Master's thesis

Don't judge a book by its cover –

Impact evaluation of a Human Library

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Specialization:	Social Psychology
ECs:	35
Date:	10-11-2017

Abstract

Social psychological research assumes that the key to successfully improve outgroup attitudes is intergroup contact (Allport, 1954). This study investigated whether the intergroup contact theory is applicable to a Human Library, a project where visitors get into contact with members of various social minority groups, and it examined the implications of visiting such an event. Specifically, this study tested whether visitors' attitudes towards the minority group, with whom they had contact, improved after the conversation and whether this effect was moderated by the conversation quality and the typicality of the conversation partner. Based on previous research, I expected that a conversation would increase visitors' knowledge, perspective taking and empathy and decrease their intergroup anxiety about the respective minority group. Further, these changes were expected to mediate the effect of intergroup contact on outgroup attitudes. I tested the hypotheses in a longitudinal field experiment, interviewing 87 visitors of a Human Library event. As expected, visitors showed more favorable outgroup attitudes towards the respective minority group after the conversation. This effect was moderated by the conversation quality but not by the typicality. Visitors' knowledge, perspective taking and intergroup anxiety changed after the conversation as expected. However, these changes didn't mediate the effect of intergroup contact on outgroup attitudes. Contrary to expectations, visitors showed no changes in empathy. Overall, results suggest that already a short conversation at a Human Library can change people's presentation of minority groups.

Keywords: intergroup contact, minority groups, outgroup attitudes, perspective taking, empathy, knowledge, intergroup anxiety, Human Library.

Acknowledgements

First and foremost, I would like to express my sincere gratitude to my supervisor Dr. Nina Hansen for her continuous support, patience and the freedom to focus on topics of personal interest throughout my entire Research Master, especially during the internship and the Master thesis. I want to thank you especially for the support and flexibility during the past six months.

I would like to thank the people from the Human Library: First of all, I would like to thank the organizers from Groningen, Martijn Bergsma and Alex C. el-Jbeily, for their enormous support in setting up this research. Besides the organizers, I would like to thank the "books" of the Human Library for their willingness to participate in this study. I would also like to thank Dora Mołodyńska-Küntzel, who supported the research idea from the beginning on, as well as Marta Witkowska for sharing her research expertise on this topic.

Further, I want to thank the following people, who helped me with the data collection: Romy Julia Streppel, Nele Lühring, Sophie Stadler, Saskia Tauber, and Eric Wieben. Without their support, this research would not have been possible.

I want to express my gratitude to several experts at the University of Groningen. Specifically, I want to thank Marieke Timmerman for her statistical advice and spontaneous availability as well as the Qualtrics experts from the faculty of behavioural and social science, who helped me structuring the endline questionnaire on Qualtrics.

Finally, my sincere thanks also goes to Gonneke Ton and (again) Alex for their spontaneous and continuous effort and time to translate the study from English to Dutch and Dutch to English.

Don't judge a book by its cover. An impact evaluation of a Human Library

"This event [the Human Library] is great. The conversations create awareness and break

taboos by directly talking about the problems."

[Dutch Woman, 25 Years, talked to a person with an obsessive-compulsive disorder (OCD)]

Prejudice is described as one of the main roots of intergroup conflicts as well as negative intergroup relations (Brown & Hewstone, 2005; Schaller & Neuberg, 2008). This demonstrates what detrimental consequences negative attitudes towards members of a social outgroup can have. Various interventions aim at reducing existing prejudice in society. One of them is the *Human Library*. The Human Library is an initiative which organizes events, where visitors get into contact with members of different social minority groups. Since its beginning in 2000, this initiative has quickly gained popularity and is now being organized in almost 80 countries worldwide (Human Library, n.d.). By establishing personal contact between members of different social groups, the event ultimately aims at reducing prejudice against members of minority groups. To date, the impacts of the Human Library have not been systematically tested. This master thesis aimed at providing a theory-driven analysis of the impacts of a Human library event. More precisely, I investigated how a conversation with a member of a minority group may change visitors' attitudes towards the respective minority group.

Intervention

A Human Library event is organized in form of a library, where people attend to borrow *books*. The *book titles* present local minority groups, such as a *refugee, an HIV positive* or a *transgender*. Members of these groups represent the books that can be borrowed, while visitors of the event are called *readers*. Both, books and readers, participate voluntarily in the event. When a reader borrows a book, the two individuals meet in person to have a

short conversation. The dialogues facilitate mutual exchange between the two participants and do not follow a given structure. Thus, they are free-flowing-conversations. The ultimate aim of a Human Library is to combat visitors' prejudices against social outgroups by talking to an outgroup member (Human Library, n.d.). However, past research found no support for the event to reach its ultimate aim when testing for prejudice reduction (Kuta, Kwiatkowska, Jacaszek, & Kaczaluba, 2015). The present study adds to this by examining the influence of underlying mechanisms, thus provides a systematical analysis of the mechanisms of a Human Library event. In the following, I provide a theory of change based on social psychological research, meaning an explanation that describes how one conversation can reduce prejudices (White, 2009).

Prejudice

To investigate whether intergroup contact can reduce prejudices, it is essential to first define prejudice. Prejudice is described as an antipathy directed towards a social group and its members, which is based on faulty and inflexible generalizations (Allport, 1954). Following, it broadly describes (irrational) negative attitudes someone holds towards members of an outgroup, thus negative outgroup attitudes. Therefore, researchers generally measure people's outgroup attitudes when approaching the concept of prejudice (see Fiske, Cuddy, Glick, & Xu, 2002). The stereotype-content model (Fiske et al., 2002) differentiates between two different dimensions of outgroup attitudes, namely perceived competence and warmth of an outgroup. Over time, the model has been extended and warmth has further been specified into two distinct dimensions, namely perceived sociability and morality (Brambilla, Hewstone & Colucci, 2013; Leach, Ellemers, & Barreto, 2007). Brambilla et al. (2013) demonstrated that each dimension operated as a distinct and relevant characteristic when assessing outgroup attitudes. Concluding, this model provides a holistic and in-depth insight into people's presentation of outgroups and has been used to examine the positive effect of intergroup

contact on outgroup attitudes (see Brambilla et al., 2013), which is described as *contact effect* in the following. Based on this research, I decided to use the extended stereotype-content model to investigate the contact effect in the context of a Human Library event.

Theoretical explanation of intergroup contact

  Contact effect. Social psychological theories offer theoretical explanations on how a Human Library event may improve visitors' outgroup attitudes. The intergroup contact theory (Allport, 1954) assumes that contact between members of different groups improves intergroup relations and outgroup attitudes. A meta-analysis of more than 500 studies demonstrated a robust and highly significant contact effect by finding that more intergroup contact significantly improved outgroup attitudes across divers groups and contexts (see Pettigrew & Tropp, 2006). In line with this, Brambilla et al. (2013) tested the intergroup contact theory by using the extended stereotype-content model. They showed that personal contact between Italian citizens and immigrants improved the citizens' attitudes towards immigrants by higher sociability, competence and morality perceptions of immigrants after a face-to-face encounter. Hence, intergroup contact influenced all three dimensions.

  Further, the meta-analysis from Pettigrew and Tropp (2006) revealed that four different conditions have a positive impact on the contact effect (Pettigrew & Tropp, 2006), instead of being essential as Allport (1954) assumed. The four conditions are: Equal group status within the situation, intergroup cooperation instead of competition, authority support, and common goals (Allport, 1954). The Human Library dialogues mostly fulfill these conditions: Both parties have equal rights and status during a conversation, the dialogues present an intergroup collaboration, and the local community supports the event. However, no concrete goals must be achieved. Overall, the Human Library provides a promising environment for intergroup contact to improve outgroup attitudes, and therewith to achieve the ultimate aim of the Human Library. In the current research, I tested the aim of the Human

Library assuming that a conversation with a member of a minority group in the context of a Human Library event improves visitors' attitudes towards this minority group compared to people who do not engage in a conversation (Hypothesis 1a).

   The role of moderators in the contact effect. Despite the strong support for the contact effect, past social psychological research demonstrated that two factors modify this effect: First, the perceived quality of the intergroup contact showed a strong influence on the intergroup contact effect (see Brown, Eller, Leeds, & Stace, 2007; Brown & Hewstone, 2005; Schwartz & Simmons, 2001). Specifically, more favorable attitudes would be observed if the intergroup contact was perceived as a positive interaction. Paolini et al. (2014) showed that only if the intergroup contact was perceived positively, outgroup attitudes would improve. Otherwise, outgroup attitudes might even become more negative. Hence, it is essential to take the perceived quality into consideration in the current study, when examining the contact effect at a Human Library event. Following, I expected that with an increasing extent of conversation quality, the positive effect of the conversation on outgroup attitudes increases, too (Hypothesis 1b).

   Second, Brown and Hewstone (2005) showed that the perceived typicality of the person with whom one has contact affects the contact effect. This means that more favorable outgroup attitudes would be observed if the conversation partner was perceived as a typical member of the outgroup than if the person was perceived as less typical (Brown, Eller, Leeds, & Stace, 2007). Intergroup contact with a typical member of an outgroup was also found to increase the degree of generalization from the member to the group, meaning that outgroup attitudes improved for the entire outgroup and not merely for the conversation partner (Brown & Hewstone, 2005). The present research followed this line of thinking and investigated the influence of perceived typicality of the conversation partner on

the contact effect in the context of a Human Library. I expected that, as the extent of perceived typicality increases, the positive effect of the conversation on outgroup attitudes increases, too (Hypothesis 1c).

  The role of mediators in the contact effect. Next, it is important to gain a better understanding of the underlying processes of the contact effect, meaning what induces an improvement of outgroup attitudes. This presents the theory of change of the present study. A meta-analysis (Pettigrew & Tropp, 2008) revealed that this effect is mediated by three factors: By (1) enhancing knowledge about the outgroup, (2) reducing anxiety of intergroup contact, and (3) by increasing empathy and perspective taking. This suggests that intergroup contact has a cognitive effect by learning about the outgroup as well as an affective one by reducing negative emotions while simultaneously increasing positive ones (Brown & Hewstone, 2005). All three factors are considered as key mediators for the contact effect. Particularly strong empirical support exists for the influence of empathy and intergroup anxiety (Pettigrew & Tropp, 2008), whereas the influence of knowledge is sometimes discussed controversially (Pettigrew & Tropp, 2008) or lacks empirical support (Jarrot & Savla, 2015; Goto & Chan, 2005). Jarrott and Savla (2015) found that more contact with elderly people increases teenagers' empathy for them as well as decreases their extent of anxiety, but no changes in knowledge about elderly people were found. Nevertheless, I assumed that knowledge plays a crucial role in the contact effect at the Human Library, as visitors meet minority group members that they generally do not interact with on the daily basis, such as an HIV-positive or a brain damaged person. Thus, it is likely that they get new information. To provide a complex insight into the effect of a conversation at a Human Library event, I tested all three mediators in the present research. Specifically, I expected that a conversation at a Human Library increases visitors' knowledge about the minority group with whom they had contact (Hypothesis 2), reduces their anxiety about intergroup contact with the minority group

(Hypothesis 3), and increases empathy and perspective taking (Hypothesis 4) compared to people who do not experience intergroup contact (see Figure 1). Further, I expected that an increase in knowledge, empathy and perspective taking as well as a decrease in intergroup anxiety mediates the contact effect (Hypothesis 5). Thus, the theory of change of the present study assumed that the contact effect can be explained by changes in the extent of knowledge, intergroup anxiety, empathy and perspective taking.
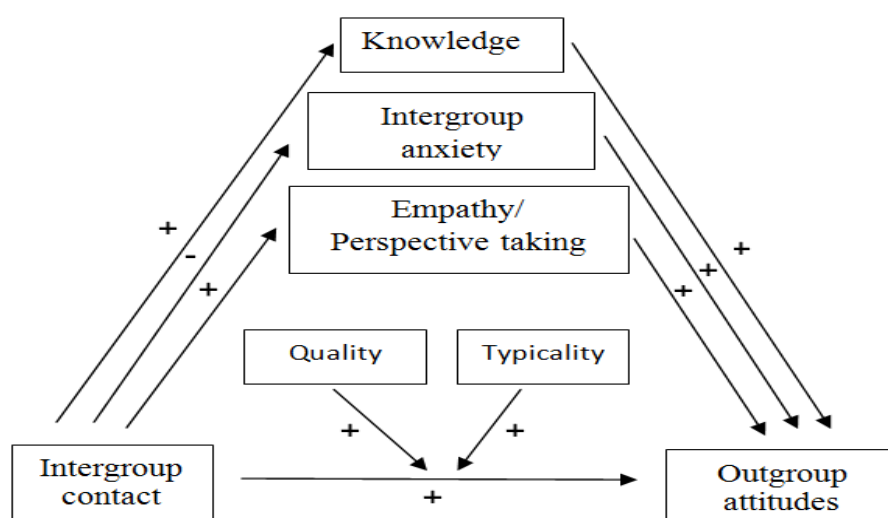
Figure 1. Theoretical model of the impact of a Human Library event.

Present study

In this master thesis, I tested the impact of intergroup contact on outgroup attitudes among visitors of a Human Library event. The present research had two distinct aims: (1) To test the aim of the Human Library by investigating whether a conversation at a Human Library can improve visitors' attitudes towards the minority group with whom they had contact, and (2) to explain the contact effect with social psychological research. Specifically, I investigated whether the contact effect depends on the extent of perceived conversation quality and the perceived typicality of the conversation partner. Further, I examined whether

the contact effect can be explained by changes in knowledge, intergroup anxiety as well as empathy and perspective taking.

Method

Design

Planned study design. Initially, the present research intended to use a 2 (condition: Treatment condition vs. comparison condition) x 3 (time: baseline, midline, and endline) mixed Design. Specifically, I intended to investigate the effect of a conversation with a minority group member on visitors' attitudes towards this minority group compared to participants who had no conversation. This study followed a longitudinal design with three timepoints of data collection. Participants in the treatment condition, thus people who experienced intergroup contact, were questioned at all three points of assessment: (1) before the conversation [baseline], (2) directly after the conversation [midline], (3) and one month after the conversation [endline]. Out of practical reasons, participants in the comparison condition, meaning people with no intergroup contact, were interrogated at only two timepoints, namely baseline and endline.

Response rates in the treatment condition. The overall response rate in the treatment condition was very low, only 28.72% ($n = 27$) of the participants who completed the baseline questionnaire also completed the endline questionnaire. From the 27 participants in the endline, I further excluded the responses of 17 participants due to incomplete questionnaires or information that could not be merged (Table 1). In total, the final sample of the endline in the treatment condition presented 10.64% ($n = 10$) of the original sample. The information of the endline was not sufficiently informative, so that I decided to take it not into consideration for further analysis. Therefore, I could only analyze the information of baseline and midline for the treatment condition.

Response rate in the comparison condition. Similarly, the response rate was also very low in the comparison condition, with only 9.76% ($n = 4$) of the participants from the baseline completed the endline questionnaire. I further excluded the information of two participants due to information that could not be merged with information from the baseline (Table 1). Following, two participants remained in the final sample of the endline. Due to the low response rate, I excluded the endline from the analysis of the current study. Thus, participants in the comparison condition merely provided analyzable information at baseline, so that a change over time was impossible to examine for the comparison condition. Consequently, I decided to use the information of the comparison condition only to compare visitors and non-visitors at the baseline, thus test for differences between the two samples. For the main analyses, I merely focused on the information provided by participants of the treatment condition, namely the Human Library visitors.

Table 1

Overview of the response rates.

Time	Condition	Original sample	Attrition a. Insufficient information b. Not identifiable[a] c. Dropout[b] d. Other[c]		Final sample
Baseline	TC	$N = 94$	c.	2.1% ($n = 2$)	97.9% ($n = 92$)
	CC	$N = 41$		-	100.0% ($n = 41$)
Midline	TC	$N = 92$	a.	4.3% ($n = 4$)	94.6% ($n = 87$)
			d.	1.1% ($n = 1$)	
	CC	-		-	-
Endline	TC	$N = 27$	a.	25.9% ($n = 7$)	37.0% ($n = 10$)
			b.	37.4% ($n = 10$)	

CC	$N = 4$	b. 50.0% ($n = 2$)	50.0% ($n = 2$)

Note. Percentage (Count). TC = treatment condition (visitors); CC = comparison condition (non-visitors).

[a] Responses could not be merged because participants provided an unidentifiable personal code or reported conversations, which they didn't report at baseline.

[b] Visitors ended their study participation during the completion of the questionnaire, but continued having a conversation with the minority group member.

[C] Visitors mistakenly received a wrong questionnaire.

Final study design. Due to the given data, I only focused on the treatment condition, namely visitors of the Human Library event, to investigate change over time. Therefore, I needed to adapt the study design. Finally, I investigated the effect of a conversation with a minority group member on visitors' attitudes towards the respective minority group compared to visitors' attitudes towards another minority group, with whom they had no contact, thus a comparison group. Consequently, the final design of this research used a 2 (groups: Treatment group vs. Comparison group) x 2 (time: Pretest and Posttest) within-subject Design. Variables were analyzed at two timepoints, namely (1) directly before the conversation [pretest], and (2) directly after the conversation [posttest].

Comparison group. I used homeless people as the comparison group, namely a group that no visitor talked to at the Human Library event. The choice of this comparison group was based on theoretical as well as on practical reasons. Overall, I aimed to use a comparison group which differed from the minority groups that were present at the event. Therefore, the selection depended on practical conditions of the Human Library. The represented minority groups at the Human Library event will be described in more detail in the upcoming paragraph, see *Minority groups at the Human Library*. Theoretically, I based the selection of the comparison group on the stereotype-content-model (Fiske et al., 2002), which categorized

various social minority groups in western societies on perceived competence and perceived warmth, ranging from low to high. According to Fiske et al. (2002), homeless people were perceived as relatively little competent and little warm, whereas the minority groups of the Human Library, overall, were rather categorized with medium to high competence and warmth (more detailed information will be provided in the following paragraph). Following, homeless people presented a group that differed from the minority groups at the Human Library event. This contrast enabled me to compare the contact effect for all minority groups of the Human Library, which will be referred to as *overall effect* in the following, with homeless people. Due to the inclusion of multiple minority groups in the overall effect, the data of the present study presented nested data (for further comments regarding the analysis, see *preliminary analysis*).

Minority groups at the Human Library. In total, 24 members of different minority groups took part at the Human Library event in Groningen (see Table B1), meaning visitors talked to different people. To provide additional and more precise information about the contact effect, I decided to test for differences between the minority groups. However, due to small sample sizes (range: 1 – 8) and a large diversity of minority groups, I merged several minority groups to broader categories of minority groups (for more information, see Table 2). In the analyses, I will specify the effect for the three largest categories: First, *people with psychological disorder* ($n = 15$, 17.2%) consisting of one person with anxiety disorder ($n = 4$), one person with obsessive-compulsory disorder (*OCD*, $n = 5$), and one suffering from post-traumatic stress disorder (*PTSD*, $n = 6$). Second, *refugees* ($n = 12$, 13.8%), which included one male homosexual African refugee ($n = 3$), one male African political refugee ($n = 4$), one male Syrian refugee ($n = 5$) and one female Pakistani refugee ($n = 3$). The third category presented *transgender* ($n = 11$, 12.6%) and consisted of two transwomen (each $n = 4$) and one transman ($n = 3$). Regarding the stereotype-content model, these categories were categorized

with relatively high warmth and low competence (Fiske et al., 2002), medium warmth and competence (Fiske et al., 2002), and high warmth and competence (Partridge, 2016), respectively. Concluding, besides reporting the overall effect of minority groups, the present research further specified the effect for the three most convincing categories, which is referred to as the *individual minority groups* in the following.

Participants

In total, 94 people participated in the study, who visited a Human Library event in Groningen in June 2017. Among these, 12 visitors (11.3%) engaged in more than one conversation, so that they appeared multiple times in the dataset (Table 2). To control for the effect of multiple conversations, I considered only the information of their first conversation for the analysis. Out of the 94 visitors, the information of seven visitors (6.6%) were excluded from the dataset due to insufficient information ($n = 4$, 3.8%), dropouts ($n = 2$, 1.9%) or because they mistakenly received a wrong questionnaire ($n = 1$, 0.9%), see Table 1. Concluding, the final sample consisted of 87 visitors.

Table 2

Overview of conversations per visitor

Amount of conversations	Count (%)
One conversation	82 (87.4%)
Two conversations	9 (10.3%)
Three conversations	3 (2.3%)
Total	94 (100.0%)

Note. This statistic reports the amount of recorded conversations per visitor at the Human Library event.

On average, the visitors were 30 years old ($SD = 11.89$; range: 15 - 61 years) and the

majority were women (68% women; 30% men; 2% indicated "others"). Regarding their educational background, most visitors held a university degree ($n = 61$, 70.1%). 16.1% ($n = 14$) attended HBO, only a minority of 9.2% ($n = 8$) hold a high school degree and 1.15% ($n = 1$) of the visitors indicated "others". The majority of the visitors were Dutch ($n = 44$, 50.6%) or German ($n = 18$, 20.7%), while the remaining indicated Iranian ($n = 3$, 3.4%), Chinese (n = 2, 2.3%), Turkish ($n = 2$, 2.3%), US American ($n = 2$, 2.3%) or other nationalities ($n = 16$; each $n = 1$, 1.1%). Overall, the visitors indicated a high motivation to attend the event ($M = 4.07$, $SD = .83$; range: 2-5). Most visitors ($n = 65$, 76.4%) visited a Human Library for the first time, while 23.6% ($n = 20$) indicated to have already visited a Human Library event before. More specifically, 13 visitors (15.3%) visited a Human Library once, four visitors (4.7%) visited it twice, and three visitors (3.6%) indicated three or more previous visits. The participation in the study was voluntary. To increase the response rate, the visitors had the chance of winning one of three amazon vouchers, each worth 15 Euros.

Procedure

Visitors of the Human Library event were invited to participate in this study during their visit, after they had selected the minority group with whom they wanted to have a conversation. Before completing the questionnaires, the visitors received an informed consent, notifying them about the general purpose of the study, their voluntary participation as well as the anonymous and confidential treatment of the data. Overall, each visitor completed two questionnaires at the event. They could choose to complete the questionnaires either in English ($n = 72$, 82.4%) or in Dutch ($n = 15$, 17.2%).

Visitors filled in the first questionnaire before the conversation, namely the pretest (see Appendix A). This was a paper-pencil questionnaire and consisted of three parts: First, a block of questions about demographic information, including gender, age, nationality, education level, and a recognition code to merge the data. Second, questions about intergroup contact.

This block assessed among others relevant study variables, namely outgroup attitudes, intergroup anxiety, empathy, perspective taking, and knowledge (for more detailed information, see Measures). These questions were posed twice, namely about intergroup contact with the respective minority group and about intergroup contact with homeless people, and presented in a randomized order. Third, follow-up questions, where visitors indicated their experiences with and general interest in the Human Library.

Next, visitors had a conversation with a member of the chosen minority group. Afterwards, visitors completed the second questionnaire, the posttest. It followed a similar structure as the pretest and consisted of the same three parts. Regarding the demographic information, only the recognition code was requested. Next, I used the same intergroup contact questions about both the specific minority group and about homeless people. Finally, visitors evaluated their past conversation, their conversation partner as well as the Human Library. After completing the questionnaires, every visitor received a debriefing. On average, visitors filled in the questionnaires within 15 minutes.

Measures[1]

Outgroup attitudes. Outgroup attitudes were assessed by a six-item scale applying the extended version of the stereotype-content model (see Leach, Ellemers, & Barreto, 2007). Specifically, visitors rated members of a specific minority group on a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*), on certain characteristics. Three dimensions were examined, namely perceived sociability, competence and morality. Sociability was assessed with two items, namely the perceived extent of friendliness and warmth ("To what extent do you think refugees are friendly?"; "To what extent do you think refugees are

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[1] Additional variables of interest for the Human Library are discussed in the appendices, see Appendix C.

warm?"). In contrast, competence was measured by characteristics, such as perceived intelligence and competence ("To what extent do you think refugees are intelligent?"; "To what extent do you think refugees are competent?"), while morality asked for the extent of honesty and trustworthiness ("To what extent do you think refugees are honest?"; "To what extent do you think refugees are trustworthy?"). The outcomes of the three dimensions did not differ significantly from each other, with χ^2 (2)'s $\geq$ 0.62, *p's* > .05[2]. Overall, the scales showed high internal reliabilities (α's $\geq$ .78, see Table B2). Following, I computed outgroup attitude scales including all six questions[3].

Quality. I assessed the perceived quality of the conversation by a four-item scale inspired by Brown et al. (2007). Therein, visitors evaluated their conversation in the posttest on a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*). Specifically, visitors indicated to what extent they perceived the conversation as pleasant, interesting, emotional, and inspiring ("Overall, how would you describe this conversation? - Pleasant? Interesting? Emotional? Inspiring?"). As the overall scale demonstrated a high internal reliability (α's $\geq$ .50), I computed quality scales including all four questions[4].

Typicality. The perceived typicality of the conversation partner was assessed in the posttest with a single item, as it was done by Brown et al. (2007), using a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*). Specifically, visitors rated the representativeness of the conversation partner regarding the respective minority group ("In your opinion, to what extent was your conversation partner a typical representative of refugees?). Although, I would have preferred the use of a multi-item index, due to restricted time for the completion of the questionnaires, I used a single-item to assess typicality.

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[2] The statistics are based on the Friedman's test.
[3] Ten scales were computed: For the overall effect, for the three individual minority groups and for the comparison group, each at the pre- and posttest.
[4] Four scales were computed: For the overall effect and for the three individual minority groups at the posttest.

Knowledge. I assessed perceived knowledge about a minority group by two items using a five-point Likert scale, ranging from 1 (*Nothing*) to 5 (*A great extent*). The visitors were asked to estimate the extent of personal knowledge about the minority group ("In general, how much do you know about refugees?"; "How much do you know about the life of refugees?"). The two items showed high bivariate correlations (r's ≥ .49, p's ≤ .05, except for Transgender; see Table B2); hence I computed knowledge scales including both items[5]. Importantly, the correlations for the individual minority groups were comparably lower, which can be explained by the small sample sizes. Following, the outcomes of the individual minority groups need to be interpreted with caution.

Intergroup Anxiety. I assessed intergroup anxiety about contact with the minority group with a six-item scale developed by Stephan (2002). Visitors indicated on a five-point Likert scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*), the extent of certain emotions that they would perceive during intergroup contact with a specific minority group ("Please indicate, when interacting with a refugee, to what extent would you feel awkward?"). Each question addressed a specific affect, namely awkwardness, comfort, being at ease, anxiety, uncertainty, and confidence. The responses of comfort, being at ease and confidence were reverse scored. The overall scales showed a high internal reliability (α's ≥ .76; Table B2). Thus, I computed intergroup anxiety scales including the six items[5].

Empathy.[6] Empathy was assessed by two statements that were rated on a five-point Likert Scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The statements were

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[5] Ten scales were computed: For the overall effect, for the three individual minority groups and for the comparison group, each at the pre- and posttest.

[6] Initially, I planned to create one scale for *Empathy and Perspective taking*. However, the overall scales demonstrated low internal reliabilities, with α's between .38 and .71. Therefore, I decided to analyze both constructs individually.

used and adapted from the Interpersonal Reactivity Index (Davis, 1980) and examined the extent of empathic concern for a specific group ("I often have tender, concerned feelings for refugees"; "When I see a refugee being treated unfairly, I generally feel very pity for him/her."). The two statements were relatively highly correlated (r's $\geq$ .49; p's ≤ 0.05, except for the minority groups *Transgender* and *Psychological Disorder*; see Table B2) and, thus I computed empathy scales with both items[7]. Again, the bivariate correlations were notably lower for the individual minority groups, so that their outcomes need to be interpreted with caution.

Perspective taking. This construct used two statements that were rated on a five-point Likert Scale, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The statements were used and adapted from the Interpersonal Understanding scale (Stephan, 2002) and focused on the tendency to adopt the point of view of others ("I find it easy to put myself in the place of a refugee to understand his/her viewpoint."; "I find it easy to understand a refugee's perspective on most issues."). The two items were highly correlated (r's $\geq$ .55, p's ≤ 0.02, except for Transgender; see Table B2). Following, I computed perspective-taking scales including both items[7]. Due to the low correlations of the individual minority groups, their outcomes need to be interpreted with caution.

Motivation. Visitors extent of motivation to attend the event was assessed at the pretest with a single item ("How motivated are you to visit a Human Library?"). Specifically, visitors rated their extent of motivation on a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*).

Results

Preliminary analysis

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[7] Ten scales were computed: For the overall effect, for the three individual minority groups and for the comparison group, each at the pre- and posttest.

To test the hypotheses, I first examined the distributions of relevant study variables. According to the Shapiro-Wilk-Test, the study variables of the overall effect, homeless people as well as several variables of the individual minority groups were non-normally distributed (S-W's $\geq$ .64, p's $\leq$ .05, see Table B2). Similarly, visual inspections of their histograms indicated non-normal distributions. Various transformations, such as log-transformations or square root transformations, did not alter the distributions towards normality. Based on the advice of several statistical experts at the University of Groningen, the following analyses will consequently be based on non-parametric tests. This must be taken into consideration when interpreting the findings. Furthermore, it is important to note that due to the small sample sizes, we did not discard extreme values from the dataset and no multilevel analyses could be used (Maas & Hox, 2005).

For an overview of descriptive information of relevant study variables, see Table B2. Overall, visitors' attitudes towards both groups, treatment and comparison group, were relatively high, with M's $\geq$ 3.22, SD's $\leq$ .81. Similarly, visitors indicated a relatively high extent of perspective taking (M's $\geq$ 3.06, SD's $\leq$ 1.06), empathy (M's $\geq$ 3.78, SD's $\leq$ .87), quality of the conversation (M = 4.23, SD = .57) and typicality of the conversation partner (M = 3.60, SD = .91), while indicating a medium extent of knowledge (M's $\geq$ 2.52, SD's $\leq$ .99) and relatively low intergroup anxiety (M's $\leq$ 2.66, SD $\leq$ .61). Further, difference scores of all study variables, thus the changes from pre- to posttest, for the treatment and comparison group were positive, except for empathy and intergroup anxiety, see Table B2.

Baseline/ Pretest results. Next, I analyzed the results of the pretest to check whether visitors of the Human Library differed significantly from non-visitors. Thus, I compared the outcomes of the treatment condition with the ones of the comparison condition. Both samples reported their extent of outgroup attitudes, knowledge, intergroup anxiety, empathy and perspective taking towards transgender, refugees and homeless people. Regarding the evaluations

of refugees and transgender, I found no differences between the two samples, with U's $\leq$ 285.00 and p's $> .05$ (see Table B3), except for the evaluation of homeless people[8]. The two samples differed significantly in the extent of empathy for homeless people ($U = 1245.50$, $p <$ .05)[8], with visitors indicating more empathy ($M = 4.07$, $SD = .71$) than non-visitors ($M = 3.76$, $SD = .78$), see Figure 2. Overall, it can be said that visitors and non-visitors evaluated the three minority groups similarly before the Human Library event.
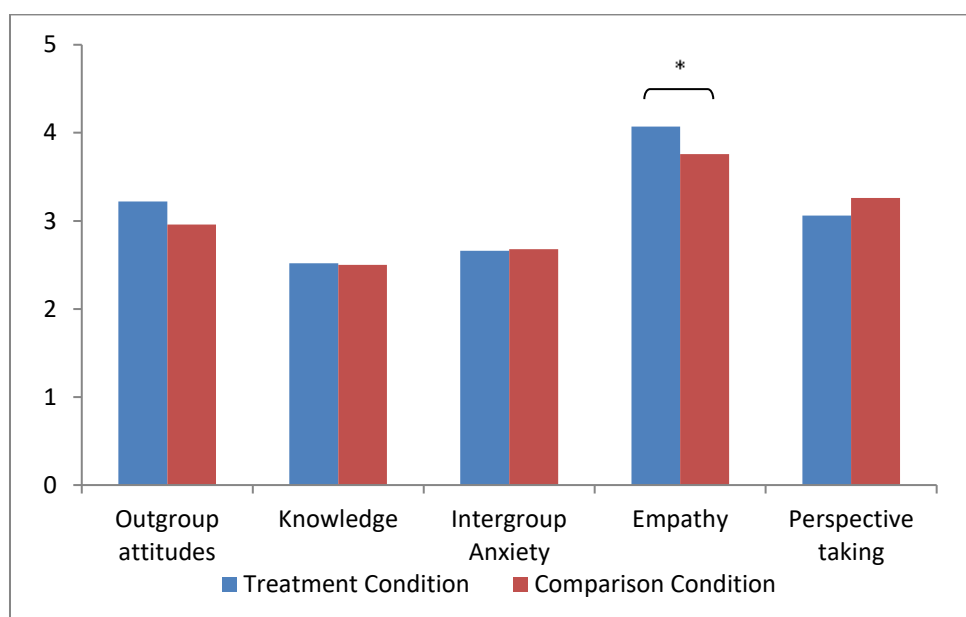

Figure 2. Comparison of the evaluation of homeless people between the treatment condition (visitors; $n = 87$) and the comparison condition (non-visitors; $n = 41$) at the pretest. * $p <.05$.

Next, I checked for differences within the treatment condition, meaning whether visitors evaluated the minority group with whom they were going to have contact differently than a comparison group, namely homeless people. Sign tests showed significant differences in all study variables between the two groups, with Z's ≤ -2.12, p's $< .05$, and r's $\geq .26$[9], see Table B4. More specifically, visitors demonstrated significantly more favorable attitudes ($M = 3.72$, $SD = .66$), more knowledge ($M = 2.89$, $SD = .99$) and more perspective taking ($M = 3.36$, SD

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[8] Statistics are based on the Mann-Whitney U test.
[9] The effect sizes were calculated by the formula: $r = Z / \sqrt{n}$ (see Pallant, 2006).
Its interpretation is based on Cohen (1988), with .1 = small effect, .3 = medium effect, .5 = large effect.

= 1.06) towards the minority group, with whom they were going to have contact, than towards homeless people ($M = 3.22$, $SD = .49$; $M = 2.52$, $SD = .69$; $M = 3.06$, $SD = .98$, respectively), see Figure 3. Further, visitors indicated significantly less intergroup anxiety ($M = 2.13$, $SD = .61$) and less empathy ($M = 3.78$, $SD = .87$) for the treatment group compared to the comparison group ($M = 2.66$, $SD = .59$; $M = 4.07$, $SD = .73$, respectively), see Figure 3.
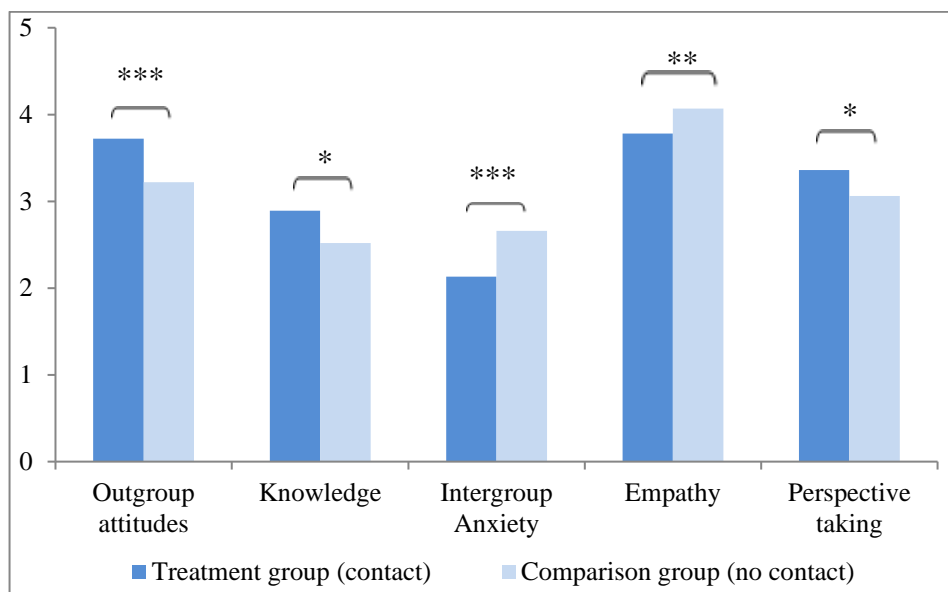

Figure 3. Comparison of visitors' evaluation of the treatment group (a minority group with whom they were going to have contact) and their evaluation of the comparison group (a minority group with whom they were not going to have contact) at the pretest ($N = 87$). * p <.05. ** p <.01. *** p <.001.

Afterwards, I checked for differences between the evaluation of the three individual minority groups of the Human Library, namely transgender, refugees and people with a psychological disorder, see Figure 4. Visitors showed a significantly different extent of knowledge about the three groups [$\chi^2 (2) = 15.36$, $p < .001$], with a mean rank score of 10.64 for transgender, 20.83 for refugees, and 28.77 for people with a psychological disorder. Similarly, visitors demonstrated a significantly different extent of perspective taking for the three groups [$\chi^2 (2) = 7.27$, $p < .05$], with a mean rank score of 15.64 for transgender, 18.57 for refugees, and 27.37 for people with psychological disorder. However, no significant

differences between the three minority groups were found in the extent of outgroup attitudes, intergroup anxiety and empathy, with χ^2 (2)'s ≤ 4.37 and p's $> .05$.
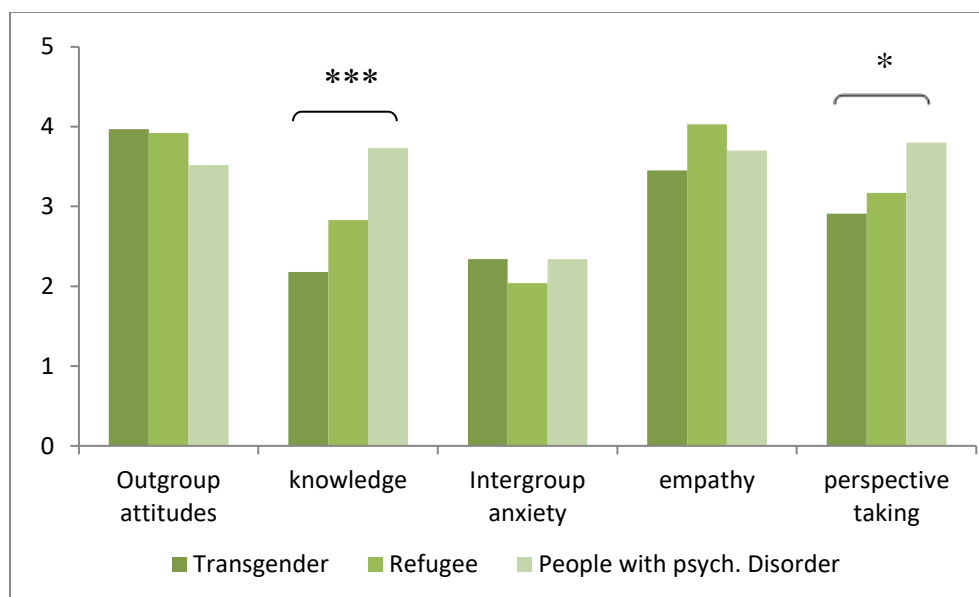

Figure 4. Comparison of visitors' evaluation about the three individual minority groups of the Human Library (transgender, refugee, and people with a psychological disorder) at the pretest ($N = 87$). * $p < .05$. ** $p < .01$. ** $p < .001$.

Further, I examined the bivariate correlations between relevant study variables (for an overview, see Table B5). First, I checked the correlation of two descriptive variables, age and motivation to attend the event, with relevant study variables. While age was not significantly related with the relevant study variables (r's $\leq .20$, p's $> .05$), the motivation to attend the Human Library was significantly related with outgroup attitudes at the pre- and posttest (r's $\geq .23$, p's $< .05$). Regarding outgroup attitudes and the mediator variables[10], only empathy demonstrated a significant correlation with outgroup attitudes at the posttest ($r = .28$, $p < .05$). This means that the data doesn't provide ground for a mediation analysis, so that Hypothesis 5 won't be investigated further. When inspecting the correlations among the mediator variables,

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[10] Herein, I refer to the difference scores of the mediator variables, meaning posttest score – pretest score. Mediator variables are: Intergroup anxiety, knowledge, empathy and perspective taking.

all variables demonstrated significant inter-correlations (r's $\geq$ .21, p's < .05), except for empathy and intergroup anxiety (r = .02, p = .85). Next, the conversation quality showed a significantly positive correlation with outgroup attitudes at the pretest, posttest as well as with the difference score. Further, typicality of the conversation partner showed a significant positive correlation with outgroup attitudes at the posttest (r's $\geq$ .29, p's < .01), whereas no correlation with the pretest.

Main analyses

Due to the low response rates, I needed to adapt the study design and the hypotheses (for more information, see *Design*). The final hypotheses will be stated before each analysis in the following. Based on the advice of several statistical experts at the University of Groningen, the results for the main analyses are based on matched-pair sign tests. Wilcoxon signed-rank tests were not used for the analyses as the assumption of symmetric distributions were violated, which were examined by a visual inspection of the boxplots of the relevant variables.

Hypothesis 1a

"I love this event because it breaks stereotypes and misconceptions that I have about other people that I normally don't meet in my daily life."

(Egyptian Woman, 20 Years, talked to a refugee)

With the first hypothesis, I tested the assumption of the Human Library that visitors' attitudes towards the minority group, with whom they had contact, improved after the conversation, compared to their attitudes towards homeless people. First, I examined whether visitors' attitudes towards the minority group, with whom they had contact, changed over time. Regarding the overall effect, a sign test indicated a significant change in visitors' outgroup attitudes towards the respective minority group over time (Z = -4.76, p < .001, r =

.52), with significantly more favorable outgroup attitudes at the posttest ($M = 4.05$, $SD = .75$)

than at the pretest ($M = 3.72$, $SD = .66$), see Figure 5. Regarding the three individual minority

groups, visitors who talked to a person with a psychological disorder or to a refugee showed a

significant change in attitudes towards the respective minority group over time (Z's $= -2.74$,

p's $< .05$, r's $\geq .21$), with more favorable outgroup attitudes at the posttest (M's ≥ 4.10, SD's

$\leq .81$) than at the pretest (M's > 3.52, SD's $\leq .73$). However, no significant change was

demonstrated for visitors' attitudes towards transgender over time, with $Z = -2.74$ and $p = .13$.

Next, I compared the change of visitors' attitudes towards the minority group, with

whom they had contact, with their change of attitudes towards a comparison group. Herein, I

focused on the difference scores of the variables. Visitors' outgroup attitudes for the two

groups changed significantly different ($Z = -2.27$, $p < .05$, $r = .26$), with a stronger change of

attitudes towards the minority group with whom they had contact ($M = .26$, $SD = .53$) than

towards the comparison group ($M = .11$, $SD = .40$), see Figure 5. However, regarding visitors

who talked to one of the three individual minority groups, their outgroup attitudes didn't

change significantly different for the respective minority group compared to the comparison

group (Z's $= -1.64$, p's $> .05$).
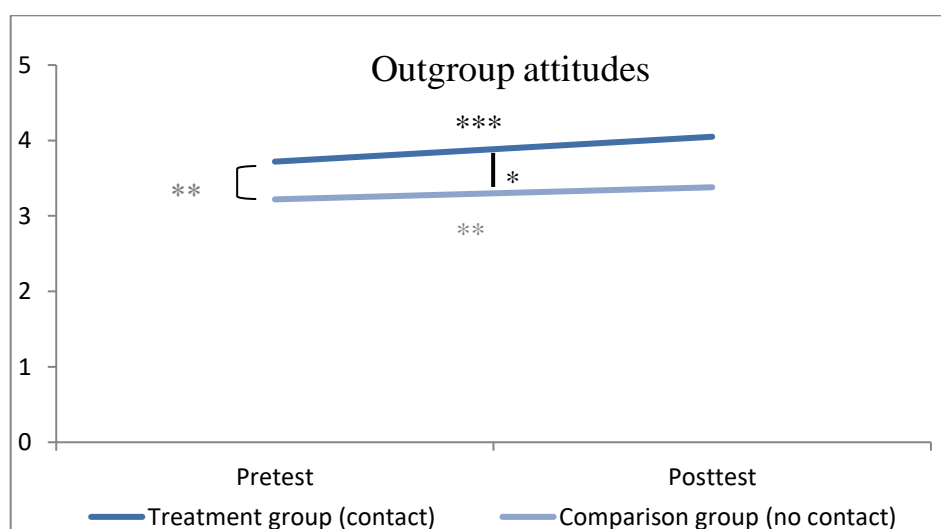
Figure 5. Visitors' extent of attitudes towards the minority group, with whom they had contact, and towards a comparison group over time (Hypothesis 1a). * *p* <.05. *** *p* <.001; black stars denote hypothesis relevant results, whereas grey stars denote hypothesis irrelevant results.

Hypothesis 1b and 1c

"It is a very welcoming and emotional event. During our conversation, I felt so comfortable that I could ask almost everything."

(German woman, 28 Years, talked to an Iranian Woman)

Hypotheses 1b and 1c assumed that a high conversation quality and a typical conversation partner increase the contact effect. To test for an indirect effect of quality and typicality, I ran a multiple moderation analysis using Hayes Macro model (Hayes, 2012). Due to the non-normally distributed variables, I can merely refer to the bootstrapped confidence intervals, as they don't require normal distributions (Preacher & Hayes, 2004). Specifically, I used a bootstrap estimation approach with 5000 samples. The results showed that the indirect coefficient of quality was significant, *b* =.08, *SE* = .04, with a 95% *CI* = .02, 0.19, whereas the indirect coefficient of typicality was statistically insignificant, *b* =.03, *SE* = .04, with a 95% *CI* = -.02, 0.13.

Hypothesis 2

"This event helped me to learn something new that I would never be able to learn in my normal daily interactions."

(Irish Woman, 21 Years, talked to a blind person)

"This event gives the opportunity to find out more about minority groups."

(Dutch Woman, 28 Years, talked to an ex-drug addict)

I expected to find that the extent of visitors' perceived knowledge about the minority group with whom they had contact increased after intergroup contact, compared to the extent of perceived knowledge about a comparison group. Regarding the overall effect, visitors' extent of perceived knowledge about the respective minority group changed significantly over time ($Z = $ -4.10, $p < $ .001, $r = $ .44), with increased perceived knowledge at the posttest ($M = $ 3.30, $SD = $ .82) compared to the pretest ($M = $ 2.89, $SD = $ .99), see Figure 6. Regarding the three individual minority groups, only visitors who talked to a transgender showed a significant change in the extent of knowledge ($Z = $ -2.97 and $p < $ .01), with a significantly higher extent of knowledge at the posttest ($M = $ 3.23, $SD = $ .26) than at the pretest ($M = $ 2.18, $SD = $ .56). However, the extent of knowledge neither changed significantly for visitors who have talked to a person with a psychological disorder nor for visitors who talked to a refugee, with $Z's = $ -3.72, and $p's \geq $ .38.

Further, visitors change of knowledge about the treatment group did not differ significantly from the change of visitors' knowledge about the comparison group, with $Z = $ -1.56, $p = $ .12, $r = $ .26, meaning they changed over time to a similar extent (see Figure 6). Regarding the individual minority groups, visitors' extent of knowledge about a transgender or a refugee changed significantly different compared to their change of knowledge about the comparison group ($Z's = $ -1.74, $p's < $ 0.05), with a stronger increase of knowledge about transgender or refugee ($M's \geq $ .23, $SD's \leq $ .57) than about the comparison group ($M = $ .11, $SD = $ .40). However, regarding visitors who talked to a person with a psychological disorder, visitors' knowledge about the respective minority group did not change significantly different than their knowledge about the comparison group ($Z = $ -1.74, $p > $ .05).

Figure 6. Visitors extent of perceived knowledge about the minority group, with whom they had contact, and about a comparison group over time (Hypothesis 2). ******* *p* <.001.

Hypothesis 3

"This event has a very nice atmosphere. I especially liked the opportunity to meet and talk to people openly and to be honest about my anxieties around people that are different."

(American Women, 29 years, talked to a blind person)

I expected to find a significantly decreased extent of intergroup anxiety about the minority group, with whom the visitor had contact, after the conversation, compared to visitors' intergroup anxiety about a comparison group. Regarding the overall effect, visitors' extent of intergroup anxiety about the minority group, with whom they had contact, changed significantly from pre- to posttest ($Z = -4.36$, $p < .001$, $r = .47$), with a significantly lower extent of intergroup anxiety at the posttest ($M = 1.85$, $SD = .59$) than at pretest ($M = 2.13$, $SD = .61$). However, regarding the three individual minority groups, the extent of intergroup anxiety did not change significantly, with Z's $= -3.83$ and p's $\geq .07$.

Visitors' intergroup anxiety about the respective minority group changed significantly different than their anxiety about the comparison group over time ($Z = -8.95$, $p < .001$, $r =$

.98), with a stronger decrease of anxiety about the minority group with whom they had

contact (M = -.29, SD = .58) than about the comparison group (M = -.15, SD = .58), see

Figure 7. Similarly, visitors' intergroup anxiety about the three individual minority groups

decreased significantly stronger than their anxiety about the comparison group (Z's = -6.48,
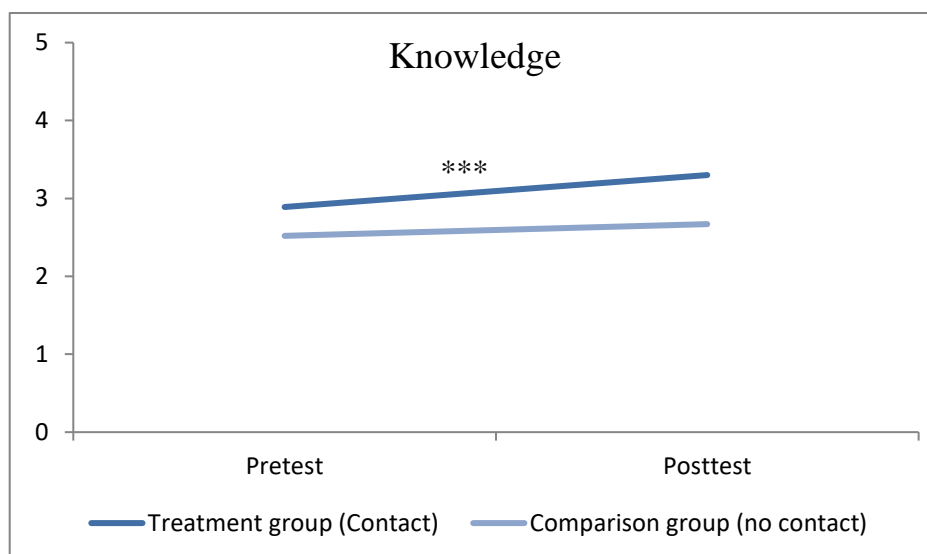
p's ≤ .01).
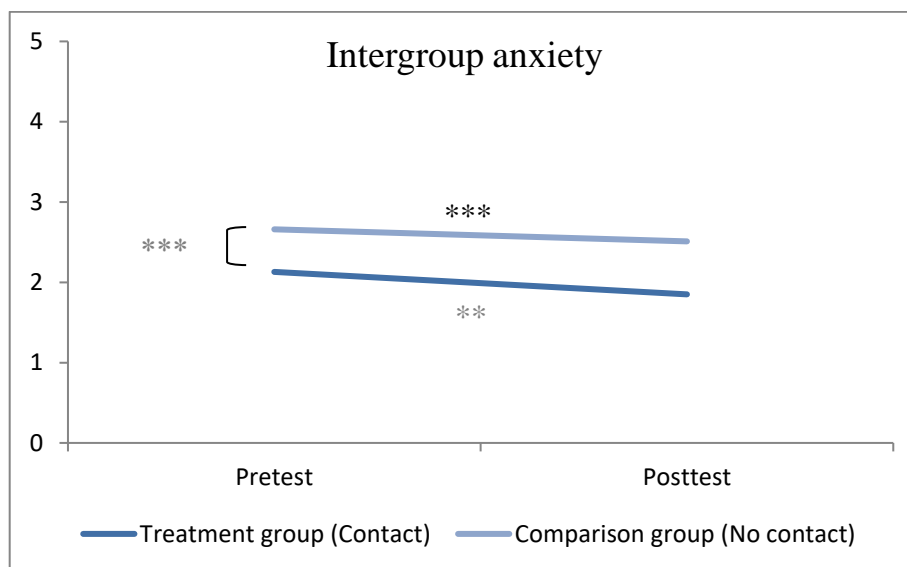
Figure 7. Visitors extent of intergroup anxiety about the minority group, with whom they had

contact, and about a comparison group over time (Hypothesis 3). Black stars denote

hypothesis relevant results, whereas grey stars denote hypothesis irrelevant results. ** p <.01.

*** p <.001

Hypothesis 4. The fourth hypothesis predicted that visitors' extent of empathy and

perspective taking for the minority group, with whom they had contact, increased

significantly after the conversation compared to their extent of empathy and perspective

taking for a comparison group.

Empathy.

"The conversations changed my perspective on how it [the drug addiction] affected his life and

how everybody could fall in such a situation."

(Dutch Woman, 28 Years, talked to an ex-drug addicted)

Over time, visitors demonstrated a marginally significant change in the extent of empathy towards the minority group with whom they had contact ($Z = -1.94$, $p = .05$, $r = .21$), with a higher extent of empathy at the posttest ($M = 3.99$, $SD = .81$) than at the pretest ($M = 3.78$, $SD = .87$). When focusing on the individual minority groups, visitors' extent of empathy did not change significantly over time for any of the three groups, with Z's = -1.80 and p's >.05. Moreover, the change of visitors' extent of empathy for the minority groups of the Human Library did not differ significantly from visitors' change of empathy for homeless people over time, with $Z = -1.49$ and $p > .05$. Likewise, visitors' extent of empathy for the three individual minority groups did not change significantly different for the respective minority group than for the comparison group, with Z's = -1.59, $p > .05$.

Perspective taking.

"It was great that I had the chance to put myself in her shoes to understand her better."

(Dutch Woman, 57 Years, talked to a woman with cancer)

From pre- to posttest, visitors showed a significant change in the extent of perspective taking of the minority group, with whom they had contact ($Z = -4.96$, $p < .001$, $r = .53$), with a significantly higher extent of perspective taking at the posttest ($M = 3.98$, $SD = .86$) than at the pretest ($M = 3.36$, $SD = 1.06$), see Figure 8. Regarding the individual minority groups, this change over time was found for visitors who talked to a refugee or a transgender (Z's = -2.92 and p's < .05), with a significantly higher extent of perspective taking of the respective minority group at the posttest (M's ≥ 3.87, SD's $\leq .84$) than at the pretest (M's ≥ 2.91, SD's $\leq .98$). However, no significant change over time was found for visitors who talked to a person with a psychological disorder ($Z = -2.92$, $p > .05$).

Further, visitors' extent of perspective taking of the minority groups at the Human

Library changed significantly different over time than their perspective taking for the

comparison group ($Z = -2.81$, $p < .01$, $r = .31$). Specifically, visitors demonstrated a

significantly stronger increase in perspective taking of the minority group, with whom they

had contact ($M = .61$, $SD = .93$), than of the comparison group ($M = 2.26$, $SD = .71$), see

Figure 8. Regarding the individual minority groups, only visitors who talked to a transgender

demonstrated a significantly different change of perspective taking between the respective

minority group and the comparison group ($Z = -2.01$, $p < .05$), with a stronger increase in

perspective taking of the respective minority group ($M = 0.95$, $SD = .65$) than of the

comparison group ($M = 0.05$, $SD = .52$). However, regarding visitors who talked to a person

with a psychological disorder or a transgender, the change in perspective taking of the

respective minority group and of the comparison group did not differ significantly (Z's = -
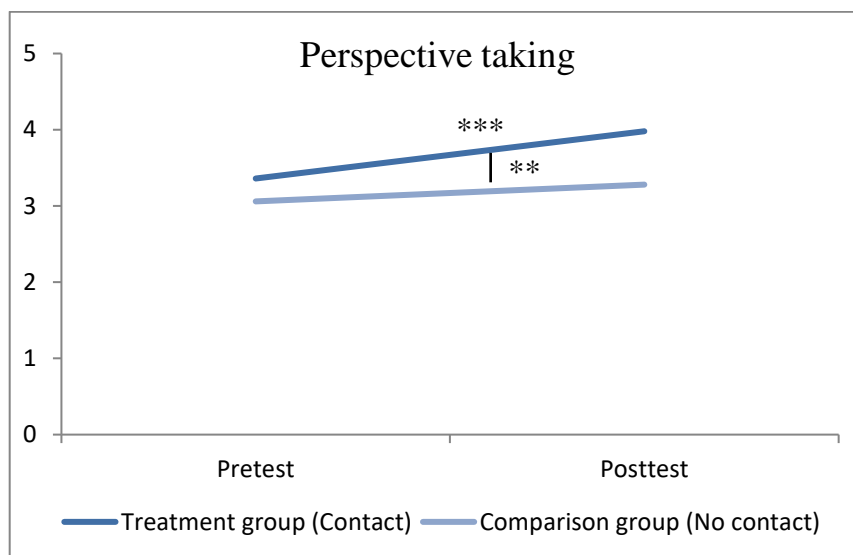
2.01, p's > .05).

Figure 8. Visitors' extent of perspective taking of the minority group, with whom they had

contact, and of the comparison group over time (Hypothesis 4). ** $p < .01$; *** $p < .001$.

Additional analysis

A high motivation to engage in intergroup contact plays a crucial role in the contact effect (Halperin et al., 2012). Based on past research and the fact that visitors' motivation showed significant correlations with outgroup attitudes at the pre- and posttest (Table B5), I tested for a mediation effect of visitors' motivation to attend the event, meaning whether the contact effect was explained by the extent of motivation. Indeed, when using Hayes Macro model (Hayes, 2012), the outcomes of a bootstrap estimation approach with 5000 samples demonstrated a significant effect of the indirect coefficient of motivation, with $b = .64$, $SE = .10$, with a 95% $CI = .01, .17$.

Discussion

The present study aimed to provide an empirically based impact evaluation of the Human Library, where I investigated the effects of a conversation with a minority group member on visitors' outgroup attitudes. In line with the aim of the Human Library, visitors' attitudes towards the respective minority group became more favorable after a conversation, thus the present data supports Hypothesis 1a. Further, this study showed that the quality of the conversation moderated the contact effect, meaning that outgroup attitudes became more favorable if the quality of the conversation was perceived to be high (Hypothesis 1b). However, contrary to prior expectations (Hypothesis 1c), no significant influence of the typicality of the conversation partner on the contact effect was found. Next, as predicted, visitors indicated more perceived knowledge about the respective minority group (Hypothesis 2), less anxiety about contact with the respective minority group (Hypothesis 3), as well as more perspective taking of this group after the conversation (Hypothesis 4). Interestingly, visitors indicated the changes in outgroup attitudes and in intergroup anxiety not only for the minority group, with whom they had contact, but also for homeless people, with whom they had no contact. Nonetheless, outgroup attitudes and perspective taking changed significantly stronger for the treatment group than for the comparison group. Contrary to my expectations,

visitors' extent of empathy didn't change after the conversation for none of the two groups (Hypothesis 4). Further, changes in knowledge, intergroup anxiety and perspective taking were not associated with changes in outgroup attitudes, thus no mediation effect and therewith no support for Hypothesis 5 was found. Surprisingly, although these variables did not mediate the contact effect, the high motivation to attend the Human Library event presented a positive mediator, meaning that visitors' high motivation explains the improvement of outgroup attitudes. In the following, I elaborate on interesting findings that require further discussion.

The contact effect and the influence of quality. Overall, this study demonstrated that a generalization from the individual to the respective minority group took place (Stark, Flache, & Veenstra, 2013), meaning that visitors applied the impression of the individual, with whom they had contact, to the entire group. The findings support the intergroup contact theory (Allport, 1954) and indicate its applicability to the context of a Human Library conversation. This demonstrates great strength for the theory as well as positive impacts of a Human Library event. However, this study showed that not every intergroup contact evokes a positive contact effect, instead the perceived conversation quality plays an influential role in the contact effect. According to Paolini et al. (2014), quality of the contact is more important than quantity for the contact effect. This is in line with the findings of this study, which indicated that one short conversation with a minority group member is sufficient to improve people's attitudes towards the respective minority group if the conversation was positively perceived. Consequently, it is difficult to generalize the impact of a conversation at a Human Library event.

The contact effect and the influence of typicality. Contrary to my expectations and to past research (see Brown et al., 2007), typicality did not moderate the contact effect. Nonetheless, typicality of the conversation partner showed a significant, positive correlation with outgroup attitudes after the contact, meaning that intergroup contact with a more typical

conversation partner is associated with more favorable attitudes towards the respective minority group. The question remains, why this study found no significant moderation effect for typicality. One possible explanation is the use of a single item, which asks about the general representativeness (for an exact formulation, see *Measures*). This question leaves space for diverse interpretations of representativeness, such as referring to a typical outward appearance of the outgroup or rather to a typical life story. Consequently, different interpretations might explain the insignificant results. Following, the use of multiple questions and a clear formulation of typicality is advisable to avoid insignificant findings. In addition, an investigation of different forms of typicality might be interesting to determine whether different forms of typicality influence the contact effect in a different way.

The least wins the most. Especially people with negative outgroup attitudes benefit from intergroup contact (see Hodson, 2011). The present study specifies this by finding that especially people with little knowledge about a specific outgroup or with low perspective taking for minority group members indicated the strongest improvement after the conversation. Before the conversation, visitors indicated a different extent of knowledge about as well as a different extent of perspective taking of the three individual minority groups. Specifically, visitors who talked to a transgender demonstrated the least amount of knowledge and the least ability to take the perspective of the respective minority group. However, after the conversation, only visitors who talked to a transgender indicated a significant increase in knowledge and only visitors who talked to a transgender or a refugee indicated a significant increase in the extent of perspective taking over time. Following, these findings suggest that intergroup effect can be especially beneficial for people, who know little about an outgroup or who find it difficult to take the perspective of an outgroup member. Nonetheless, it must be taken into consideration that visitors already scored relatively high on the relevant study variables at the pretest. Concluding, this finding presents inspiration for future research but

cannot be generalized to people who have no knowledge or no ability to take the perspective of an outgroup member before the contact.

The spillover effect to another outgroup. Interestingly, next to a generalization from the individual to the group, this study further showed a generalization from the outgroup, with whom the visitor had contact, to another outgroup of no contact, namely homeless people. Although such a spillover effect is barely found (see Pettigrew, 1997), in the present study, visitors showed a significant decrease in intergroup anxiety as well as a significant improvement of attitudes towards homeless people after intergroup contact with a member of another minority group. One possible explanation for the spillover effect is the environment of the Human Library event. At the event, visitors were confronted with the existence of numerous minority groups in different indirect ways. For example, the physical presence of various minority group members at the event, as visitors were in the same room or sat at the same table with different minority group members, might lower their anxiety to interact with members of outgroups, in general. Further, visitors were presented with a booklet of the life stories of all participating minority group members which might further raise visitors' awareness about the existence of numerous minority groups, which might facilitate the improvement of outgroup attitudes towards minority groups in general. Overall, the open and welcoming atmosphere for social diversity at the event, without focusing on only one specific minority group, might facilitate this spillover effect. It can be said that while the finding of a spillover effect demonstrates a great strength for positive impacts of visiting a Human Library, the specific reasons for such an effect at a Human Library event remain unclear and require further research attention.

Underlying processes. In line with Pettigrew and Tropp (2008) and with the current theory of change, this study supports the idea that intergroup contact increases the extent of knowledge, perspective taking and outgroup attitudes and decreases intergroup anxiety. This

finding presents strong support for positive impacts of the Human Library. However, contrary to the theory of change, the changes in knowledge, perspective taking and intergroup anxiety were not correlated with outgroup attitudes, thus they did not explain the improvement of outgroup attitudes. An explanation for the non-significant findings are the high correlations among the mediator variables, as collinearity attenuates a mediation effect (see Preacher & Hayes, 2004). In line with this, past research overly tested the influence of one of the mediators on outgroup attitudes per study, but barely tested a mediation analysis including all four mediators (see Pettigrew & Tropp, 2008). Although, theoretically speaking, the variables describe distinct constructs, it is likely that they explain similar parts in the change of outgroup attitudes, such as a cognitive change (knowledge and perspective taking) and an affective change (empathy and intergroup anxiety). An in-depth investigation of the inter-correlations as well as the individual and shared contributions of the mediators require further research attention, as it could not be analyzed in this study due to a limited scope.

Empathy. Although Pettigrew and Tropp (2008) argued for an especially strong effect of empathy on the contact effect, visitors' extent of empathy did not change in the present study. To explain this, I examined the construct of empathy in more detail. Past intergroup contact research often used perspective taking and empathy as one construct (see Pettigrew et al., 2006), whereas the present study used two distinct constructs and found different results. In contrast to a positive change of perspective taking over time, no change was found in empathy. Hence, the question arises, why visitors' outcomes of the two constructs differed. Although they were positively correlated, there are substantial differences, as perspective taking is based on cognition, whereas empathy is based on emotion (Galinsky, Maddux, Gilin, & White, 2008). Following, the two constructs might rely on different processes in the contact effect. In line with this, a recent study (Galinsky et al., 2008) argued that while an increase in perspective taking is visible immediately, changes in empathy might

develop over time. Consequently, a possible explanation for no significant change in empathy is the time and amount of data collection assessments in the present study. The final analyzable data was assessed immediately after the conversation, thus visitors might not have had enough time to process the information. Further, by using an additional wave of data collection, as it was initially planned (see *Design*), one can account for possible effects that require more time to process. Overall, it can be said that it was beneficial to assess empathy and perspective taking with two distinct constructs and that it is important to collect data at multiple timepoints.

Motivation. Although not hypothesized in advance, this study showed that the positive contact effect can be explained by visitors' high motivation to attend the Human Library. This is in line with past research (see Halperin et al., 2012), which highlighted the importance of people's motivation to engage in intergroup contact in order to improve intergroup relations. According to Pettigrew (1997), people who are more motivated engage more openly with outgroup members and following have more favorable attitudes towards them. Since visitors attended the event voluntarily, it seems likely that they were highly motivated to engage in intergroup contact with minority group members. Nonetheless, this influential finding demonstrates the variety of factors that might influence the contact effect but remain undiscovered. Following, it is important for future research to not merely rely on the established key mediators of past research but to pay further attention to potential others, such as the motivation of the visitor or the environment of the intergroup contact.

Visitors versus non-visitors. A common critique towards the Human Library is that people who attend a Human Library are generally less prejudiced against minority groups than non-visitors, so that the findings cannot be generalized to non-visitors. However, outcomes of the present study found no differences between visitors of the Human Library and non-visitors in the evaluation of refugees, transgender and homeless people, except for

the extent of empathy towards homeless people (see Figure 2). Following, non-visitors demonstrated a similar extent of outgroup attitudes, perspective taking, knowledge and intergroup anxiety towards the minority groups, thus no initial differences were found. This presents an important outcome and suggests that the positive impacts of the Human Library cannot be explained by initial differences between the two populations, as both groups have the same starting point.

Limitations and future research directions

Reality constraints of the Human Library. Due to the fact that this study presents field research, I had limited control about certain study conditions. Following, a limitation of this study were reality constraints, which this study faced, such as small sample sizes regarding the minority groups due to the short duration of the event, a low response rate, non-parametric distributions of the study variables and limited control about the available minority groups, which forced me to merge different minority groups to broader categories. It is important to highlight that these limitations decreased the statistical power of the results and limit the ability to generalize the findings. Consequently, following aspects of improvement are advisable for future research: (1) To increase incentives for participation in order to increase response rates, (2) to investigate more than one Human Library event with similar minority groups in order to increase sample sizes, (3) to use a comparison condition in order to generalize the findings to a wider population, and (4) to conduct a laboratory follow-up study, where a Human Library is duplicated in an experimental setting in order to increase the control of the researcher and minimize these reality constraints.

Differences between the minority groups. Another limitation addresses differences between the minority groups. Changes in the extent of outgroup attitudes, intergroup anxiety, knowledge and perspective taking differed across the three individual minority groups, meaning that for example the extent of outgroup attitudes only changed for visitors who

talked to a person with a psychological disorder or a refugee but not for visitors who talked to a transgender. Concluding, different effects were noticed for visitors of different minority groups. Since different visitors talked to different minority groups, it is difficult to compare the outcomes of the diverse minority groups. The question arises, whether existing differences were due to different minority groups or due to individual differences of the visitors? By using an experimental follow-up study, this uncertainty can be eliminated.

Long-term effect. A final limitation of this study is the lack of an endline assessment, as it was initially planned. This has two major limitations: First, as discussed above with regard to the effect of empathy, certain factors might require more time to have an effect. Thus, their effect only becomes visible over time. Second, certain effects might change over time, for example the changes that we found might wear off over time. Consequently, no inferences about a long-term effect of the Human Library can be made. Moreover, due to the special environment at the Human Library and the immediate impact of the conversation, the findings might present a change which not necessarily remains over time. However, to make robust inferences about the impacts of a Human Library event, the use of multiple timepoints of data collection after the intergroup contact is crucial.

Implications

The present study empirically tested the impact of a Human Library event and provides first insights into ongoing processes, describing what happens to a visitor during a conversation with a minority group member at the Human Library event. Overall, this study provides strong support for the ultimate aim of the Human Library by demonstrating that one rather short conversation at the event, wherein people participate voluntarily, can be sufficient to improve visitors' outgroup attitudes towards the respective minority group. This finding further enriches the scientific knowledge regarding the applicability of the intergroup contact theory (Allport, 1954) to the real world, namely to the context of a Human Library event.

Besides the improvement of outgroup attitudes, this study found that one short conversation can increase knowledge and perspective taking as well as it can decrease visitors' extent of intergroup anxiety for the minority group. Moreover, a conversation with one minority group member can even have positive effects on the visitors' evaluation of another minority group, which might be explained by the special environment of the Human Library event. Overall, it can be said that, visiting the Human Library can be very beneficial to improve intergroup relations in society. Nonetheless, it is important to consider various contextual and individual factors that might influence the effect of the contact effect. This study demonstrated the importance of the conversation quality and of visitors' motivation to attend the event for the contact effect at the Human Library. Consequently, it is difficult to generalize the benefits of a conversation at the Human Library event.

A Human Library is a valuable initiative, which doesn't require large financial resources (Human Library, n.d.), as the minority group members and most organizers generally participate voluntarily in the project and the expenses for the venue depend on the location. Moreover, the event can be organized in different contexts and for different target groups by selecting specific minority groups, thus is adjustable to diverse situations and purposes. One example can be the organization of a Human Library event for pupils at school with minority groups that especially teenagers have prejudices against. Concluding, a Human Library can be very cost efficient and can be adapted to diverse situations.

Conclusion

This research demonstrates the importance to use social psychological research to explain ongoing processes in the external world, thus to use field research. Field research helps to take out the knowledge researchers have established in the laboratory to test its effectiveness in the external world. This study adds to the existing literature by showing the applicability of the intergroup contact theory (Allport, 1954) to the context of a Human

Library event and demonstrates that one short conversation can be sufficient to improve

outgroup attitudes if the contact is perceived positively. Following, this study presents a first

systematic impact analysis of a Human Library event. Overall, this study supports the idea

that intergroup contact at the Human Library can have positive impacts for the visitor and

therewith for society by improving intergroup relations. Concluding, this study promotes the

slogan of the Human Library: Don't judge a book by its cover.

References

Allport, G.W. (1954). *The nature of prejudice.* Reading: Massachusetts. Addison-Wesley

Publishing Company.

Brambilla, M., Hewstone, M., & Colucci, F. P. (2013). Enhancing moral virtues: Increased

perceived outgroup morality as a mediator of intergroup contact effects. *Group

Processes & Intergroup Relations*, *16*(5), 648-657. doi:10.1177/1368430212471737.

Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in

Experimental Social Psychology, 37*, 255–343. doi:10.1016/S0065-2601(05)37005-5.

Brown, R., Eller, A., Leeds, S., & Stace, K. (2007). Intergroup contact and intergroup

attitudes: a longitudinal study. *European Journal of Social Psychology*, *37*(4), 692-

703. doi:10.1002/ejsp.384.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale,

NJ: Lawrence Earlbaum Associates.

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS

Catalog of Selected Documents in Psychology, 10*, 85. Retrieved from

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.462.7754&rep=rep1&type=

pdf.

Dion, K. L. (1985). Social Distance Norms in Canada: Effects of Stimulus Characteristics and

Dogmatism. *International Journal of Psychology*, 20(3-4), 743-749.

doi:10.1080/00207598508247567.

Fiske, S. T., Cuddy, A. J., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype

content: Competence and warmth respectively follow from perceived status and

competition. *Journal of Personality and Social Psychology, 82*(6), 878-902.

doi:10.1037/0022-3514.82.6.878.

Galinsky, A. D., Maddux, W. W., Gilin, D., & White, J. B. (2008). Why It Pays to Get Inside

the Head of Your Opponent. *Psychological Science*, *19*(4), 378-384.

doi:10.1111/j.1467-9280.2008.02096.x.

Halperin, E., Crisp, R. J., Husnu, S., Trzesniewski, K. H., Dweck, C. S., & Gross, J. J. (2012).

Promoting intergroup contact by changing beliefs: Group malleability, intergroup

anxiety, and contact motivation. *Emotion*, *12*(6), 1192-1195. doi:10.1037/a0028620.

Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable

mediation, moderation, and conditional process modeling. Retrieved from

http://www.afhayes.com/public/process2012.pdf.

Hodson, G. (2011). Do ideologically intolerant people benefit from intergroup contact?

Current Directions in Psychological Science, 20(3), 154-159.

doi:10.1177/0963721411409025.

Human Library (n.d.). Retrieved from http://humanlibrary.org.

Kuta, I., Kwiatkowska, Z., Jacaszek, J., & Kaczaluba, M. (2015, May). *Paradoxical effects of

the Human Library on general prejudice*. Poster session presented at Psychology

faculty psychonalia 2014, Faculty of Psychology, University of Warsaw.

Leach, C.W., Ellemers, N., & Barreto, M. (2007). Group virtue: The importance of morality

(vs. competence and sociability) in the positive evaluation of in-groups. *Journal of

Personality and Social Psychology. 93*, 234-249. doi:10.1037/0022-3514.93.2.234.

Maas, C. J., & Hox, J. J. (2005). Sufficient Sample Sizes for Multilevel Modeling.

Methodology, 1(3), 86-92. doi:10.1027/1614-2241.1.3.86.

Pallant, J. (2006). *SPSS survival manual: A step by step guide to data analysis using SPSS for

Windows (version 12)*. Buckingham: Open University Press.

Paolini, S., Harwood, J., Rubin, M., Husnu, S., Joyce, N., & Hewstone, M. (2014). Positive

and extensive intergroup contact in the past buffers against the disproportionate impact of negative contact in the present. *European Journal of Social Psychology*, *44*(6), 548-562. doi:10.1002/ejsp.2029.

Partridge, E. J. (2016). Exploring Predictors of Canadian Attitudes Toward Syrian Refugees and How They Should be Helped. *Undergraduate Honors Theses. 32.* Retrieved August 25, 2017 from http://ir.lib.uwo.ca/psychK_uht/32.

Pettigrew, T. F. (1997). Generalized Intergroup Contact Effects on Prejudice. *Personality and Social Psychology Bulletin, 23*(2), 173-185. doi:10.1177/0146167297232006.

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, *90*(5), 751-783. doi:10.1037/0022-3514.90.5.751.

Pettigrew, T. F., & Tropp, L. R. (2008), How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922–934. doi: 10.1002/ejsp.504.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*(4), 717-731. doi:10.3758/bf03206553.

Schaller, M. & Neuberg, S.L. (2008). Intergroup prejudices and intergroup conflicts. In C. Crawford, & D.L. Krebs (Eds), *Foundations of Evolutionary Psychology* (pp. 399–412). Mahwah NJ: Lawrence Erlbaum Associates.

Stark, T. H., Flache, A., & Veenstra, R. (2013). Generalization of Positive and Negative Attitudes Toward Individuals to Outgroup Attitudes. *Personality and Social Psychology Bulletin*, *39*(5), 608-622. doi:10.1177/0146167213480890.

Stephan, W.G. (2002). A survey for use in evaluating dialogue programs. Retrieved March 09, 2017 from http://ncdd.org/exchange/files/docs/walter_stephan.pdf.

van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. (2004). Put Your Money Where

Your Mouth Is! Explaining Collective Action Tendencies Through Group-Based Anger

and Group Efficacy. *Journal of Personality and Social Psychology, 87*(5), 649-664.

doi:10.1037/0022-3514.87.5.649.

White, H. (2009). Theory-based impact evaluation: Principles and Practice (Working Paper

3). *International Initiative for Impact Evaluation (3ie)*. Retrieved from

www.3ieimpact.org/media/filer_public/2012/05/07/Working_Paper_3.pdf.

Appendix A

Baseline Questionnaire/ Pretest for visitors who talk to a refugee

1.	Please provide the following personal information:			
1.1	Nationality	☐ Dutch	☐ German	☐ other:_____
1.2	Gender	☐ Woman	☐ Man	☐ other
1.3	Age	_____ *years*		
1.4	Level of education	☐ school ☐ HBO	☐ University	☐ other: _____
1.5	Please also indicate the following code: (which will be processed anonymously) *Example:* *You are left-handed, you live in the Oude Boteringestraat 18, and you are born on the 15th of May. Your code would be:* *1. Left- or right-handed: L for left or R for right* *L* *2. Your house number* *18* *3. Your day of birth (two digits)* *15* Please indicate your code: 1. Left- or right-handed: *L* for left or *R* for right ____ 2. Your house number ____ 4. Your day of birth (two digits) ____			

2.	Please indicate: When interacting with a refugee, to what extent would you feel…					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
2.1	… awkward?	*1*	*2*	*3*	*4*	*5*
2.2	… comfortable?	*1*	*2*	*3*	*4*	*5*
2.3	… at ease?	*1*	*2*	*3*	*4*	*5*
2.4	… anxious?	*1*	*2*	*3*	*4*	*5*
2.5	… threatened?	*1*	*2*	*3*	*4*	*5*
2.6	… confident?	*1*	*2*	*3*	*4*	*5*

3.	Please indicate to what extent you agree with the following statements:					
		Strongly Disa-gree	*Somewhat Disagree*	*Neither Agree nor Disagree*	*Somewhat Agree*	*Strongly Agree*
3.1	I find it easy to put myself in the place of a refugee when I want to understand his/her viewpoint.	*1*	*2*	*3*	*4*	*5*
3.2	I find it easy to understand a refugee's perspective on most issues.	*1*	*2*	*3*	*4*	*5*
3.3	I often have tender, concerned feelings for refugees.	*1*	*2*	*3*	*4*	*5*
3.4	When I see a refugee being treated unfairly, I generally feel very pity for him/her.	*1*	*2*	*3*	*4*	*5*
3.5	I would sign a petition that aims to improve the integration of refugees in society.	*1*	*2*	*3*	*4*	*5*
3.6	I would participate in a demonstration that aims to improve the integration of refugees in society.	*1*	*2*	*3*	*4*	*5*

4.	Please indicate: To what extent do you think that refugees are …					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
4.1	... honest?	1	2	3	4	5
4.2	… trustworthy?	1	2	3	4	5
4.3	… competent?	1	2	3	4	5
4.4	… intelligent?	1	2	3	4	5
4.5	… warm?	1	2	3	4	5
4.6	… friendly?	1	2	3	4	5
5.	To what extent would you be open to have a refugee as …					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
5.1	… your spouse?	1	2	3	4	5
5.2	… a close friend?	1	2	3	4	5
5.3	… a neighbor?	1	2	3	4	5
5.4	In general, to what extent are you interested in having personal contact with a refugee?	1	2	3	4	5
6.	Please indicate what describes your experience with refugees best:					
		Nothing	*Very little*	*Somewhat*	*Much*	*A great extent*
6.1	In general, how much do you know about refugees?	1	2	3	4	5
6.2	How much do you know about the life of refugees?	1	2	3	4	5
6.3	How often have you been in contact with a refugee?	☐ Never	☐ Rarely	☐ Occasionally	☐ Frequently	☐ Very Frequently
		Very negative	*Rather negative*	*Neither negative nor positive*	*Rather positive*	*Very positive*
6.4	How would you describe the past contact?	1	2	3	4	5
6.5	How many people do you know that are refugees?	_____ people.				
6.6	How many friends do you have that are refugees?	_____ friends.				
7.	Please indicate: When interacting with a homeless person, to what extent would you feel …					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
7.1	… awkward?	1	2	3	4	5
7.2	… comfortable?	1	2	3	4	5
7.3	… at ease?	1	2	3	4	5
7.4	… anxious?	1	2	3	4	5
7.5	… threatened?	1	2	3	4	5
7.6	… confident?	1	2	3	4	5

8.	Please indicate to what extent you agree with the following statements:					
		Strongly Disagree	*Somewhat Disagree*	*Neither Agree nor Disagree*	*Somewhat Agree*	*Strongly Agree*
8.1	I find it easy to put myself in the place of a homeless person when I want to understand his/her view-point.	*1*	*2*	*3*	*4*	*5*
8.2	I find it easy to understand a home-less person's perspective on most issues.	*1*	*2*	*3*	*4*	*5*
8.3	I often have tender, concerned feel-ings for homeless people.	*1*	*2*	*3*	*4*	*5*
8.4	When I see a homeless person be-ing treated unfairly, I generally feel very pity for him/her.	*1*	*2*	*3*	*4*	*5*
8.5	I would sign a petition that aims to improve the integration of homeless people in society.	*1*	*2*	*3*	*4*	*5*
8.6	I would participate in a demonstration that aims to improve the integration of homeless people in society.	*1*	*2*	*3*	*4*	*5*
9.	Please indicate: To what extent do you think that homeless people are…					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
9.1	... honest?	*1*	*2*	*3*	*4*	*5*
9.2	… trustworthy?	*1*	*2*	*3*	*4*	*5*
9.3	… competent?	*1*	*2*	*3*	*4*	*5*
9.4	… intelligent?	*1*	*2*	*3*	*4*	*5*
9.5	… warm?	*1*	*2*	*3*	*4*	*5*
9.6	… friendly?	*1*	*2*	*3*	*4*	*5*
10.	To what extent would you be open to have a homeless person as …					
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great extent*
10.1	… your spouse?	*1*	*2*	*3*	*4*	*5*
10.2	… a close friend?	*1*	*2*	*3*	*4*	*5*
10.3	… a neighbor?	*1*	*2*	*3*	*4*	*5*
10.4	In general, to what extent are you interested in having personal con-tact with a homeless person?	*1*	*2*	*3*	*4*	*5*
11.	Please indicate what describes your experience with homeless people best:					
		Nothing	*Very little*	*Somewhat*	*Much*	*A great extent*

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11.1	In general, how much do you know about homeless people?	1	2	3	4	5
11.2	How much do you know about the life of homeless people?	1	2	3	4	5
12.	Finally, we have a few questions about the Human Library:					
12.1	What motivation brought you to the Human Library? *(Multiple answers possible)*	☐ curiosity	☐ support for the event	☐ Personal reason	☐ To meet new people	☐ other: _____
12.2	How did you hear about the Human Library? *(Multiple answers possible)*	☐ Social media (i.e.facebook)	☐ via friends	☐ TV ☐ Ra-dio	☐ News-paper	☐ other: _____ _____
		Not at all	*Very little*	*Somewhat*	*Much*	*To a great ex-*
12.3	How motivated are you to visit a Human Library?	1	2	3	4	5
12.4	How many times have you visited the Human Library before today?	_____ *times.*				

Thank you for answering the questions!

Now, enjoy your conversation!

Appendix B

Relevant tables presenting study results

Table B1

Overview of represented minority groups at the Human Library event and amount of reported conversations

Book Title	Count (%)	Broader Category	Count (%)
African Political-Activist Refugee	4 (4.6%)	Refugee [a]	12 (13.8%)
African Homosexual Refugee	3 (3.4%)		
Syrian Refugee	5 (5.7%)		
Pakistani Refugee	3 (3.4%)		
OCD	5 (5.7%)	Psychological Disorder [a]	15 (17.2%)
PTSD	6 (6.9%)		
Anxiety Disorder	4 (4.6%)		
Transwoman	4 (4.6%)	Transgender [a]	11 (12.6%)
Transwoman	4 (4.6%)		
Transman	3 (3.4%)		
Blind	4 (3.4%)	Blind	6 (6.9%)
Visually Impaired	2 (2.3%)		
HIV+ (Man)	2 (2.3%)	HIV+	3 (3.4%)
HIV+ (Woman)	1 (1.1%)		
Iranian Woman	4 (4.6%)	Iranian Woman	4 (4.6%)
Clairvoyant	5 (5.7%)	Clairvoyant	5 (5.7%)
Brain Damaged	5 (5.7%)	Brain Damaged	5 (5.7%)

Vegan	4 (4.6%)	Vegan	4 (4.6%)
Ex-Drug Addict	3 (3.4%)	Drug Addicted	3 (3.4%)
Cancer	5 (5.7%)	Cancer	5 (5.7%)
Bi-cultural	4 (4.6%)	Bi-cultural	4 (4.6%)
BDSM	4 (4.6%)	BDSM	4 (4.6%)
Tattooed	3 (3.4%)	Tattooed	3 (3.4%)
Homosexual	1 (1.1%)	Homosexual	1 (1.1%)

Note. N = 87

[a] This category presents one of the three individual minority groups, which was used for further in-depth analyses.

Table B2

Descriptive information of relevant study variables

Variable	Group	Time	N	M (SD)	α / r	S-W[a]
Outgroup attitudes	TG (overall effect)	T1	85	3.72 (.66)	.90	.96*
		T2	83	4.05 (.75)	.96	.88***
		T2-T1	81	.26 (.53)	-	.91***
	TG (Psych. Disorder)	T1	14	3.52 (.73)	.93	.98
		T2	13	4.10 (.81)	.98	.86*
		T2-T1	11	.23 (.84)	-	.77**
	TG (Refugee)	T1	14	3.92 (.57)	.90	.93
		T2	14	4.23 (.69)	.96	.88
		T2-T1	14	.31 (.37)	-	.82*
	TG (Transgender)	T1	11	3.97 (.67)	.96	.92*
		T2	11	4.11 (.75)	.97	.90
		T2-T1	11	.13 (.44)	-	.83*
	Comparison group	T1	83	3.22 (.49)	.78	.94**
		T2	82	3.38 (.54)	.88	.88***
		T2-T1	81	.11 (.40)	-	.93***
Quality	TG (overall effect)	T2	84	4.23 (.57)	.71	.92***

	TG (Psych. Disorder)	T2	15	4.10 (.56)	.73	.87*
	TG (Refugee)	T2	15	4.40 (.47)	.50	.93
	TG (Transgender)	T2	11	4.20 (.53)	.82	.87
Typicality	TG (overall effect)	T2	82	3.6 (.91)	-	.89***
	TG (Psych. Disorder)	T2	15	4.07 (1.03)	-	.81**
	TG (Refugee)	T2	14	3.57 (.85)	-	.88
	TG (Transgender)	T2	10	3.30 (.95)	-	.91
Intergroup Anxiety	TG (overall effect)	T1	86	2.13 (.61)	.78	.95**
		T2	87	1.85 (.59)	.76	.95**
		T2-T1	86	-.28 (.61)	-	.91***
	TG (Psych. Disorder)	T1	15	2.35 (.85)	.91	.90
		T2	15	2.10 (.63)	.73	.94
		T2-T1	15	-.29 (.92)	-	.81**
	TG (Refugee)	T1	15	2.04 (.56)	.86	.95
		T2	15	1.97 (.68)	.84	.92
		T2-T1	15	-.08 (.46)	-	.93
	TG (Transgender)	T1	11	2.34 (.47)	.79	.92
		T2	11	1.82 (.54)	.80	.82*
		T2-T1	11	-.52 (.47)	-	.95
	Comparison group	T1	83	2.66 (.59)	.81	.96**
		T2	83	2.51 (.61)	.81	.97
		T2-T1	82	-.15 (.59)	-	.92***
Empathy	TG (overall effect)	T1	87	3.78 (.87)	.31**	.94***
		T2	87	3.99 (.81)	.40***	.92***
		T2-T1	87	.22 (.83)	-	.92***
	TG (Psych. Disorder)	T1	15	3.70 (.89)	.28	.92
		T2	15	3.80 (.85)	.22	.94
		T2-T1	15	.10 (.95)	-	.93
	TG (Refugee)	T1	15	4.03 (1.03)	.50*	.79**
		T2	15	4.40 (.63)	.49*	.85**
		T2-T1	15	.37 (1.11)	-	.64***
	TG (Transgender)	T1	11	3.45 (.79)	.19	.95

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		T2	11	3.50 (1.12)	.33	.95
		T2-T1	11	.05 (.93)	-	.94
	Comparison group	T1	83	4.07 (.73)	.43***	.89***
		T2	83	4.03 (.77)	.41***	.89***
		T2-T1	82	-.31 (.47)	-	.89***
Perspective taking	TG (overall effect)	T1	87	3.36 (1.06)	.72 ***	.95**
		T2	87	3.98 (.86)	.71***	.88***
		T2-T1	87	.62 (.93)	-	.96*
	TG (Psych. Disorder)	T1	15	3.80 (.90)	.84***	.88*
		T2	15	4.13 (.77)	.89***	.85*
		T2-T1	15	.33 (.84)	-	96
	TG (Refugee)	T1	17	3.17 (.97)	.59*	.95
		T2	17	3.41 (.73)	.55*	.93
		T2-T1	13	.90 (1.11)	-	.92
	TG (Transgender)	T1	11	2.91 (.77)	.33	.82*
		T2	11	3.86 (.84)	.71*	.92
		T2-T1	11	.95 (.65)	-	.93
	Comparison group	T1	83	3.06 (.98)	.62***	.95**
		T2	83	3.28 (.94)	.84***	.94***
		T2-T1	82	.26 (.71)	-	.90***
Knowledge	TG (overall effect)	T1	87	2.89 (.99)	.84***	.95**
		T2	86	3.30 (.82)	.77***	.92***
		T2-T1	86	.40 (.73)	-	.89***
	TG (Psych. Disorder)	T1	15	3.73 (1.1)	.78***	.90
		T2	14	3.82 (1.05)	.74**	.90
		T2-T1	14	-.04 (.41)	-	.77**
	TG (Refugee)	T1	15	2.83 (.52)	.49*	.76**
		T2	15	3.07 (.70)	.90***	.82**
		T2-T1	15	.23 (.49)	-	.73**
	TG (Transgender)	T1	11	2.18 (.56)	.66*	.89
		T2	11	3.23 (.26)	.50	.65***
		T2-T1	11	1.04 (.57)	-	.81**

Comparison group	T1	83	2.52 (.69)	.72***	.89***
	T2	83	2.67 (.75)	.85***	.86***
	T2-T1	82	.12 (.54)	-	.89***

Note. TG = Treatment group (Minority group, with whom the visitor had contact). T1 = pre-test; T2 = posttest; S-W = Shapiro-Wilk statistic; * $p < .05$. ** $p < .01$. ** $p < .001$.

[a]The Shapiro-Wilks test statistics are based on the residuals

Table B3

Comparison of treatment condition (visitors) with control condition (non-visitors) at the pretest

Variable	Group	Condition	N	M (SD)	U
Outgroup attitudes	Homeless	TC	83	3.22 (.49)	1225.50
		CC	41	2.96 (.77)	
	Transgender	TC	11	3.97 (.67)	162.00
		CC	41	3.82 (.78)	
	Refugee	TC	14	3.92 (.57)	189.00
		CC	41	3.61 (.68)	
Intergroup anxiety	Homeless	TC	83	2.66 (.59)	1596.00
		CC	41	2.68 (.71)	
	Transgender	TC	11	2.34 (.47)	154.00
		CC	41	2.06 (.67)	
	Refugee	TC	15	2.04 (.56)	225.50
		CC	41	2.23 (.66)	
Empathy	Homeless	TC	82	4.07 (.73)	1247.50*
		CC	41	3.70 (.78)	
	Transgender	TC	11	3.45 (.79)	197.00

		CC	41	3.61 (.68)	
	Refugee	TC	17	4.06 (.97)	273.50
		CC	41	4.00 (.86)	
Perspective taking	Homeless	TC	83	3.06 (.98)	161.50
		CC	41	3.23 (.82)	
	Transgender	TC	11	3.45 (.79)	146.00
		CC	41	3.35 (.94)	
	Refugee	TC	15	4.03 (1.03)	235.50
		CC	41	3.54 (.90)	
Knowledge	Homeless	TC	83	2.52 (.69)	1495.50
		CC	41	2.50 (.77)	
	Transgender	TC	11	2.18 (.56)	162.00
		CC	41	2.56 (.63)	
	Refugee	TC	15	2.83 (.52)	258.00
		CC	41	3.07 (.75)	

Note. The statistics are based on the Mann-Whitney U Test. * $p < .05$. TC = Treatment condition (visitors); CC = Control condition (non-visitors).

Table B4

Overview of changes over time.

Variable	Group (Time)	Z (p)	N	r
Outgroup attitudes	Treatment group (T1) – Comparison group (T1)	-5.62***	82	.62
	Treatment group (T2) – Treatment group (T1) [a]	-4.76***	83	.52
	Comparison group (T2) – Comparison group (T1)	-2.75**	81	.31
	Treatment group (T2-T1) – Comparison group (T2-T1) [a]	-2.27*	77	.26
Knowledge	Treatment group (T1) – Comparison group (T1)	-1.82	83	.20
	Treatment group (T2) – Treatment group (T1) [a]	-4.10***	86	.44
	Comparison group (T2) - Comparison group (T1)	-1.08	82	.12
	Treatment group (T2-T1) – Comparison group (T2-T1) [a]	-1.56	81	.17
Intergroup anxiety	Treatment group (T1) – Comparison group (T1)	-4.93***	82	.54
	Treatment group (T2) – Treatment group (T1) [a]	-4.36***	86	.47
	Comparison group (T2) - Comparison group (T1)	-2.93**	82	.32
	Treatment group (T2-T1) – Comparison group (T2-T1) [a]	-8.95***	81	.98
Empathy	Treatment group (T1) – Comparison group (T1)	-1.85	83	.20
	Treatment group (T2) – Treatment group (T1) [a]	-1.94	87	.21
	Comparison group (T2) - Comparison group (T1)	-.31	82	.03
	Treatment group (T2-T1) – Treatment group (T2-T1) [a]	-1.49	82	.16
Perspective taking	Treatment group (T1) – Comparison group (T1)	-1.09	83	.12
	Treatment group (T2) – Treatment group (T1) [a]	-4.96***	87	.53
	Comparison group (T2) - Comparison group (T1)	-1.59	82	.18
	Treatment group (T2-T1) – Comparison group (T2-T1) [a]	-2.81**	82	.31

Note. The statistics are based on Sign Tests. * $p < .05$. ** $p < .01$. ** $p < .001$;

r = effect size (Pallant, 2006); C = comparison group; T1 = pretest; T2 = pretest;

[a]denotes statistics that were used for hypotheses testings.

Table B5

Bivariate correlations of study variables and additional variables of interest

	Variables	Time	1a.	1b.	1c.	2a.	2b.	2c.	3a.	3b.	3c.	4a.	4b.	4c.	5a.	5b.	5c.	6.	7.	8.	9.
1a.	Outgroup	T1	1.00	.62***	-.20	.01	.11	.11	.12	.21	.05	-.31**	-.17	.15	.14	.12	-.04	.25*	.13	-.20	.29**
1b.	attitudes	T2		1.00	.55***	-.15	.12	.28*	.10	.31**	.16	-.20	-.39***	-.17	.14	.20	.03	.45***	.33**	-.20	.34**
1c.		T2 – T1			1.00	-.04	.20	.23*	-.01	.10	.09	-.14	-.32**	-.21	.02	.16	.15	.27*	.19	-.16	.12
2a.	Empathy	T1				1.00	.51***	-.55***	.27*	.08	-.23*	-.12	.02	.14	.26*	.05	-.28**	.05	.03	.08	.09
2b.		T2					1.00	.43***	.07	.08	-.01	-.27*	-.10	.18	.13	.10	-.04	.31**	.09	.04	.28*
2c.		T2 – T1						1.00	-.21*	-.01	.24*	-.14	-.13	.02	-.15	.05	.25*	.24*	.06	-.05	.17
3a.	Persp. taking	T1							1.00	.55***	-.63***	-.42***	-.23*	.20	.62***	.45***	-.35**	.08	.28*	.03	.25*
3b.		T2								1.00	.30**	-.23*	-.39***	-.15	.49***	.51***	-.09	.25*	.25*	-.14	.31**
3c.		T2 – T1									1.00	.27*	-.10	-.36**	-.26*	-.04	.31**	.13	-.09	-.16	.01
4a.	Inter. anxiety	T1										1.00	.49***	-.52***	-.33**	-.34**	.06	-.07	-.17	.10	-.29**
4b.		T2											1.00	.48***	-.11	-.27*	-.18	-.27*	-.20	.10	-.37**
4c.		T2 – T1												1.00	.22*	.07	-.23*	-.20	-.02	-.01	-.07
5a.	Knowledge	T1													1.00	.69***	-.59***	-.02	.27*	-.13	.23*
5b.		T2														1.00	.17	.09	.18	-.15	.32**

5c.		T2 – T1	1.00	.12	-.15	.01	.07
6.	Quality	T2		1.00	.23*	.19	.28*
7.	Typicality	T2			1.00	.09	.06
8.	Age	T1				1.00	-.23*
9.	Motivation	T1					1.00

Note. The statistics report Pearson's correlation coefficients (*r*). * *p* <.05. ** *p* <.01. ** *p* <.001; T1 = pretest, T2 = posttest

Appendix C

Additional results of the Human Library event

By establishing personal contact between members of different social groups, the Human Library ultimately aims at reducing prejudice against social minority groups. For a systematic impact analysis of a Human Library event in Groningen, 87 visitors were interviewed to learn more about how they experienced this event. This report provides additional information to offer the following insights: (1) People's reasons to visit the Human Library event, (2) visitors' knowledge about the respective minority group, (3) visitors' evaluation of the conversation, and (4) possible implications of the conversation on visitors' behavioral intentions.

People's reasons to visit the Human Library event

Overall, visitors demonstrated a high motivation to attend the event ($M = 4.07$, $SD = .83$)[11]. More specifically, the majority of the visitors indicated to visit the Human Library to support the event and its idea (35.3%) and/ or to meet new people (27.1%, see Figure C1). These promising findings suggest that people want to raise awareness about minority groups in society and were open to challenge personal prejudices as well as to get into contact with members of minority groups. Interestingly, 17.6% of the visitors indicated to attend the Human Library for personal reasons. A possible explanation for this finding is that people might have personal experience with a specific minority group, for example by knowing a member of this minority group or by being a minority group member themselves. Following, visitors might perceive the conversation as an opportunity to discuss personal issues or to meet people that face similar situations in life.

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[11] Visitors rated their motivation to attend the event on a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*), see Appendix A question 12.3.

Suggestion:

To increase the number of visitors who attend the event for personal reasons, it may be useful, to publish a list with the participating minority groups in advance. Then, people are informed about the minority groups that will participate at the Human Library event.

Reasons to visit the Human Library

other — 7,8% (n = 7)

personal reason — 17.6%, (n = 15)

meet new people — 27.1% (n = 23)

support the event — 35.3% (n= 30)
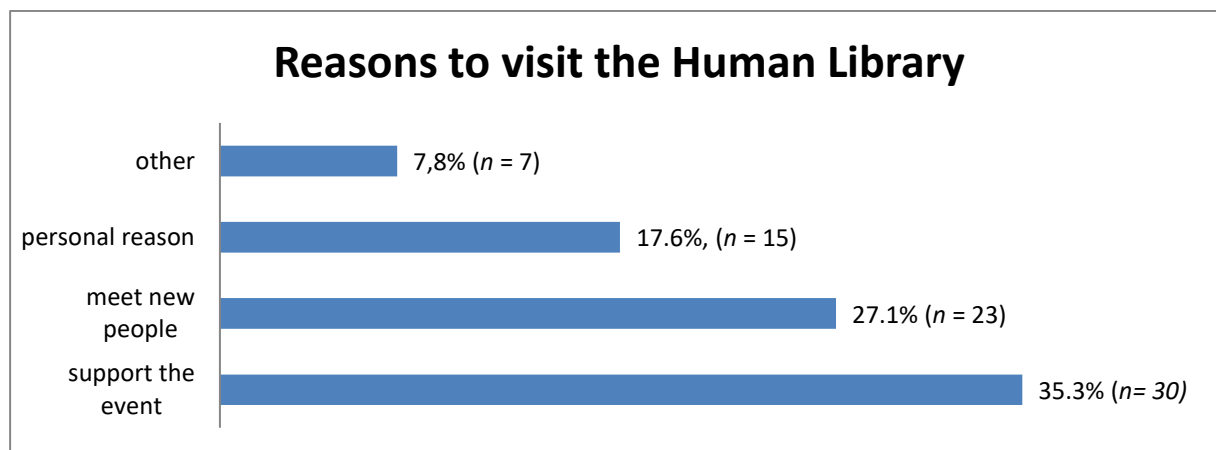
Figure C1. Overview of visitors' reasons to attend the Human Library.

The majority of visitors further indicated that they heard about the event via social media, such as Facebook (41.7%), and/or via friends (45.9%, see Figure C2). Only a minority learned about the event via local media, namely TV, radio or newspaper (3.6%). Thus, overall, social networks had a large impact on people's awareness about the event, whereas local media had less impact. Important to note, Groningen is an international student city and, in line with this, 49.4% (n = 43) of the visitors were internationals with only one person not being a student. Moreover, out of the 43 international visitors, only one visitor (2.3%) indicated that he/ she heard about the event via local media, namely via the newspaper, while the remaining indicated social media and/ or friends. These findings suggest that different forms of media channels reached different people. Thus, these findings demonstrate the impact of the environment on the marketing efficiency.

Suggestion:

To increase the marketing efficiency, it may be advisable to develop a marketing strategy depending on the target group of the event. Specifically, it is important to take the influence of certain characteristics of the target group, such as nationality or age, into consideration when selecting media channels for advertisement.
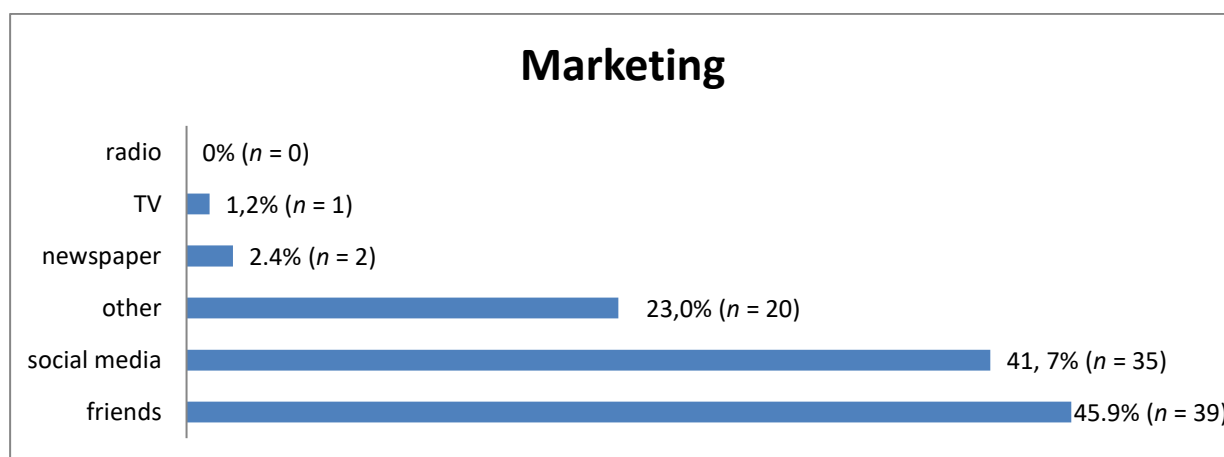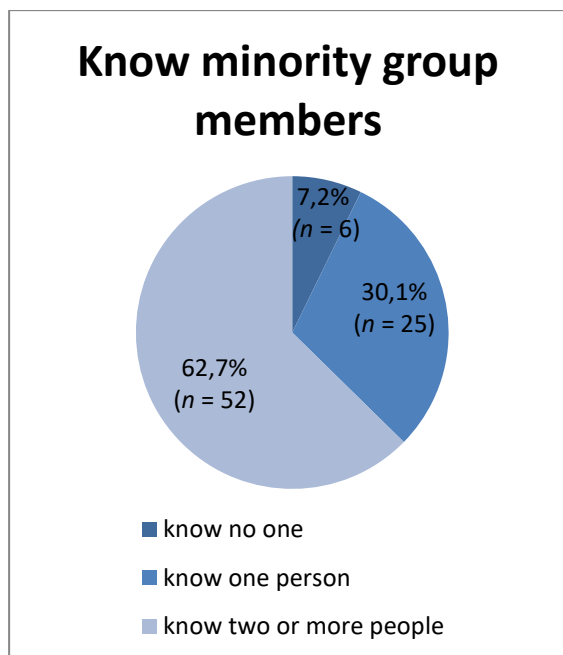

Figure C2. Overview of how visitors heard about the Human Library event.
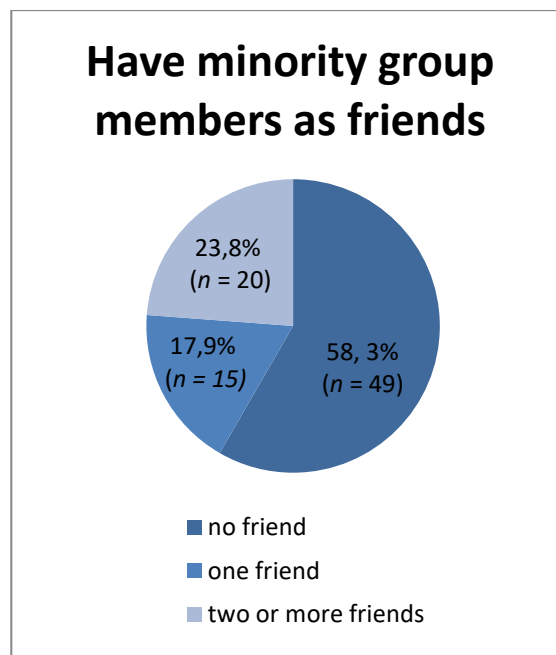
Visitors' knowledge about the respective minority group

In general, the visitors indicated that they knew somewhat about the respective minority group before the conversation ($M = 2.89$, $SD = 1.00$)[12]. More specifically, the majority (92.8%, see Figure C3) indicated that they knew one or more members of the respective minority group, while the majority (58.3%) further indicated that they had no friends that are members of the respective minority group (see Figure C4). The findings suggest that visitors selected minority groups that they do meet in their daily lives but have had no personal contact with, so far. Following, this event presents a unique opportunity for people to engage in a personal conversation with new people and to learn more about their lives.

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[12] Visitors rated their extent of knowledge about the specific minority group on a five-point Likert scale, ranging from 1 (*Nothing*) to 5 (*A great extent*), see Appendix A question 6.1 – 6.2.

OUTGROUP ATTITUDE CHANGE AT THE HUMAN LIBRARY

Know minority group members

7,2%
(*n* = 6)

30,1%
(*n* = 25)

62,7%
(*n* = 52)

■ know no one
■ know one person
■ know two or more people

Have minority group members as friends

23,8%
(*n* = 20)

17,9%
(*n* = 15)

58, 3%
(*n* = 49)

■ no friend
■ one friend
■ two or more friends

Figure C3. Amount of people, the visitors knew that were members of the respective minority group (*N* = 83).

Figure C4. Number of friends, the visitors had that were members of the respective minority group (*N* = 84).

Visitors' evaluation of the conversation

After the conversations, visitors indicated that they learned new information about the lives of the specific minority group (see results of the Master thesis). Besides this positive impact of the conversation, the visitors further described the quality of the conversations as very high (*M* = 4.23, *SD* = .57)[13] and most visitors (82.4%, *n* = 70) voluntarily extended the regular conversation time of 20 minutes for ten additional minutes. Interestingly, almost all visitors (97.4%, see Figure C5) indicated that they were interested in continuing the conversation. This is a very promising finding suggesting that visitors have not only benefitted from the conversation by acquiring new knowledge about the outgroup, but they further enjoyed this contact and indicated their interest to continue the conversation. Especially when considering

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[13] Visitors indicated to what extent they perceived the conversation as pleasant, interesting, emotional, and inspiring. They rated each component on a five-point Likert scale, ranging from 1 (*Not at all*) to 5 (*To a great extent*).

OUTGROUP ATTITUDE CHANGE AT THE HUMAN LIBRARY

the fact that the minority group members had multiple consecutively and rather short conversations per event, the positive evaluation of the visitors demonstrates strong support for the efficiency of the Human Library event.
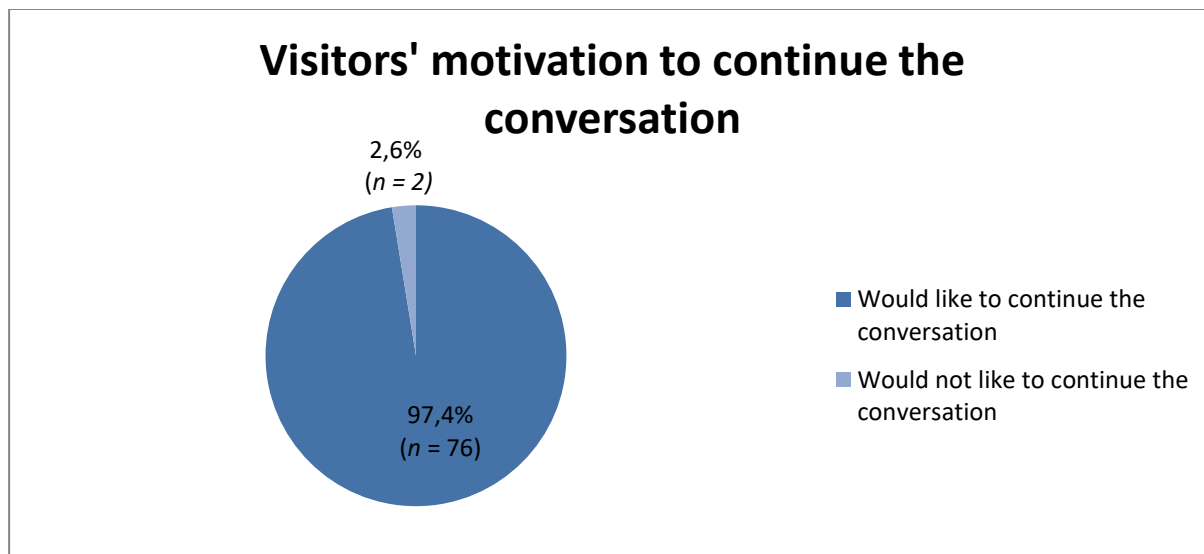

Figure C5. Overview of visitors' willingness to continue the conversation (*N* = 78).

Implications of the conversation on visitors' behavioral intentions

Visitors indicated more favorable attitudes towards the specific minority group after the conversation (see results of the Master thesis). Additionally, visitors indicated their behavioral intentions for intergroup contact before and after the conversation. More specifically, they indicated their interest to engage in future contact with members of the specific minority group[14], their willingness to engage in collective action to improve the integration of the respective minority group[15] as well as their motivation to become involved in upcoming Human Library events.

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[14] Visitors rated their interest in engaging in intergroup contact with members of the specific minority group on four items, using five-point Likert scales, ranging from 1 (*Not at all*) to 5 (*To a great extent*), before and after the conversation, see Appendix A questions 5.1 – 5.4. The items showed high internal reliabilities (α's ≥ .77).
[15] Visitors indicated their willingness to engage in collective on two items, using five-point Likert scales, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*), before and after the conversation, see Appendix A questions 3.5 - 3.6. The items showed high bivariate correlations (*r*'s ≥ .41, *p*'s ≤ .001).

Interestingly, visitors demonstrated a moderate to high interest to engage in future contact with members of the respective minority group (M's $\leq$ 3.78, $SD \leq$ .88), whereas a significantly lower interest in contact with homeless people (M's $\leq$ 2.85, $SD \leq$ .82) before and after the conversation, with Z's > -6.93, p's < .001, r's > 0.77. Thus, visitors preferred intergroup contact with members of the respective minority group to contact with homeless people (see Figure C6). Moreover, visitors' interest in contact with the respective minority group increased significantly after the conversation, with Z = -2.76, p < .01, r = .30. These findings suggest that a short conversation with a minority group member can be sufficient to increase people's willingness to engage in intergroup contact with this minority group, thus to increase visitors' behavioral intentions.
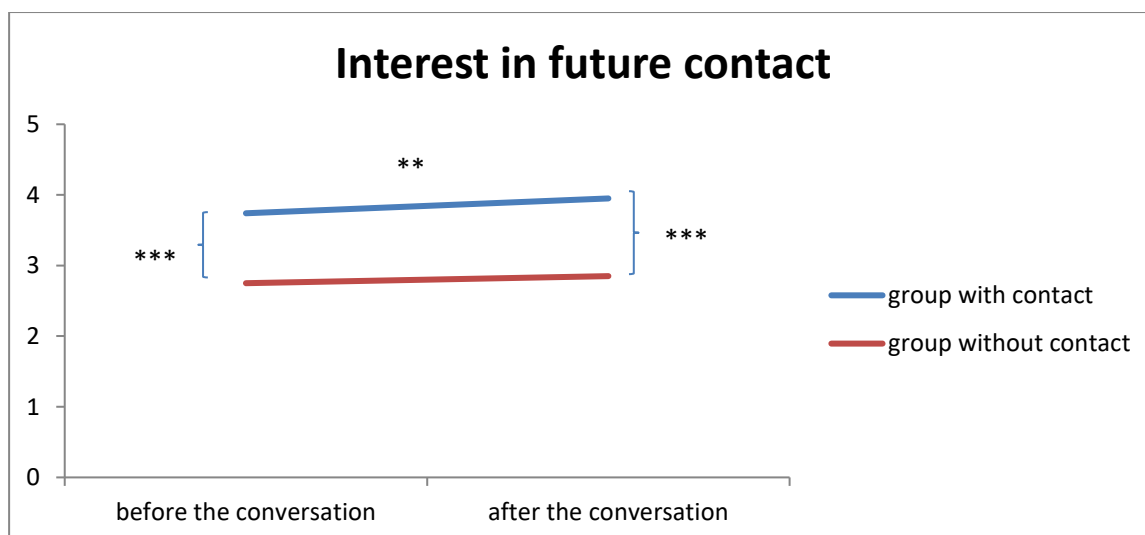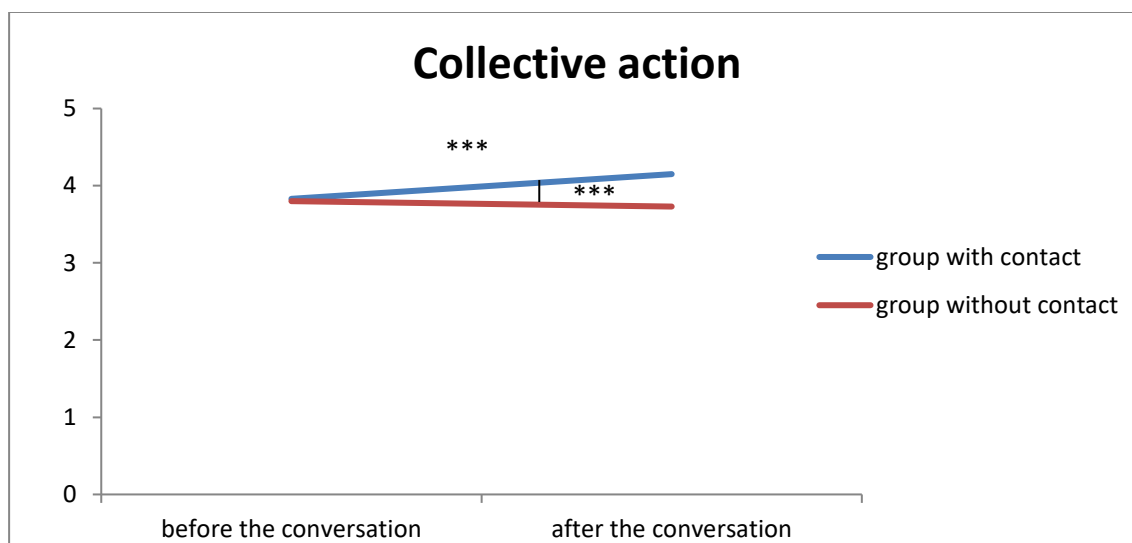

Figure C6. Visitors' willingness to engage in future contact with the respective minority group, with whom the visitor had contact compared to homeless people, with whom the visitors had no contact, over time (N = 82). ** p < .01. ** p < .001.

Further, visitors demonstrated a high extent of willingness to engage in collective action for the respective minority group as well as for homeless people before and after the event (M's > 3.73, $SD \leq$ .95). Interestingly, only for the respective minority group, visitors in-

dicated a significant increase in their willingness to engage in collective action after the conversation ($M = 4.15$, $SD = .87$) than before the conversation ($M = 3.83$, $SD = .95$), with $Z = -3.97$, $p < .001$, $r = .43$. Further, visitors' willingness to engage in collective action for the respective minority group ($M = .30$, $SD = .65$) changed significantly stronger than for homeless people ($M = -.07$, $SD = .59$), with $Z = -3.50$, $p < .001$, $r's = .77$. These findings suggest that a short conversation with a minority group member can be sufficient to increase people's willingness to engage in collective action for this minority group. Based on the past two results, visiting the Human Library event seems to increase positive intergroup behavioral intentions. This means, that not only visitors' cognitive presentations of the minority group became more favorable after the conversation (see results of the Master thesis), but also visitors' positive behavioral intentions increased.

Figure C7. Visitors' willingness to engage collective action for the respective minority group, with whom the visitor had contact, compared to homeless people, with whom the visitor had no contact, over time ($N = 86$). *** $p < .001$.

Interestingly, 67.9% of the visitors indicated a high motivation to become involved in the Human Library event in future, with 43.2% as a volunteer and 24.7% as a book (see Fig-

ure C8). The high interest in becoming a book at a Human Library event might have two possible explanations: First, people who identify themselves as a minority group member might be more willing to visit a Human Library to get into contact with other minority group members and to support the event. Second, the conversations and the general event might encourage people to talk about personal issues and to stand up for minority groups. The high interest in becoming involved in a Human Library further indicates that visitors appreciate the idea of the Human Library and see the benefits of the event. Following, the findings promisingly indicate the potential to expand the event further by organizing it more frequently or by establishing Human Libraries in more cities.

Suggestion:

To further improve and expand the Human Library, it may be advisable to maintain the contact with the people, who indicated their interest in becoming involved in a Human Library event. One example is the use of mailing lists, so that interested people stay informed about upcoming Human Library events or have the opportunity to apply for them.
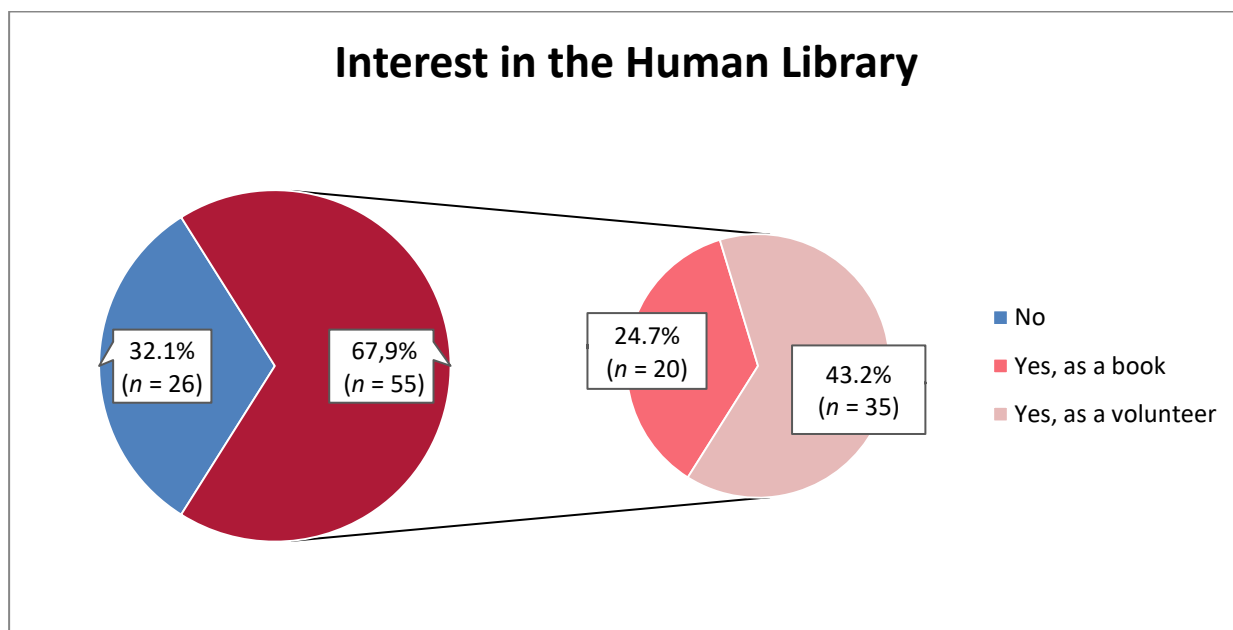

Figure C8. Overview of visitors' interest in becoming involved in a Human Library event (*N* = 81).