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The Power of Biography: Using the Diary of Anne Frank to Stimulate Generalisation and Secondary Transfer of Willingness for Intergroup Contact

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ABSTRACT

An impact evaluation of a large-scale field study tested the effects of biographical intergroup contact on children and adolescents' willingness to have intergroup contact with individuals from 12 social categories. Biographical contact was implemented through the anti-prejudice programme led by the educational charity the Anne Frank Trust UK, based on the life of the Jewish teenager Anne Frank. Before and after participating in the programme, young people between the ages of 9 and 17 years ($N = 1413$ from 69 participating schools) completed a 'Contact Star' measure of their willingness for close social contact with individuals from each of the social categories. Biographical contact substantially improved willingness for contact with Jewish people (the initial target group) as well as with all 11 other groups, as measured by the Contact Star. Additionally, increased willingness for contact with Jewish people was strongly predictive of increased willingness for contact with the other groups, thereby demonstrating a secondary transfer of improved intergroup attitudes. The effect was similarly large in the case of outgroups that were less similar or familiar to participants, contrary to the idea that secondary transfer weakens as the outgroups become less similar (a generalisation gradient). Theoretical and practical implications of this potentially powerful new form of contact are discussed.

> Learning about Anne Frank has made me a lot more open-minded ... in that I'm willing to meet new people maybe outside of my culture, my race.
>
> Anne Frank Ambassador

1 | Introduction

1.1 | Background

Intergroup contact is widely regarded as one of the most successful methods for improving intergroup attitudes (Allport 1954) and has been extensively tested in psychological research with adults (e.g., De Coninck, Rodríguez-de-Dios, and d'Haenens 2021; Eller and Abrams 2004; Pettigrew and Tropp 2008) and children (e.g., Aboud, Mendelson, and Purdy 2003; Rutland et al. 2005; Wagner et al. 2003; Wölfer et al. 2016). Over six decades of empirical research has suggested that direct or face-to-face contact works to improve intergroup attitudes, and, more recently, this research has expanded to include indirect contact. Indirect contact is particularly valuable in circumstances where direct contact is impractical and includes methods such as extended contact (Wright et al. 1997), imagined contact (Crisp and Turner 2012), vicarious contact (Dovidio, Eller, and Hewstone 2011), parasocial contact (Schiappa, Gregg, and Hewes 2005) and electronic or e-contact (e.g., White and Abu-Rayya 2012). Many of these

indirect methods have been shown to be somewhat successful with children; an age at which attitudes are thought to be particularly malleable (Rutland and Killen 2015), and an optimal time in which interventions can help improve intergroup attitudes and willingness for contact. However, as Paluck et al. (2021, 533) note: 'much research effort is theoretically and empirically ill-suited to provide actionable, evidence-based recommendations for reducing prejudice' The present research seeks to address this critical gap.

1.2 | Reducing Prejudice in Children/Adolescents

Research has demonstrated that children show unfavourable intergroup attitudes across domains including ethnicity, gender, nationality and disability (e.g., Aboud 1988; Abrams, Jackson, and St. Claire 1990; Krajewski and Hyde 2000; Nesdale 2001; Powlishta et al. 1994; Rutland 1999). Prejudices and intergroup biases that have their origins in childhood are often entrenched by adulthood, and it is generally accepted that an optimal period for anti-prejudice interventions is during late childhood and adolescence when understanding of group and intergroup processes become more sophisticated (Abrams 2011; Abrams et al. 2008) and before implicit biases deepen (Rutland and Killen 2015).

Reviews in this area outline the need for prejudice reduction interventions with children to be derived from, and grounded in, psychological theory (e.g., Cameron and Rutland 2006; Paluck and Green 2009). Consequently, these interventions tend to be largely based around intergroup contact, with a lesser emphasis on multiple classification skills training and social cognitive training (e.g., empathy). Whilst social cognitive skills training has been shown to have relatively positive effects on intergroup attitudes (mean effect size $d = 0.30$; Beelmann and Heinemann 2014), multiple classification skills training has been less successful (Cameron, Rutland, and Brown 2007). As with adults, intergroup contact, however, has been shown to be effective with this younger age group (e.g., Beelmann and Heinemann 2014). Although achieving positive results, direct contact is sometimes impractical, and evidence suggests that indirect contact methods can increase positive attitudes and willingness for contact with outgroup members (e.g., Cameron and Rutland 2006; Lytle and Levy 2019; Turner, West, and Christie 2013).

1.3 | Indirect Contact Methods

Different indirect routes to prejudice reduction include extended contact, imagined contact and vicarious contact. The extended contact hypothesis suggests that simply knowing an ingroup member who has a close relationship or friendship with an outgroup member can improve intergroup attitudes (Wright et al. 1997). These effects have been demonstrated with both adults (e.g., Eller, Abrams, and Gomez 2012; Lytle and Levy 2019) and children (e.g., Cameron and Rutland 2006; Cameron, Rutland, and Brown 2007). Compared with direct contact, extended contact is less likely to evoke intergroup anxiety; a negative emotion that has been associated with the avoidance of intergroup encounters (Turner et al. 2008). However, extended contact may be difficult to achieve in relation to outgroups that are segregated, geographically remote or rarely encountered.

A further indirect form is vicarious contact (Mazziotta, Mummendey, and Wright 2011), which involves the observation of a positive interaction between an ingroup member and an outgroup member, neither of whom the observer knows personally. Vicarious contact is an easily applicable intervention in the school environment, where children read books in which they observe the main (ingroup) characters experiencing positive contact with outgroup members. The story's protagonist acts as a role model for the participant, positively interacting with outgroup members or other stigmatised groups. Robust evidence with children and adolescents ranging from 5 to 19 years demonstrates that vicarious contact can increase positive attitudes towards outgroups such as immigrants, refugees and people with disabilities (e.g., Cameron and Rutland 2006; Cameron et al. 2011a; Liebkind et al. 2014; Vezzali, Stathi, and Giovannini 2012). Vezzali et al. (2015) demonstrated that reading the Harry Potter books improved attitudes towards three stigmatised groups (immigrants, homosexuals and refugees). Furthermore, this attitude change was possible due to changes in perspective taking.

An alternative approach is simply to ask people to imagine positive interactions with outgroup members (Crisp and Turner 2009, 2012). Studies with both adults (e.g., Turner, Crisp, and Lambert 2007a; West, Holmes, and Hewstone 2011) and children (e.g., Cameron et al. 2011b; Stathi et al. 2014) support the hypothesis that imagined contact can reduce prejudice (see Miles and Crisp 2014, for a meta-analysis). Evidence indicates that the mental simulation of a social interaction with an outgroup member is sufficient to improve attitudes to the outgroup and behavioural tendencies to approach or interact with outgroup members (e.g., Turner, West, and Christie 2013) in the absence of direct contact. Although indirect contact may not always have as large an effect as direct contact (Pettigrew et al. 2011; Turner et al. 2007b), it may ease the path towards future contact (Crisp and Turner 2009), by increasing 'confidence in contact' (Crisp and Turner 2012). For example, imagined contact results in stronger intentions to interact with an outgroup and greater confidence in being able to interact with an outgroup (Stathi, Crisp, and Hogg 2011).

Imagined contact also has complexities. For example, it is generally assumed that intergroup contact should involve a 'typical' outgroup member. However, Yetkili et al. (2018) demonstrated that imagined contact with *atypical* (conciliatory) outgroup members produces more positive attitude change than those with prototypical members. A part of the reason for this effectiveness may be that the imagined contact with such atypical outgroup members may be more attention-grabbing and memorable, as well as threat-reducing. This also suggests that a useful way to ensure that contact does have positive impacts is to strengthen elements that share these features (memorable, positive and threat reducing).

1.4 | Generalisability of Indirect Contact

A challenge that has long concerned intergroup relations researchers is whether the effects of contact can generalise beyond the individuals and groups included in the initial contact situation. The secondary transfer effect (STE; Pettigrew 1997, 2009)

refers to the phenomenon whereby contact with a primary outgroup influences attitudes towards other secondary outgroups, which were not involved in the contact. Support for the STE (Pettigrew 2009) has been shown cross-sectionally (Tausch et al. 2010) and in an imagined contact scenario (Harwood et al. 2011). Moreover, although meta analytically small (Pettigrew and Tropp 2006), longitudinal studies have shown that the effect can be lasting (Eller and Abrams 2004; Van Laar et al. 2005).

Based on research concerning attitude generalisation (Fazio, Eiser, and Shook 2004; Shook, Fazio, and Eiser 2007), Pettigrew (2009) proposed that prejudice reduction following positive contact with the primary outgroup can generalise to other secondary outgroups. However, the STE may be constrained such that attitudes would generalise more readily to the extent that the outgroups are viewed as more similar to the primary outgroup. Indeed, there may be a stimulus gradient (see Harwood et al. 2011; Pettigrew 2009) whereby groups that are perceived as similar on some specific dimension are most likely to be impacted by the STE (a gradient effect). Exactly what these dimensions might be, however, and whether they vary from person to person, requires further study.

There are also methodological reasons why similarity might matter. Most contact interventions, and specifically indirect contact interventions, are brief and lab based. It may be that the extension of empathy to secondary outgroups is difficult to achieve using brief interventions and thus may be limited to outgroups that have more obvious connection or salient similarity with the primary outgroup. The limited scope of STEs also suggests that even when the STE alters attitudes towards specific groups, it may not reflect a reduction in the propensity to express prejudice to outgroups more generally.

1.5 | A New Form of Indirect Contact—Biographical Contact

A different form of indirect contact, which is less well recognised but has been implemented over many years by the anti-prejudice educational charity the Anne Frank Trust UK (AFT), can be described as 'biographical contact'. Whereas extended and vicarious contact generally involve a connection to the outgroup via an ingroup member, and imagined contact involves an imaginary outgroup member, biographical contact involves participants learning about the life and perspective of a *real outgroup member* and their experiences of intergroup relationships.

A well-crafted tale or biography has the potential to make the reader or audience leave their own surroundings and enter the world of the story—a process known as narrative transportation (Green and Brock 2000, 2002), and one which increases perspective taking (van Van Krieken, Hoeken, and Sanders 2017). Whilst a large body of evidence suggests that fictional stories result in narrative transportation (Green, Brock, and Kaufman 2004; Kaufman and Libby 2012), there is also some evidence to suggest that real-world narratives can similarly increase perspective taking and reduce negative intergroup attitudes (e.g., Bruneau and Saxe 2012; Herrera et al. 2018; Vescio, Sechrist, and Paolucci 2003). Empathy is a powerful tool in prejudice reduction; it has not only been shown to mediate the relationship between ingroup and outgroup attitudes in studies employing vicarious contact but is also regarded as a mediator of the STE. Positive contact engages empathy with the primary outgroup, which also promotes empathy towards secondary outgroups and ultimately improves attitudes towards those secondary outgroups (Vezzali and Giovannini 2012).

As is the case with the Diary of Anne Frank (Frank 1989), the content of the biography is critical, and it must focus on the biographere's experiences of prejudice and discrimination, as well as their rejection of prejudices towards outgroups, to provide a basis for prejudice reduction. Specifically, the participant (reader, viewer and audience) can gain an understanding of the lived experience of discrimination as well as responses to it (e.g., Iverson 2016). This can be a basis for improving intergroup attitudes and increasing willingness for contact with the outgroup, as seen in studies using first person narratives as the vehicle for change (e.g., Kim and Lim 2022).

Abrams and Eller's (2016) temporally integrated model of contact and threat (TIMCAT) holds that threat increases the chances that contact experiences will be negative rather than positive. A particular advantage of biographical contact, therefore, is that it portrays the experience of a group member(s) over time and across situations whilst also doing so in a way that minimises or eliminates completely any direct threat from an intergroup conflict. A further advantage of biographical contact is that it humanises the contact experience via social presence (Lee 2004). For example, people are more involved in the experience when social presence is high (Gunawardena and Zittle 1997; Han, Min, and Lee 2016) and it allows opportunities for cognitive and affective perspective taking to arise through a range of potentially shared experiences with the outgroup member, whereas these might not arise in a single event or encounter. Finally, we believe that the greater complexity, heterogeneity and potential personal relevance of biographical events make it more likely that learning and insights from the contact may serve (either passively or by those orchestrating the contact) to encourage both generalisation to the wider group of the outgroup member and transfer of positive attitudes to other groups whose members might face aspects of discrimination.

Using biographical examples in a contact intervention may help participants to make parallels with real-world situations and lived experiences. Additionally, it has also been suggested that people can form parasocial relationships with outgroup members, which could influence outgroup attitudes similarly to direct contact (Bond 2021). Importantly, biographical contact, in which real-life experiences of prejudice and discrimination are communicated via text or other media, moves beyond the realms of being simply conceptual. It involves engaging with real, and often irrefutable, past experiences of a real person, which should make the contact both vivid and memorable.

1.6 | Biographical Contact and the AFT

The AFT, founded in 1991, is the only organisation in the United Kingdom that is licensed to use the name of Anne

Frank. There are only a few other organisations globally who are permitted to do this. Inspired by Anne herself, the Trust builds on the work of Otto Frank, Anne's father, to use Anne's legacy to challenge prejudice, particularly amongst young people. The Trust aims to provide learning from Anne Frank and the Holocaust to empower young people aged 9–15 to challenge all forms of prejudice. The AFT Schools' Programme specifically uses the Diary of Anne Frank as a vehicle to enable young people to engage with Anne and her life through a variety of media and activities. It also enables young people to understand her experiences and provides some insights into their own lives and experiences, whilst also recognising the antisemitism she experienced, which ultimately led to her death and the deaths of millions of other Jews murdered in the Holocaust. The programme is delivered within schools and always seeks to develop improved knowledge about Anne Frank's life and the Holocaust. Details are available from the AFT web site (https://www.annefrank.org.uk/).

Two versions of the Schools' programme are offered by the AFT: A History for Today (HFT) and Voices for Equality (VFE). The former uses a pop-up exhibition about the life and diary of Anne Frank, whilst the latter focuses more on the diary itself. In both versions, students retell Anne's story either by leading tours of the exhibition or through other media such as presentations and artwork. For the purposes of the present research, the important aspect that is common to both programmes and is the vehicle for changing attitudes is biographical contact. Further details of the programme can be found in Section 2.

1.7 | The Current Study

The current research involves a large field study designed to evaluate the impact of the AFT educational programme, and more specifically its use of biographical contact with the Jewish teenager Anne Frank, on children's and adolescents' willingness for contact with Jewish people (generalisation). Traditional measures of prejudice include social distance measures (e.g., Turner and West 2012), feeling thermometers (e.g., Newheiser and Olson 2012; Spears Brown et al. 2017) and resource allocation tasks (e.g., Dunham, Baron, and Carey 2011; Pagotto et al. 2013; Sparks, Schinkel, and Moore 2017). More recently, however, willingness for contact has been used, particularly with child and adolescent samples (e.g., Cameron and Rutland 2006; Cameron et al. 2011b; Husnu, Mertan, and Cicek 2018; Hutchison et al. 2010), and akin to social distance measures, it appears to be a good (albeit slightly indirect) indicative measure of prejudice.

We evaluate the change over time in young people's willingness to have meaningful contact with others from each of 12 social categories differing in religion, gender, age and ethnicity. To the best of our knowledge, this is the first study to use and analyse the impact of biographical contact in adolescents, and it is the first to explore whether biographical contact has potential as a vehicle for a generalised improvement in willingness for outgroup contact. The aims of the AFT are to reduce prejudice towards Jewish people and, through a focus on the meanings and mechanisms of prejudice, to reduce prejudice towards a wide range of other groups (the STE). Thus, our hypotheses and predictions are that these will be the impacts as measured in terms of willingness for outgroup contact.

The specific aims of the current study are:

- To evaluate the impact of the AFT programme on willingness for contact with Jewish people (generalisation).
- To evaluate whether change in willingness for contact with Jewish people predicts change in willingness for contact with other groups (the STE).
- To determine whether secondary transfer is smaller or larger in the case of groups that are initially more psychologically distant (a gradient effect).

2 | Method

2.1 | Study Design

The study used a nonexperimental within-participants (pre- and post-intervention) design. Ethics approval for the evaluation measures was obtained from the Psychology Ethics Committee at the University of Kent (Ethics approval id: 201815375395705107).

Variables measured include basic demographics of gender, age and ethnicity, and willingness for contact with 12 groups in society.

2.2 | Participants

Within each school that took part in the AFT programme, a set of students were trained as peer educators. The AFT does not select the students but asks teachers to invite/nominate a set of students who are diverse in background and ability. The AFT then works with these peer educators to train them to become more knowledgeable about Anne Frank and her life. The peer educators then go on to teach other students in the school via methods such as an exhibition, assemblies and/or lessons.

In total, the AFT trained 1522 students during the academic year 2021–2022. The programme was delivered in 69 schools in five regions of England (London, Northeast, Northwest, Yorkshire and West Midlands) and in Scotland. Twenty-one schools took part in the HFT version of the programme, and 48 in the VFE programme. Participants were between the ages of 9 and 17 years ($M = 11.7$, SD = 1.6). The demographic characteristics of the sample can be found in Table 1. Of the 1522 students, 1413 completed both pre- and post-intervention questionnaires and were included in the statistical analyses.

2.3 | Measures

2.3.1 | Demographics

Independently of other measures, demographic details of all participants were recorded using the AFT equalities monitoring questionnaire.

TABLE 1 | Demographic characteristics of participants at baseline.

Variable	*n* = 1413	%
Gender		
Male	575	40.7
Female	642	45.4
Non-binary	30	2.1
Other	14	1.0
Prefer not to say	13	0.9
Missing	139	9.8
Ethnicity		
White	773	54.7
Asian/Asian British/Asian Scottish	212	15.0
Black/African/Caribbean/Black British/Black Scottish	115	8.1
Mixed/multiple ethnic groups	70	5.0
Other ethnic group	50	3.5
Prefer not to say	54	3.8
Missing	139	9.8
Religion		
Muslim	223	15.8
Christian	386	27.3
Jewish	5	0.4
Hindu	16	1.1
Buddhist	5	0.4
Sikh	20	1.4
Other religion	37	2.6
Non-religious	507	35.9
Prefer not to say	75	5.3
Missing	139	9.8
School type		
Primary	652	46.1
Secondary	632	44.7
All through	129	9.1

2.3.2 | Willingness for Contact With Other Groups

Willingness for contact with social groups was measured using the Contact Star. This evaluation tool was developed jointly by the AFT and the University of Kent in 2015 (see also Purewal 2014).

The Contact Star was designed for use with students in a school setting and asks them to consider how much they would like to spend every lunchtime for a whole week with individuals they have never met before and who are from different social groups. The participants rate how much they would like to do this for each group on a 7-point rating scale (1 = *not at all like to*, 4 = *neither like nor dislike*, 7 = *very much like to*), where 1 is the farthest tip of the star and 7 is closest to the centre of the star (and hence the self). The 12 groups represented on the points of a star include Black, Christian, Disabled, Female, Gypsy, Jewish, LGBTQ, Male, Muslim, Old, Refugee and White. An example of the Contact Star is shown in Figure 1.

Participants completed the Contact Star twice: once before the AFT intervention (pre-evaluation) and once approximately 2 weeks after the intervention (post-intervention).

2.4 | Procedure

Before the biographical contact intervention, and blind to the AFT workers, all peer educators completed the equalities form measuring demographics and the Contact Star.

The peer educators then spent time with AFT education workers learning about all aspects of Anne's life—a comprehensive form of biographical contact. This included information on her early life in Germany, her time in hiding and her experiences in the camps after being arrested. The peer educators are trained to consider her whole family, as well as some of the events leading up to her birth in 1929, such as the loss of World War I for Germany and the Treaty of Versailles. Resources for the programme include an exhibition—a combination of key text and photos—that tells the story of Anne and her family against the backdrop of the rise of the Nazi Party, the Second World War and the Holocaust.

The central key text is Anne's famous diary. Anne's diary and quotes are used during the training process, as well as a video series made by the Anne Frank House called the Video Diaries; this series imagines Anne filming her experiences rather than writing her diary. Throughout the peer education training process, the AFT teaches about Anne as an individual, focusing on her personality and her likes and dislikes, rather than seeing her solely as a victim. By teaching about Anne in this way, the AFT aims to improve empathy and perspective taking while increasing perceptions of commonality. In these ways, biographical contact differs from more standard educational programmes, which simply aim to provide knowledge about outgroup members, enhance social skills (see Beelmann and Lutterbach 2020, for a review) or employ other interventions that seek to trigger collective guilt as a method of reducing prejudice (e.g., Powell, Branscombe, and Schmitt 2005). All peer educators are given a handbook/booklet to record their activities.

Once the biographical contact training is complete, peer educators either present tours of the exhibition to other students and adults within their school or create their own forms of peer education. This could include assemblies and lessons to share their learning with others, for example. At the end of this process, the peer educators completed the Contact Star again, blind to the AFT instructors. The intervention took approximately 2 weeks from start to finish, although this varied slightly on timetabling constraints within each school.

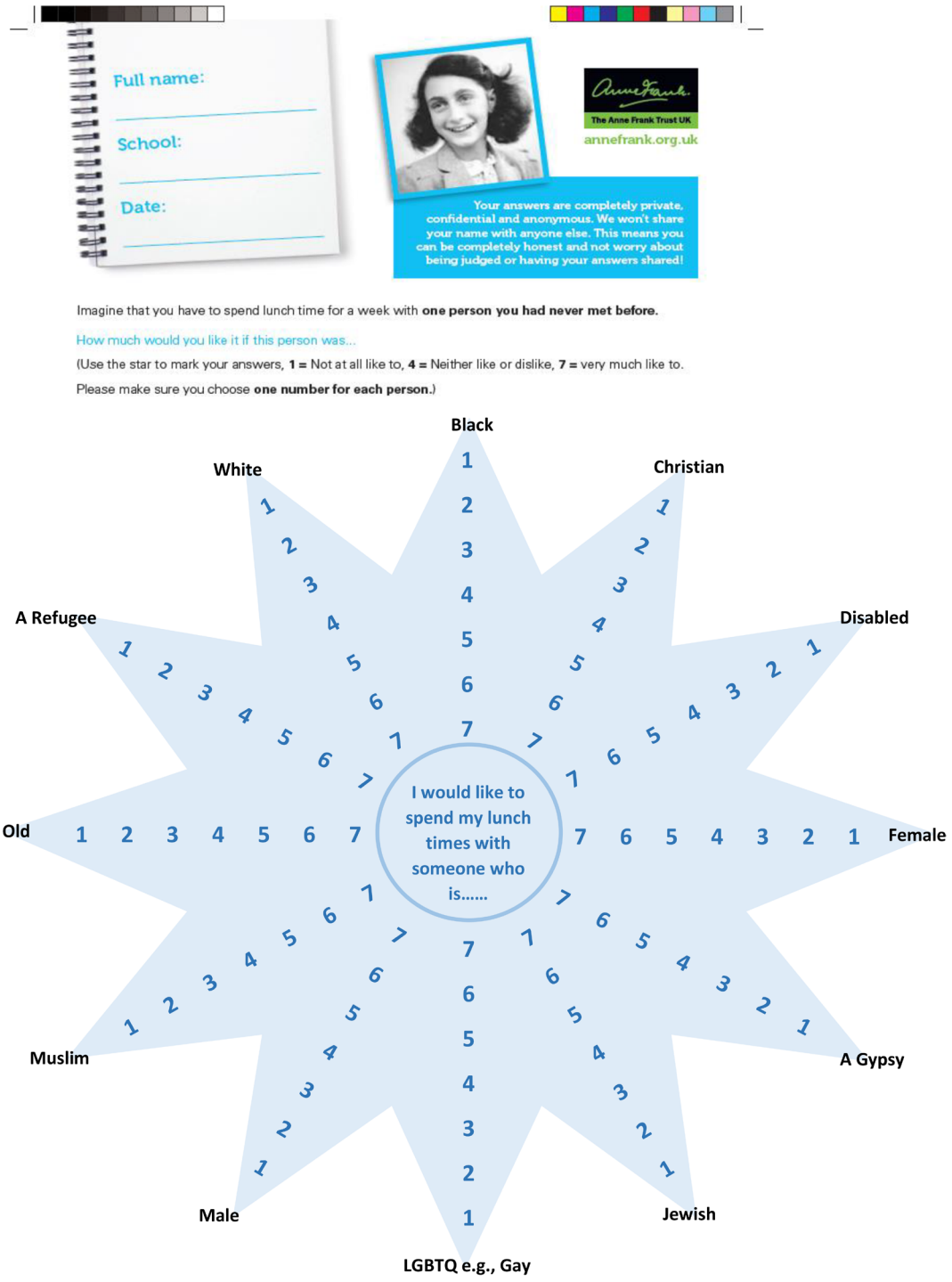

FIGURE 1 | The Contact Star.

3 | Results

Participants reported willingness for contact to 12 groups on the Contact Star at two time points: pre- and post-intervention. All analyses were carried out in SPSS Statistics 26.

3.1 | Change in Willingness for Contact

Repeated-measures univariate ANOVAs were conducted on willingness for contact with each group. The results presented in Table 2 included all participants in the data analyses, preserving the largest possible sample size for each group (sample sizes range from 1394 to 1410). Findings from more conservative multivariate analyses did not differ substantially and are therefore provided in Supporting Informations S1 and S2.

To provide a measure of the substantive meaning of these changes, we also calculated the proportion of students whose willingness for contact improved with at least 1, at least 4, and at least 8 of the groups. To do this, it was necessary to use, as a baseline, those who are not already maximally positive to each

TABLE 2 | Means, standard deviations and one-way repeated-measures analyses of variance in willingness for contact with social groups.

	Pre-evaluation		Post-evaluation				
Group	***M***	**SD**	***M***	**SD**	***F***	***df***	η_p^2
Black	5.50	1.46	5.90	1.33	160.87***	1, 1409	0.10
Christian	5.14	1.54	5.60	1.47	177.53***	1, 1401	0.11
Disabled	5.12	1.55	5.59	1.41	151.11***	1, 1397	0.11
Female	5.41	1.60	5.85	1.45	146.52***	1, 1405	0.09
Gypsy	4.60	1.77	5.21	1.67	199.70***	1, 1395	0.13
Jewish	4.93	1.62	5.58	1.45	294.16***	1, 1402	0.17
LGBTQ	4.71	1.94	5.29	1.74	218.92***	1, 1399	0.14
Male	5.22	1.60	5.63	1.48	140.73***	1, 1393	0.09
Muslim	5.31	1.57	5.70	1.42	145.13***	1, 1396	0.09
Old	4.64	1.73	5.26	1.60	217.00***	1, 1397	0.13
Refugee	5.16	1.50	5.59	1.45	157.26***	1, 1402	0.10
White	5.36	1.49	5.74	1.40	121.21***	1, 1399	0.08

***$p < 0.001$.

group. For example, a student who at the outset scores their willingness for contact at seven (the maximum possible) to four of the groups can only progress in their willingness for contact with the remaining eight. Findings indicated that 85.3% of participants improved their willingness for contact with at least one group, 57.7% improved to at least four groups and 30.9% to at least eight groups.

Given regression to the mean over time, we could expect some low scorers to raise their scores and some high scorers to lower theirs, but this does not have bearing on the overall shifts in means. In fact, only a very small minority of participants reported lower post-programme willingness for contact with some groups, and amongst these, the average reduction across groups was less than 1 Contact Star point.

We also examined the variation in willingness for contact due to the programme type and school of the participants using a one-way ANOVA with programme type as a between-participants factor and school as a Level 2 variable. Neither school nor programme type had any significant effects. The ICC, calculated as the ratio of between-school variance to total variance, was 0.03 (95% CI: 4.024E−6-0.000). As this is below the threshold at which it is necessary to use hierarchical modelling and as we had no specific hypotheses regarding either variable, these effects were not investigated further.

3.2 | STEs

The AFT programme is grounded in teaching about the life and experiences of Anne Frank and her family. Whilst as a charity they are committed to reducing antisemitism; by using Anne Frank as an inspiration, they aim to empower young people to challenge all forms of prejudice. Ensuring that their programmes increase positivity and willingness for contact with multiple groups is therefore of pivotal importance.

It is therefore important to test whether becoming more pro-Jewish after the programme also means that participants become more positive towards other groups, as measured on the Contact Star.

To test whether change in willingness for contact with Jewish people predicted change in willingness for contact with other groups, we conducted a series of hierarchical multiple regressions with post-evaluation willingness for contact with another group as the dependent variable. We entered demographic data (religion, ethnicity, age and gender) in the first step, pre-evaluation willingness for contact with the target group and Jewish people in the second and third steps and the post-evaluation willingness for contact with Jewish people at the fourth step. This procedure therefore tests whether initial willingness for contact with Jewish people predicts change in willingness for contact with other groups (Step 3), and whether change in willingness for Jewish people predicts change in willingness for contact with other groups (Step 4). If biographical contact produces secondary transfer, we should observe a larger effect at Step 4 than at Step 3. We conducted separate analyses to consider the STE towards each of the 11 target groups on the Contact Star. Table 3 shows a summarised version of the hierarchical regression results for each of the 11 groups (full hierarchical regression results can be found in Supporting Informations S1 and S2).

The regression analyses indicate a significant and substantial increase in variance explained at Step 4 compared to Step 3 across all 11 tests. The change in willingness for contact with Jewish people is a significant driver of the change in willingness for contact with other groups, over and above that of pre-existing willingness for contact.

3.3 | The STE and the Similarity Gradient

To examine the possibility of a similarity gradient in the STE, we first conducted a small-scale study ($N = 62$) via Prolific testing

TABLE 3 | Summarised hierarchical regression results.

	B	SE *B*	*β*	*F*	R^2	ΔR^2
Black						
Step 3				148.04*	0.43	
Step 4	0.50	0.02	0.54	278.62*	0.62	0.19*
Christian						
Step 3				140.86*	0.42	
Step 4	0.58	0.02	0.57	288.30*	0.63	0.21*
Disabled						
Step 3				119.99*	0.38	
Step 4	0.58	0.02	0.60	269.69*	0.61	0.23*
Female						
Step 3				131.03*	0.40	
Step 4	0.41	0.02	0.41	176.95*	0.51	0.11*
Gypsy						
Step 3				105.13*	0.35	
Step 4	0.59	0.03	0.51	185.99*	0.52	0.17*
LGBTQ						
Step 3				180.46*	0.48	
Step 4	0.56	0.03	0.46	280.28*	0.62	0.14*
Male						
Step 3				147.20*	0.43	
Step 4	0.40	0.02	0.39	190.27*	0.53	0.10*
Muslim						
Step 3				166.86*	0.46	
Step 4	0.56	0.02	0.57	343.42*	0.67	0.21*
Old						
Step 3				90.13*	0.32	
Step 4	0.50	0.03	0.45	139.30*	0.45	0.13*
Refugee						
Step 3				121.40*	0.38	
Step 4	0.60	0.02	0.60	271.76*	0.61	0.23*
White						
Step 3				120.58*	0.38	
Step 4	0.45	0.02	0.46	180.87*	0.51	0.13*

Note: Step 3 includes demographics, pre-target attitudes and pre-Jewish attitudes. Step 4 includes the effect of post-Jewish attitudes.
*$p < 0.001$.

perceived similarity of Jewish people with seven other groups from the contact star: Black, Christian, Gypsy, LGBTQ, Muslim, Refugee and White (see Supporting Informations, Table S16). Perceived similarity was assessed on three variables: culture and traditions, social standing, and meta perceptions (how we believe other people rate similarity). We note here that across all three variables, Jewish people are perceived as being significantly different from Black people, Muslims, Refugees and the groups Gypsy and LGBTQ, but not significantly different from White people or Christians.

We then rank ordered the attitude change towards each group (using β values) and plotted this against perceived similarity of the group to Jewish people for each of the three variables. This is shown in Figure 2. The data presented in Figure 2 demonstrate that there is no suggestion for a linear relationship between attitude change and perceived similarity of groups with the primary contact group and therefore little evidence of a gradient effect.

4 | Discussion

The present research investigated a potentially powerful new form of indirect intergroup contact: biographical contact. Across 69 schools, we evaluated children's and adolescents' willingness for contact with 12 different groups before and after an educational anti-prejudice programme provided by the AFT. Whilst a range of contact methods are known to reduce prejudice and improve intergroup attitudes and behaviours, biographical contact has not typically featured amongst them. By engaging a large and diverse sample of young people in schools, the research provided a highly ecologically valid opportunity to assess the potential impact of biographical contact.

The results established that following biographical contact with Anne Frank, young people's willingness for contact with Jewish people (the target group) increased, and so did their willingness for contact with the 11 other groups measured on the Contact Star. These groups included religious groups (Muslim and Christian), ethnicities (White and Black) and gender (male and female), as well as groups related to sexual orientation, gypsy and refugee status, age and disability. Almost all participants (85.3%%) showed improved attitudes towards at least one of the groups. More impressively, 57.7% improved towards at least 4 of the groups, and 30.9% improved towards at least 8 of the groups. Moreover, we observed the greatest gains in willingness for contact with groups that tend to be the most stigmatised in society, including Gypsy, LGBTQ, Jewish and Old.

Addressing the process underlying these changes, although we cannot be certain that biographical contact was the only influence on these improvements, it seems unlikely that other aspects of the programme were as central. The effects were similar regardless of which form the programme took (HFT or VFE). Additionally, the impact was not moderated by differences in school levels. Most importantly the AFT's programme explicitly uses Anne's biography as its vehicle for change, establishing the hypotheses well in advance of the research. We found that increased willingness for contact with Jewish people was predictive of increased willingness for contact with the other groups. This demonstrates a secondary transfer of improved intergroup attitudes. More critically, we found no evidence of a gradient; this would imply a stronger effect on change towards more similar groups compared to less similar groups vis-a-vis Jewish people.

With prior evidence suggesting that there is only a small effect of indirect contact on secondary transfer (e.g., Harwood

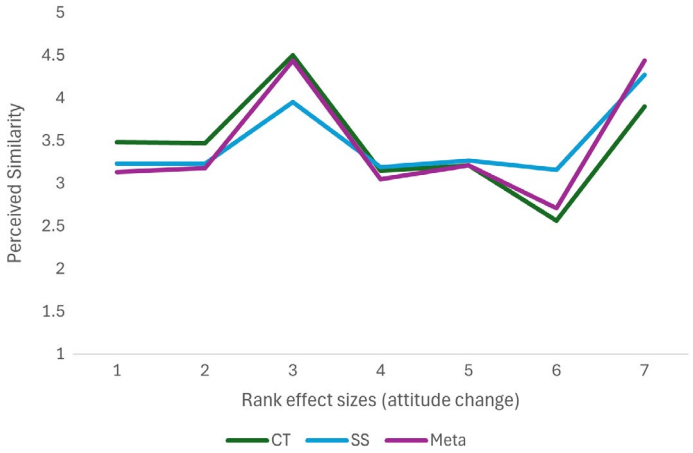

FIGURE 2 | Attitude change and perceived similarity to Jewish people. Rank effect sizes (1 = *greatest attitude change*, 7 = *smallest attitude change*). CT = culture and traditions, Meta = meta perceptions, SS = social standing.

et al. 2011; Pettigrew and Tropp 2006), it is encouraging that biographical contact in the current study appears to have a relatively larger and wider STE. In addition to the large primary effects on attitudes to Jewish people, learning about Anne Frank and her life resulted in statistically significant increases in willingness for contact with 11 other groups, all with medium effect sizes (see Cohen 1988; Lakens 2013; Richardson 2010). Previous evidence has suggested that the groups affected by the STE are those which are more obviously similar to the target group (Pettigrew 2009); however, this limitation did not apply in the present case, where similarity to the target group did not appear to be a limiting factor. As it could be reasonably expected that positive effects might be restricted to those who are not members of the target group and to those who are not already favourable towards that group at pretest, further analysis provides encouraging evidence that the effects for these participants are all large in size (see Supporting Informations Table S1). Moreover, these results were not restricted to a homogeneous sample of participants. The participants in the current study came from a wide range of schools, regions of the United Kingdom, ages, ethnicities and religious backgrounds. The generalisability of the findings and their external validity is a particularly valuable feature of the present evidence. Specifically, we can be confident that biographical contact has the potential to be effective across demographic profiles and can positively impact attitudes towards a diverse range of outgroups, including those to which young people may not have prior or regular exposure.

More broadly, the findings reinforce the utility of using indirect intergroup contact to reduce prejudice. In an often fractious and divided world, the need for a wide array of alternative methods for prejudice reduction is essential, as no one method is likely to be effective across all contexts. Childhood and adolescence are critical periods for laying the foundations for positive intergroup attitudes and behaviours (Abrams and Killen 2014; Rutland and Killen 2015). Whilst direct contact methods are not always practical for this age group, indirect contact methods are accessible, and the evidence presented here suggests that biographical contact may be especially effective in promoting willingness for contact with outgroups.

Although we did not measure prior or current direct intergroup contact, the present evidence also suggests that biographical contact might be as powerful, if not more so, than direct contact (Pettigrew et al. 2011; Turner et al. 2007b). There may be a number of reasons for this. In all forms of contact, the content of the contact experience is an essential element of its impact. We acknowledge that the educational intervention programme provided by the AFT is a very active use of biographical contact; the AFT educational team provides in-depth biographical knowledge about Anne Frank, and the young people are provided with various resources and workshops, as well as being encouraged to reflect on Annes own words. Previous research using fictional narratives (e.g., van Van Krieken, Hoeken, and Sanders 2017) has demonstrated that engaging with stories or text can result in enhanced perspective taking, and similar work with non-fictional narratives has suggested that this engagement also reduces negative intergroup attitudes. (e.g., Bruneau and Saxe 2012; Herrera et al. 2018; Vescio, Sechrist, and Paolucci 2003). Increased empathy, particularly perspective taking, is well established as a predictor of more positive intergroup attitudes (e.g., Shih et al. 2009; Vescio, Sechrist, and Paolucci 2003), and it may be that biographical contact, such as that provided by the AFT, stimulates intergroup perspective taking. Given that perspective taking is a cognitive strategy not restricted to thinking about one particular group, and that the biographical content of the AFT programme uses both first- and third-person accounts in its provision, it is possible that the shift in perspective taking may also be associated with increased positive feelings towards a wide range of groups.

The biographical content of the AFT programme also connects Anne's experiences with the participants' own lives or lived experiences. Young people who take part in biographical contact may also begin to see the connections, similarities or analogies with their own lived experience and with other events and issues they observe in the world around them, thereby stretching and extending their learning. Like vicarious contact with fictional figures (see Cameron et al. 2011a) or parasocial relationships with outgroup members (e.g., Bond 2021), a mechanism supporting the effectiveness of biographical contact may be identification with the target character. If young people identify with Anne Frank, this may also strengthen perspective taking. Future research should aim to understand the role of potential mediators such as perspective taking and identification that may

be in the path from biographical contact to more positive intergroup attitudes and behaviours.

4.1 | Limitations and Future Directions

The present field research was designed to assess the impact of a real-world intervention. The schools that participated were recruited by the AFT, and although the majority of these were from areas with relatively high levels of deprivation, there were no formal inclusion or exclusion criteria for which schools were involved. Similarly, the young people who trained as peer educators were selected by the individual schools. The AFT provides guidelines for this process, encouraging the selection of students from a range of backgrounds and with mixed abilities; however, the selection process is ultimately the decision of the school. Despite these two forms of selection bias, the sample comprised participants from a wide range of backgrounds and regions. Even if the findings are only generalisable to this group, it would represent a sizeable and highly relevant section of the wider population.

The AFT took all responsibility for the implementation of the programme, the design of the equalities form and administration of measures. Thus, we were unable to determine some relevant participant characteristics, including sexual orientation and some other minority identities. Although we controlled for demographic factors within our regression analyses, future studies should aim to address the issue of intersectionality.

It is conceivable that any association between pretest materials and the AFT may have encouraged socially desirable responding. Had this occurred, it would seem likely to have limited any further effect at post-test. Whilst a programme evaluation would ideally be closer to a randomised controlled trial, including a control group that completed the Contact Star measure with exactly matched samples at two time points, in a timeframe parallel to that of the AFT evaluation programme, there would be practical and ethical challenges associated with such a design. Rather our confidence in the impact of the programme is reinforced by evidence from some independent comparison data (which used a version of the Contact Star but not was part of an AFT programme). These comparison data are not less favourable than the baseline data but are significantly less positive than the post-test data for all groups tested.

Even if there was some socially desirable responding, perhaps arising from peer pressure or from teacher and adult expectations, this would suggest that the intervention raised the normative salience of expressing lower prejudice levels. If this had occurred within a laboratory experiment, it might be regarded as a threat to internal validity. However, in the context of a field study where a programme is designed precisely to reinforce prejudice reduction, it is not such a significant limitation. Indeed, shifting norms to be less prejudiced would itself be a positive achievement. Furthermore, if participants had simply wished to show they had no prejudices, then they might all simply choose '7' (maximum willingness for contact) towards all groups on the Contact Star, or might at least select an identical response for all groups (e.g., always selecting 5 or always 6 on the star). This did not happen. There were increases in average levels of willingness for contact with all groups, but some continued to be favoured over others, and the gains for some groups were larger than the gains for others.

The AFT programme provides a clear demonstration that biographical contact with an outgroup member can be a novel means of promoting willingness for intergroup contact and of fostering generalisation and transfer of these positive intergroup feelings. A number of intriguing questions arise for future research. For example, might a less intensive intervention be similarly effective? Could biographical contact promote willingness for contact even if it is implemented as a brief snapshot rather than a whole biography? Might biographical contact be combined with other forms of indirect contact to augment its impact? A further important question is how long lasting these effects may be. Longitudinal research will be necessary to explore these effects. Future research should also examine other types of outcomes, including the active pursuit of new contact, changes in implicit measures of prejudice and so forth. It is in the nature of real-world interventions that both the intervening agency's mission and ethical parameters for research may preclude testing alternative approaches or actions. However, equipped with the present evidence, it would now clearly be valuable to conduct experimental studies that directly compare biographical outgroup contact with other conditions such as biographical ingroup contact, no contact and so forth.

5 | Conclusion

Biographical contact is an exciting avenue for research and interventions to reduce prejudice. The wider challenge of tackling prejudice as a whole, and not just prejudice towards specific groups, is vital for social psychologists to pursue. When policymakers ask whether it is worth investing resources in prejudice reduction initiatives, they need reassurance that they will be able to demonstrate the effectiveness of those investments. The present large-scale field study therefore offers a valuable example to provide such reassurance, demonstrating that biographical contact has powerful transformative potential for improving attitudes not just towards one group but towards many.

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Conflicts of Interest

Data collection was conducted by the Anne Frank Trust UK, of which the second author is currently a Trustee.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.