



CREATE

Canterbury Research and Theses Environment

Canterbury Christ Church University's repository of research outputs

<http://create.canterbury.ac.uk>

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. Carew, M. (2014) Fostering positive intergroup relations between non-disabled people and physically disabled people: contact quality and its social psychological antecedents. Ph.D. thesis, Canterbury Christ Church University.

Contact: create.library@canterbury.ac.uk



**FOSTERING POSITIVE INTERGROUP RELATIONS BETWEEN NON-
DISABLED PEOPLE AND PHYSICALLY DISABLED PEOPLE: CONTACT
QUALITY AND ITS SOCIAL PSYCHOLOGICAL ANTECEDENTS**

by

Mark Carew

Canterbury Christ Church University

Thesis submitted for the Degree of Doctor of Philosophy

2014

I hereby declare that this thesis has not been submitted, either in the same or different form, to this or any other University for a degree.

Signature:

Abstract

Although intergroup contact is a well-established area of inquiry within social psychology, the majority of research adheres to testing its traditional formulation, i.e. the extent that contact can reduce prejudice. Under this approach researchers do not investigate what happens during interactions, only if (and often, what sort of) contact has occurred. Consequently, it lacks the power to explain *why* interactions should be as they are between groups. Conversely, this thesis proposes that investigating contact as an *outcome* may provide a new and important insight into intergroup life. Specifically, this thesis investigated social psychological antecedents of contact quality among non-disabled and physically disabled people. This unique and challenging context is one that has largely been neglected by prior research.

A review of the existing literature identified two key potential antecedents of contact quality, specifically the psychological concerns and embarrassment that both groups experience when interacting with out-group members. A qualitative study (Study 1) was then conducted to gain insight into the phenomenology of these constructs. Importantly, this allowed for the identification of the unique group-specific concerns that non-disabled and physically disabled people may hold.

This thesis went on to test the impact of concerns and embarrassment on contact quality through a series of experiments involving both vignette-based and actual interactions (Studies 2-5). Among both groups, these studies revealed evidence of an indirect link between concerns and reduced contact quality. Furthermore, embarrassment was identified as the linking mechanism driving this important relationship.

Subsequently the thesis tested a series of interventions directed at attenuating embarrassment and improving the contact quality of these encounters. Two of these studies (Study 6-7) tested the efficacy of an interpersonal feedback strategy, delivered by the physically disabled interactant across an actual (Study 6) and vignette-based (Study 7) interaction. Findings indicated that such feedback could improve contact quality perceptions among both groups, but it was unclear if it did so by reducing embarrassment. Additionally, among the physically disabled sample, the effects became non-significant when controlling for demographic factors.

Finally, Studies 8a and 8b examined the potency of a societal-level intervention, the 2012 Paralympic Games. Over the period of the event, concerns and embarrassment were found to decrease in both groups but there was no reported change in contact quality. Additionally, differences once again disappeared when controlling for demographic factors.

Implications of these findings, limitations and directions for future research are discussed.

Acknowledgements

Although it is my hand that has committed words to processor and paper, ultimately this thesis is also a product of the good fortune I have had in supervisory panel, colleagues, friends and family.

First and foremost, I would like to thank my first supervisor Dr Masi Noor, who provided me with the encouragement to begin this journey and the guidance to complete it. I am grateful for the professional and personal support you gave me throughout, especially along the small, inevitable challenges that are found on any road worth travelling.

To my panel Professor Jan Burns and Professor Paul Camic, I am grateful for your insightful feedback and suggestions on my work throughout. My thanks also extend to the CCCU Psychology department, particularly Dennis and Ana for allowing me to teach on your modules, and the Graduate school, especially Julia, for your kindness and diligence in helping me with important queries.

To my fellow doctoral students of EG18, thank you for the laughs and generous doses of writer's sympathy (I'm positive I have left an imprint in that desk). I wish you luck. To the staff and students of the Eskişehir programme, thank you so much! You taught me that the best research discussions happen among groups of friends from near and far. I look forward to our future collaborations. I would also like to give a special mention to Tammy and Sam. From the very first moment I began my doctorate, you provided help, support and encouragement, for which I am eternally grateful.

A big thank you also goes to many of my friends outside of academia for their advice, patience, encouragement and most of all the silliness that always provided a welcome break from writing. It's perhaps a sign of how lucky I am that I don't have space to list all of you, though in some cases it's because you insist on being known by ridiculous nicknames (Jon!). Some special mentions though are: James, Claire, the boys from Guildford Road ("the Shack"), and Mudge, who at many points I feel was just as excited about my research as I was.

Last but certainly not least, I would like to thank my Mum and Dad, Mary and Gary. Without your continued love and support I would never have begun this journey, much less completed it. Most importantly, thanks to you I have the confidence to seek out new challenges.

Looking forward, I am excited both as to what those challenges might be and to share them with all of you. Cheers!

CHAPTER 1 – Intergroup contact theory	1
The contact literature and physical disability	6
Contact between non-disabled and physically disabled people: Unique features of the mixed physical ability intergroup context	14
CHAPTER 2 - The importance of investigating contact as an outcome	24
How is investigating contact as an outcome useful for understanding everyday interactions between non-disabled and physically disabled people?	24
How can investigating contact as an outcome provide new routes to improving interactions between non-disabled and physically disabled people?	29
How can investigating contact as an outcome enable a greater understanding of physically disabled people’s perceptions?	35
CHAPTER 3 - Social psychological antecedents of contact quality in the mixed physical ability context	42
Psychological concerns	43
Embarrassment	49
The relationship between concerns and embarrassment and intervention strategies to improve contact quality	56
Overview of the major aims and objectives of this thesis	60
Hypotheses	61
CHAPTER 4 - Methodological issues	64
The measurement of contact quality	64
Operationalization of concerns	67
Operationalization of embarrassment	68
Operationalization of “contact avoidance” and prejudice	69
Definition of “physical disability” and treatment of “physically disabled people” as a group	70
Modes of data collection	72
Statistical assumptions and procedures	74
Power analysis	76
CHAPTER 5 - Study 1	78
Study 1- Non-disabled and physically disabled people’s perceptions of interactions with members of the other group	78
Method	80

Analysis	84
Discussion	95
CHAPTER 6 - Studies 2, 3 & 4	99
Study 2- The effect of physically disabled people's psychological concerns on embarrassment, contact quality and approach intentions in vignette-based interactions	99
Method	101
Results	110
Discussion	125
Study 3- The effect of non-disabled people's psychological concerns on embarrassment, contact quality and approach intentions within vignette-based interactions	127
Method	129
Results	138
Discussion	152
Study 4- The effect of non-disabled people's embarrassment on contact quality, approach intentions and prejudiced attributions within an imagined interaction	155
Method	157
Results	165
Discussion	174
CHAPTER 7- Study 5	177
Study 5- Testing a novel manipulation of psychological concerns on embarrassment, contact quality and willingness to help the physically disabled within an actual interaction	177
Method	181
Results	189
Discussion	195
CHAPTER 8- Studies 6, 7 & 8	200
Study 6- The extent that feedback from physically disabled people can restore positive perceptions of contact quality for non-disabled people	200
Method	205
Results	214
Discussion	228

Study 7- The extent that using a feedback strategy after an embarrassing interaction can be beneficial for physically disabled people’s contact quality	232
Method	235
Results	242
Discussion	249
Study 8- Testing the efficacy of the Paralympics as a natural method of improving contact quality between non-disabled people and physically disabled people	252
Study 8a-Testing the efficacy of the Paralympics as a natural method of improving contact quality for physically disabled people	255
Method	255
Results	258
Discussion	263
Study 8b-Testing the efficacy of the Paralympics as a natural method of improving contact quality for non-disabled people	264
Method	264
Results	267
Discussion	271
General discussion to Study 8	272
CHAPTER 9- General discussion	276
Summary of main findings	276
Major theoretical contributions of the thesis	288
Practical contributions of the thesis and recommendations for disability campaigns	296
Limitations of the thesis and methodological issues	302
Future research	309
Critical reflection	315
Final thought	317
References	319
Appendices	348
Appendix A: Example consent forms and information sheets	348
Appendix B: Confirmation of ethical approval	353
Appendix C: Study materials (surveys and example stimuli)	360
Appendix D: Interview transcripts and additional qualitative questionnaire data (Study 1)	396

List of tables

CHAPTER 6	Table 1. Correlations between all measured variables and the concerns manipulation (Study 2)	111
	Table 2. Correlations between all measured variables and the concerns manipulation (Study 3)	139
	Table 3. Correlations between measured variables and the embarrassment manipulation (Study 4)	166
	Table 4. Regression analysis of embarrassment and concerns on contact quality (Study 4)	173
	Table 5. Regression analysis of embarrassment and concerns on approach intentions (Study 4)	173
	Table 6. Regression analysis of embarrassment and concerns on prejudice (Study 4)	174
CHAPTER 7	Table 7. Correlations between all measured variables and the concerns and bogus pipeline manipulations (Study 5)	189
	Table 8. Regression analysis of the concerns and bogus pipeline manipulations on willingness to help (Study 5)	192
CHAPTER 8	Table 9. Correlations between measured variables and the embarrassment and feedback manipulations (Study 6)	215
	Table 10. Correlations between all measured variables (Study 7).	243
	Table 11. Longitudinal and cross-sectional correlations among the key measured variables (Study 8a)	259
	Table 12. Change over time on the key measures over the 2012 Paralympic Games (Study 8a)	260
	Table 13. Regression analysis of concerns (T1) on T2 embarrassment while controlling for T1 embarrassment (Study 8a)	262
	Table 14. Regression analysis of concerns (T1) and embarrassment (T1) on T2 contact quality while controlling for T1 contact quality (Study 8a).	262
	Table 15. Longitudinal and cross-sectional correlations among the key measured variables (Study 8b).	268
	Table 16. Change over time on the key measures over the 2012 Paralympic Games (Study 8b).	269

Table 17. Regression analysis of concerns (T1) on T2 embarrassment while controlling for T1 embarrassment (Study 8b).	271
Table 18. Regression analysis of concerns (T1) and embarrassment (T1) on T2 contact quality while controlling for T1 contact quality (Study 8b).	271

List of figures

CHAPTER 3	Figure 1. The proposed mediational models	63
CHAPTER 6	Figure 2. Vignette content and presentation order of dependent measures (Study 2)	106
	Figure 3. Difference in reported concerns within the work-focused vignette (Study 2)	113
	Figure 4. Difference in reported concerns within the social-focused vignette (Study 2)	114
	Figure 5. Difference in reported embarrassment within the work-focused vignette (Study 2)	116
	Figure 6. Difference in reported embarrassment within the social-focused vignette (Study 2)	117
	Figure 7. Difference in reported contact quality within the work-focused vignette (Study 2)	118
	Figure 8. Difference in reported contact quality within the social-focused vignette (Study 2)	119
	Figure 9. Difference in reported approach intentions within the work-focused vignette (Study 2)	120
	Figure 10. Difference in reported approach intentions within the social-focused vignette (Study 2)	121
	Figure 11. Model 1 (concerns-embarrassment-contact quality (Study 2))	123
	Figure 12. Model 2 (concerns-embarrassment-approach intentions (Study 2))	124
	Figure 13. Vignette content and presentation order of dependent measures (Study 3)	134

Figure 14. Difference in reported concerns within the work-focused vignette (Study 3)	141
Figure 15. Difference in reported concerns within the social-focused vignette (Study 3)	142
Figure 16. Difference in reported embarrassment within the work-focused vignette (Study 3)	144
Figure 17. Difference in reported embarrassment within the social-focused vignette (Study 3)	145
Figure 18. Difference in reported contact quality within the work-focused vignette (Study 3)	146
Figure 19. Difference in reported contact quality within the social-focused vignette (Study 3)	147
Figure 20. Difference in reported approach intentions within the work-focused vignette (Study 3)	148
Figure 21. Difference in reported approach intentions within the social-focused vignette (Study 3)	149
Figure 22. Model 1 (concerns-embarrassment-contact quality (Study 3))	151
Figure 23. Model 2 (concerns-embarrassment-approach intentions (Study 3))	152
Figure 24. Diagram to show the experimental procedure for Study 4 (Study 4)	160
Figure 25. Difference in embarrassment levels across experimental conditions (Study 4)	167
Figure 26. Difference in reported contact quality according to experimental condition (Study 4)	169
Figure 27. Difference in reported approach intentions according to experimental condition (Study 4)	170
Figure 28. Difference in reported prejudice according to experimental condition (Study 4)	171
CHAPTER 7 Figure 29. Diagram to show the experimental procedure for Study 5 (Study 5)	183
Figure 30. Model 1 (concerns-embarrassment-contact quality (Study 5))	194

	Figure 31. Model 2 (concerns- embarrassment- willingness to help (Study 5))	195
CHAPTER 8	Figure 32. Diagram to show the experimental design of Study 6 (Study 6)	203
	Figure 33. Diagram to show the experimental procedure for Study 6 (Study 6)	208
	Figure 34. Main effects and interaction of embarrassment and feedback on contact quality (Study 6)	218
	Figure 35. Main effects and interaction of time and feedback on contact quality (Study 6)	219
	Figure 36. Main effects and interaction of embarrassment and feedback on desire for future contact (Study 6)	221
	Figure 37. Main effects and interaction of time and feedback on desire for future contact (Study 6)	222
	Figure 38. Main effects and interaction of time and feedback on desire for future contact (without covariates (Study 6)).	224
	Figure 39. Main effects and interaction of embarrassment and feedback on prejudice (Study 6)	225
	Figure 40. Main effects and interaction of time and feedback on prejudice (Study 6)	226
	Figure 41. Main effects and interaction of time and feedback on prejudice (without covariates (Study 6)).	228
	Figure 42. Diagram to show the procedure for Study 7 (Study 7)	237
	Figure 43. Main effects and interaction of embarrassment and response strategy on contact quality	246
	Figure 44. Main effects and interaction of embarrassment and response strategy on approach intentions (Study 7)	247
	Figure 45. Main effects and interaction of embarrassment and response strategy on attitude to future discrimination (Study 7)	249
	Figure 46. Model depicting the relationship between concerns, embarrassment and contact quality (both samples (Study 8))	254

Word count: 80, 150 (excluding references and appendices).

CHAPTER 1

Intergroup contact theory

In the wake of the horrors of World War II, Gordon Allport (1954) proposed a strategy to promote harmony and ameliorate bias between groups known as “The contact hypothesis”. Its premise was relatively simple: under the right conditions, contact between groups would lead to prejudice reduction. This formulation has inspired extensive research by social psychologists and within other disciplines, as well as helped generate progressive social policies and various intervention programmes. Nearly sixty years later, a cursory glance at the social and political landscape can remind us why the work of Allport and his successors on the contact hypothesis continues to be important. In addition to violent conflicts such as the tragedies recently endured by people in Ukraine (2014) and Israel-Palestine (2014), manifestations of antipathy (e.g., sexism, racism, ageism) towards different social groups are frequently found in societies worldwide (see Abrams & Houston, 2006). However, despite comprising a substantial and important social issue, the intergroup relationship between non-disabled and physically disabled people has been somewhat neglected within the contact literature. This is curious, as contact between members of these two groups provides a unique and challenging context for study. In coming to think about how to investigate this context, this thesis will also question the way contact has traditionally been investigated by the researchers influenced by Allport (i.e. as a predictor of reduced intergroup bias). According to the present work, investigating contact as an *outcome* may provide a more powerful way of understanding the richness present within social interactions. Specifically, such an approach will extend knowledge of the psychological processes that act as a barrier to good quality contact in mixed physical ability interactions. Addressing this gap is especially important because, as will be shown,

interactions between non-disabled and physically disabled people are frequently fraught with tension.

As noted earlier, the contact hypothesis asserts that, under optimal conditions, contact between groups will reduce prejudice (Allport, 1954). The preceding qualifier is important as, Allport, like other theorists of his era (e.g., Baker, 1934, as cited in Pettigrew & Tropp, 2006), was relatively conservative about the potency of intergroup contact. That is, the contact hypothesis does not imply that “mere” or simple contact should be viewed as a panacea for improving intergroup relations (R. Brown, 2011). Rather, it supposes that the reduction of prejudice is achievable only if certain criteria are met. The conditions that Allport (1954) deemed optimal for producing intergroup harmony were a) equal status within the situation, b) intergroup cooperation, c) common goals, and d) support of authorities, law or custom (see Pettigrew, 1998). Subsequent theorists have also refined or emphasized different facets of these original criteria (e.g., perceived similarity between groups; Kenworthy, Turner, Hewstone & Voci, 2005; perceived importance of contact; Van Dick et al., 2004; personalisation, Dovidio, Gaertner & Kawakami, 2003). Perhaps the most important of these has been an emphasis on the role that cross-group friendships can play (see Hamberger & Hewstone, 1997; Pettigrew, 1997, 1998). Allport (1954) also recognised this, favouring intimate over simple contact and commenting that “contact must reach under the surface in order to be effective” (p. 276). Cook (1978) described this as contact which has “acquaintance potential” but, as its name belies, it is important to realise that cross-group friendship must go beyond an acquaintanceship and persist into a meaningful, personal relationship over time (Davies, Tropp, Aron, Pettigrew & Wright, 2011; Pettigrew, 1997).

Empirical evidence has generally illustrated that Allport's original conditions are important, but not essential, for obtaining the benefits of intergroup contact (see Pettigrew & Tropp, 2006). These findings are important because mixed interactions, such as those which take place between non-disabled and physically disabled people, frequently take place in the absence of these optimal conditions. For instance, Sherif's (1966) landmark Robber's cave field study demonstrates the power of intergroup cooperation quite vividly. In the first stage of the experiment boys attending a Summer camp were split into two groups. Secondly, a conflict was introduced by asking the boys to participate in a series of competitive games (e.g., tug of war) in which there could be only one victor. This generated widespread animosity between the groups. A final stage saw both groups presented with a situation (repairing a car) where they had to work together to achieve a common goal, without elements of competition. After this had occurred, group attitudes became far less prejudiced. The importance of cooperation has also been highlighted by the use of "jigsaw" interventions in schools, i.e. techniques that encourage cooperative working between children towards superordinate goals (Aronson & Gonzalez, 1988; Walker & Crogan, 1998). Other studies have also furnished support for equal status (both within and coming into the situation; (e.g., Mullen, Brown & Smith, 1992), common goals (e.g., Chu & Griffey, 1985) and institutional endorsement (e.g., Parker, 1968) as optimal conditions for contact. More recently, researchers have focused on testing the efficacy of "friendship potential" for enhancing the contact-prejudice effect. Longitudinal studies examining natural cross-group friendships formed at university (e.g., Levin, van Laar & Sidanius, 2003; Van Laar, Levin, Sinclair & Sidanius, 2005; Van Laar, Levin & Sidanius, 2008), laboratory work (e.g., Page-Gould, Mendoza-Denton, Alegre & Siy, 2010) and other studies (e.g., Hewstone, Cairns, Voci, Hamburger & Niens, 2006; Wagner, Van Dick, Pettigrew &

Christ, 2003) have demonstrated that this is perhaps the most important facilitating condition (see Davies et al., 2011; Davies, Wright, Aron & Comeau, 2013; see also Turner, Hewstone, Voci, Paolini & Christ, 2007).

Early reviews found both supporters (e.g., Cook, 1984; Pettigrew, 1986) and detractors (e.g., Ford, 1986; McClendon, 1974) of the contact hypothesis. However, these papers were generally selective (i.e. focused on a particular group or setting), did not use fully quantitative methods of assessment (see B. T. Johnson & Eagly, 2000), or had no standardised definition of intergroup contact. These shortcomings were addressed by Pettigrew and Tropp (2006), who provided perhaps the most important piece of evidence in support of the contact – prejudice link. They did this by conducting a large meta-analysis of the available contact literature at that time. Synthesizing more than 500 studies involving > 250, 000 participants (range = 1940-2000) they found that intergroup contact was inversely related to prejudice in 94% of the samples, eliciting a weak but statistically significant relationship (mean $r = -.22$). If only those studies that met Allport's (1954) criteria were included the relationship became significantly stronger (mean $r = -.29$), leading the authors to conclude that his conditions facilitated, but were not essential, for obtaining the benefits of intergroup contact. This conclusion demonstrated the potency of the contact hypothesis. While simple contact between groups should not be treated as a panacea for prejudice (R. Brown, 2011; Hewstone, 2003), the results of this meta-analysis show that contact can confer benefits in the absence of the optimal conditions outlined by Allport (1954). This means that in real-life mixed interactions, which generally lack these conditions, such as those between non-disabled and physically disabled people, contact may still be able to attenuate intergroup bias.

This realisation helped address an issue that had been troubling some of the researchers working in the field (e.g., Pettigrew, 1986; 1998). This concerned a tendency towards specifying further conditions under which the benefits of intergroup contact would be maximised (e.g., Ben-Ari & Amir, 1986; Wagner & Machleit, 1986). As more were outlined, the studied situations became less representative of real-life encounters between groups. This severely reduced the practical applicability of the contact hypothesis and caused research interest in it to ebb (Hodson & Hewstone, 2013). The confirmation that these conditions were not essential helped to further shift the field in new directions (Pettigrew & Tropp, 2006). Particularly, researchers became occupied by the why, where, and when of contact (i.e. specifying the processes by which contact reduces prejudice and establishing in which situations the contact-prejudice link is strongest, particularly for promoting generalised attitudinal change). There is now a general consensus among contact researchers that intergroup contact can reduce prejudice and advances have been made in understanding why this is so and what can moderate contact effects. This has helped transform intergroup contact from a hypothesis into a theory (Hewstone, 2009). However, before critically reviewing advances within intergroup contact of this nature, I wish to consider another relevant issue: Which groups has intergroup contact been shown to work with?

Brief summary. The contact hypothesis posits that intergroup contact, under certain conditions (e.g., co-operation, friendship potential), will reduce intergroup prejudice. Importantly, evidence has also demonstrated that these conditions facilitate but are not essential for the beneficial effects of contact. The hypothesis has gained strong empirical support and the field has moved to understanding why contact works and identifying factors that moderate the contact-prejudice effect.

The contact literature and physical disability

Allport (1954) conceived the contact hypothesis primarily within the context of improving race and ethnic relations, as was the prevalent social problem of America at that time. Since then, investigation of the contact hypothesis has been extended to groups as variable as people possessing a different sexual orientation (Anderssen, 2002; Herek & Capitano, 1996), the mentally ill (e.g., K. West, Holmes & Hewstone, 2011; K. West & Turner, 2014) and the physically disabled (Amsel & Fichten, 1988; Krahé & Altwasser, 2006). This is perhaps unsurprising given the plethora of empirical work that Allport (1954) inspired. A recent count by Hodson and Hewstone (2013, p. 5) showed that the numbers of papers on contact had climbed to 675 by the end of 2011. Of these, two-thirds were published after the new millennium, showing no abatement of interest. However, inclusion does not necessitate equality and it is fair to say that some of aforementioned intergroup relationships, such as the one between non-disabled and physically disabled people, have received less attention than others in this sizeable body of work. As the largest meta-analysis on the *general* effects of intergroup contact, Pettigrew and Tropp's work (2000, 2005, 2006) provides a useful starting point by which to evaluate these trends.

Firstly, it is useful to draw an overarching distinction between the majority and minority groups involved within these intergroup relationships. A wider criticism of social psychology is that it has generally focused on the majority group and neglected the perspective of the minority group (Devine & Vasquez, 1998; Major, Quinton, McCoy & Schmader, 2000). Looking at Tropp and Pettigrew (2005), it can be seen that this same problem is evinced within the contact literature. Of the 698 samples they investigated, only 142 (20.3%) used minority group participants, while 51 (7.3%) assessed contact among groups of both statuses. The remainder ($N = 505$, 72.4%) utilised just the

majority group perspective. The authors note that this bias is more than what would be expected by chance (i.e. $p < .05$). It is also of practical significance, given that contact seems to be differentially effective for majority and minority group members.

Specifically, Tropp and Pettigrew (2005) note that the overall contact-prejudice effect was significantly weaker for minority groups (mean $r = -.18$) relative to majority groups (mean $r = -.22$). Subsequent commentators have also made similar observations (e.g., Binder et al., 2009). Evidently then, the relative scarcity of contact papers from the perspective of minorities (cf. Swart, Hewstone, Christ & Voci, 2011) is not a purely cosmetic imbalance, but one that limits our understanding of the effectiveness of intergroup contact in real-life situations. The reasons minority groups might not accrue as many benefits from contact will be discussed in the next Chapter; for now, I wish to focus specifically on the contact literature pertaining to non-disabled and physically disabled people.

Of the 515 studies included in Pettigrew and Tropp (2006), just 76 (15%) involved physically disabled people. This demonstrates that the contact-prejudice link among non-disabled and physically disabled people is under-researched, compared to some other contexts, for example race/ethnicity ($N = 263$, 51%; Pettigrew & Tropp, 2006). This is surprising, because physically disabled people comprise a substantial minority group. In the UK there are over 11 million people living with a disability (Department of Work and Pensions [DWP], 2012). A significant proportion of these are physical in nature, with roughly 6 million people reporting mobility issues and problems lifting or carrying. Moreover, over 2 million possess impaired dexterity and physical coordination (DWP, 2012), meaning that, in total, roughly an eighth of that population possesses a physical impairment of some sort. This is also reflected worldwide, with the global number of disabled people being placed at 15% (World Health Organisation [WHO],

2011). Certainly then, this minority group enjoys a sizeable membership and the surprising lack and range of social psychological research with physically disabled people has been highlighted in decades previously (e.g., Fine & Asch, 1988; Meyerson, 1948). Looking at the studies included in the meta-analysis (Pettigrew & Tropp, 2006), nearly all used physically disabled people as the target outgroup, rather than as participants. This may be due in part to a general bias towards the majority perspective discussed above or it could be due to practical issues, such as difficulty in obtaining physically disabled participants (see Major et al., 2000). Whatever the reason, the implication of this mismatch is that contact from the physically disabled person's perspective is still poorly understood.

That is not to say we cannot draw some conclusions about how intergroup contact affects non-disabled people's attitudes towards those with impairments. In fact, Pettigrew and Tropp (2006) found that the general effect of contact when physically disabled people were the target outgroup was higher (mean $r = -.24$) than the average (mean $r = -.22$), surpassed only when people of a different sexual orientation were the target (mean $r = -.27$). This suggests that contact with physically disabled people does generally reduce non-disabled prejudice towards them. At first glance, this is heartening, but caution must be taken about inferring that the studies these findings are based on really represent the full range of contact situations non-disabled people and physically disabled people engage in. A more in-depth look at the research that has been carried out in the area will make the case that studies so far have neglected to examine certain common forms of contact between the groups. As such, there may still exist a lack of understanding of mixed physical ability interactions.

Considering the studies that have looked at contact from the perspective of non-disabled people, it can be seen that the majority of research has been conducted within

educational (e.g., schools, colleges) or organisational settings (e.g., with healthcare workers, volunteers etc.; see Pettigrew & Tropp, 2006). Educational studies have generally looked at the effect of contact on attitudes towards physically disabled schoolchildren, among both their non-disabled peers (e.g., Esposito & Peach, 1983; Esposito & Reed, 1986; Florian & Kehat, 1988; Maras & Brown, 1996, 2000) and, more rarely, teaching professionals¹ (e.g., Barr & Bracchitta, 2008; Casey, 1978). Overall, these interventions have produced generally positive results, though there are some exceptions (e.g., Maras & Brown, 2000). One issue may be that school environments do not always meet Allport's criteria, for example, the demand for equal status within the situation (Maras & Brown, 2000). Indeed, more recent intervention studies that have followed Allport's conditions closely continue to provide encouraging results for the potency of contact within educational settings (e.g., Krahe & Altwasser, 2006). There has also been a recent trend toward assessing the effectiveness of indirect forms of contact on ameliorating peer-bias towards physically disabled children, for example extended (Cameron & Rutland, 2006; Cameron, Rutland & R. Brown, 2007) and imagined contact (Cameron, Rutland, Turner, Holman-Nicolas & Powell, 2008) that have met with a measure of success.

Such research advances the field in important directions and has worthy practical application. However, it is questionable whether school contact is really representative of all the type of interactions that non-disabled people and physically disabled people have with each other. Obviously, the majority of members from both groups are adults and not schoolchildren. The perceptions of (young) children towards those with disabilities may differ from those of adults. For example, children may hold more generally positive attitudes to people with disabilities (Townsend, Wilton & Vakilirad,

¹ Arguably, this intergroup relationship can be described as organisational contact. This type of contact is discussed below.

1993) or may not distinguish between different disabilities to the same extent as adults (Abrams, Jackson & St. Claire, 1990). Indeed, research with adults also suggests that they hold different attitudes towards various impairment groups (Thomas, 2000; Tringo, 1970) which could impact the generalizability of contact effects (see Chapter 2). Aside from this, the educational setting possesses features that identify it as a special contact situation for non-disabled and physically disabled people. For example, school contact, especially under inclusive policies, enjoys a high level of institutional support (Allport, 1954). The structured setting of the classroom may allow non-disabled children the opportunity to become “experts”; i.e. to gain individuating information (N. Miller, 2002) and knowledge (Yuker, 1994) about a physically disabled classmate that may assist in prejudice reduction. The fact that classroom relations persist year after year may also provide fertile ground for cross-group friendships to form (see Davies et al., 2011). That is not to deny the reality that numerous physically disabled children experience marginalisation at many schools and colleges (see Chatzitheochari, Parsons & Platt, 2014) Rather, I wish to highlight that when a non-disabled person encounters a physically disabled person in wider daily life, which can be a rare occurrence in itself, the contact can be both casual and fleeting. Furthermore, the interactants may have very little opportunity to learn about each other. This contrasts the basic features of the educational setting that has formed the backbone of contact research on physical disability thus far. Arguably, as school contact differs markedly from interactions that group members have during daily life, experiences in this setting are not good examples of all aspects of this intergroup relationship (see also Dixon, Durrheim & Tredoux, 2005).

Following this argument, we can also construe contact research that has been conducted in organisational settings as reflecting another special type of mixed physical ability

interaction. Research in this area has, for example, examined if contact improves the attitudes of therapists (e.g., Eberhart & Mayberry, 1995), healthcare workers (e.g., Bell, 1962; Felton, 1975) and volunteers (e.g., Fichten, Schipper & Cutler, 2005; K. Miller et al., 2002) towards physically disabled people. Again, these studies show generally positive results, though perhaps more mixed than research conducted in an educational setting (see Fichten, et al., 2005). These professionals are, of course, actual experts on disability in the sense that they receive some level of training regarding areas specific to their role. This setting also provides structured opportunities to interact with disabled people, albeit in a limited, professional way. Whilst there may be little scope for cross-group friendships to form (see Davies et al., 2011), certainly non-disabled people working within these sectors have a greater chance of gaining individuating information (N. Miller, 2002) and gaining knowledge (Yuker, 1994) about their physically disabled clients compared to everyday mixed contact. These interactions also take place with a high level of institutional endorsement. Like school contact then, it can be seen that mixed physical ability interactions in an organisational setting constitute just one example of the intergroup relationship between non-disabled and physically disabled people; one that may not fully represent “daily life” encounters (see also Dixon et al., 2005).

A small minority of contact studies have used both non-disabled and physically disabled people as participants when investigating the effects of contact (e.g., Fichten, Amsel, Bourdon & Creti, 1988; R. S. Friedman, 1975; D. W. Johnson & Johnson, 1985; K. Miller et al., 2002). These have mostly been conducted within an educational setting (cf. K. Miller et al., 2002). For instance, D. W. Johnson and Johnson (1985) examined the effect of co-operative learning strategies among hearing impaired and hearing able children. They found that co-operative learning increased both the frequency of mixed

interactions and interpersonal attraction between the two groups relative to an individualistic learning experience. Similarly, R. S. Friedman (1975) investigated the efficacy of an intervention termed the “peer to peer program” in which non-disabled and physically disabled school children engaged in a series of structured interactions with each other. This programme resulted in the non-disabled children holding more positive attitudes towards the disabled, however the attitudes of the physically disabled children remained unchanged relative to a control group. Regardless of the effectiveness of these interventions, more pressing is that these studies have been conducted solely within certain contexts (e.g., educational, organisational). As stated, these contexts are not fully representative of the daily life encounters that non-disabled people and physically disabled people have. This means that this type of contact is poorly understood, especially from the perspective of physically disabled people.

The majority of studies which use non-disabled people and physically disabled people have been conducted in settings where positive contact is relatively likely to occur (e.g., schools). This is representative of the wider preoccupation with investigating the *benefits* of intergroup contact within the traditional contact literature. That is, casual encounters between groups have been an understudied area of research thus far (Pettigrew, 2008; Pettigrew & Tropp, 2011). However, outside of structured settings, contact between non-disabled people and physically disabled people may very often be negative in tone. One reason is that, generally, cross-group interactions may lack many of the optimal conditions for contact. Consider Pettigrew and Tropp (2011), who analysed survey data of 1383 Germans’ contact experiences with foreigners. When comparing instances of “positive” and “negative” contact reported by these participants, they found that where contact was superficial, non-voluntary and of unequal status, it was more likely to be reported as negative (i.e. as contact that increases prejudice) and

less likely to be reported as positive contact. Evidently, like many cross-group interactions between strangers, a meeting between a non-disabled person and a physically disabled person who are unknown to each other will often be superficial. Additionally, physically disabled people comprise a stigmatised group, meaning that they convey a devalued social identity to others (Dovidio, Major & Crocker, 2000). Thus, mixed physical ability interactions may rarely carry connotations of equal status. Finally, contact between the two groups can be non-voluntary, at least for one party. For example, a physically disabled person may be subject to repeated offers of assistance when they would rather be left alone. The examples given above illustrate that daily life encounters between non-disabled people and physically disabled people do not always take place under optimal conditions. On the other hand, Pettigrew and Tropp (2011) note that negative contact is quite rare in comparison to positive contact (< 5% of cases in the meta-analysis; Pettigrew & Tropp, 2006). In addition, Allport's (1954) conditions for contact have been shown to facilitate, but not be essential for contact to attenuate intergroup bias. Based on this, it can be suggested that the absence of facilitating conditions may contribute to, but is not sufficient, to explain instances where less optimal contact may be occurring. The next section will explore why contact between non-disabled and physically disabled people may frequently not be positive in tone.

Brief summary. Contact research has generally examined the perspective of the majority and not the minority group. This same bias is evident among contact research on physical disability, in which only a few studies use physically disabled people as participants. Little is therefore known about contact from the perspective of disabled people. Moreover, this intergroup relationship is under-researched in general, compared to some others (e.g., race/ethnicity). Of the studies conducted in the area, most have

looked at the effect of contact within educational or organisational settings. The area has not looked extensively at daily life encounters, where positive contact may be rare.

Contact between non-disabled and physically disabled people: Unique features of the mixed physical ability intergroup context

In this section, I explore the characteristics of casual or “daily life” contact between non-disabled and physically disabled people. In doing so, I illustrate that this context possesses unique features that frequently suffocate positive contact between members of these two groups.

Accounts from people with physical impairments regarding their social interactions with non-disabled people suggest that many encounters can be highly awkward. This can be due to overt discrimination on the part of non-disabled people, such as staring, name-calling, ignoring and exclusionary behaviour (Frank, 1988; Gill, 2001; Goffman, 1963; Morris, 1991; Reeve, 2002, 2012). Recent statistics confirm that this type of experience is still common: for example, 65,000 disability hate crimes were reported annually between 2009 and 2011 (DWP, 2013) and a nationwide survey conducted within the last decade reported that 30% of disabled people had experienced disability prejudice (Abrams & Houston, 2006). Moreover, at other times, awkward interactions can be caused by well-meaning, but ultimately inappropriate behaviour. One particularly pervasive example is inquisitiveness to the level that many physically disabled people find disrespectful. For instance, Reeve (2012) discusses the experiences of one respondent who was faced with repeated and invasive questions about his physical condition. This respondent’s chosen moniker for that study –Adinuf- aptly reflects the feelings of many physically disabled people regarding such incidents.

Though many people with impairments feel that the onus is on them to manage strained

and awkward encounters (Davis, 1961; Goffman, 1963), contact of this type may ultimately produce feelings of awkwardness and embarrassment and lead to psychological distress (Reeve, 2012). As Shakespeare, Gillespie-Sells and Davies (1996, p. 42-43) comment: “[dealing with] daily...experiences of rejection and humiliation are among the hardest aspects of being a disabled person”.

At first, accounts of explicit negative experiences with non-disabled people may seem surprising as attitudes toward physically disabled people in many countries, such as the UK, show ostensible improvement (Deal, 2007). For example, a recent British survey noted that, of 3000 non-disabled respondents, 85% think their employers should do more for disabled people in the workplace (British Telecom [BT], 2011). Empirical evidence is also supportive of a desire to be kind to disabled people. In one experiment, non-disabled participants were asked to rate the performance on a task of either a physically disabled or an able-bodied confederate (Hastorf, Northcraft & Picciotto, 1979). The physically disabled confederate received more positive performance feedback, even when controlling for participant expectations of their competency, which the authors argue reflects a norm to be kind. Similar interactive studies have also shown that participants will evaluate an interaction with a physically disabled confederate more positively compared to the same interaction with a non-disabled confederate (Kleck, 1969) and will also distort their opinions to be consistent with a physically disabled confederate (Kleck, Ono & Hastorf, 1966). Of course, these instances of “false feedback” may also contribute to the awkwardness experienced in mixed interactions by physically disabled people. Physically disabled people, in common with members of other stigmatised groups, may be sensitive to negative cues given off by others (Vorauer, 2006). In fact, they may see patronizing behaviour even where none exists (Strenta & Kleck, 1985; see also Vorauer & Kumhyr, 2001). This

itself may contribute to detrimental interaction outcomes; for example, a physically disabled person might seek to terminate an encounter with a non-disabled person prematurely (Comer & Piliavin, 1972).

Despite a prevailing “norm to be kind”, non-disabled people themselves also appear to find interacting with physically disabled people an awkward prospect. In the same UK survey cited earlier (BT, 2011), over half (51%) of the 3000 respondents said they felt uncomfortable when interacting with disabled people, while nearly two thirds admitted both staring (60%) and avoiding them because of not knowing how to act (65%).

Several experiments have also observed anxious and avoidant behaviour in non-disabled people during mixed interactions. For example, Kleck (1968, 1969), found that non-disabled participants display decreased motor engagement (in the form of sitting or speaking from further away) when interacting with a confederate who possessed an apparent physical impairment vs. a confederate with no apparent physical impairment (see Snyder, Kleck, Strenta & Mentzer, 1979). Interacting with the physically disabled confederate was also described as more uncomfortable in a post-experiment survey (Kleck, 1966; see also Amsel & Fichten, 1988). Interestingly, positive verbal behaviour (e.g., survey responses) and negative non-verbal behaviour (e.g., inhibited movements) are often observed in the same studies (e.g., Kleck et al., 1966; Katz, Farber, Glass, Lucido & Elmswiller, 1978), representing an apparent disparity between favourable and unfavourable attitudes. Dovidio, Pagotto and Hebl (2011) suggest that this positive/negative mismatching reflects the tendency for majority groups to hold ambivalent attitudes towards minorities (see also Hebl & Dovidio, 2005). In the case of physically disabled people, this includes a mixture of both positive (e.g., sympathy, pity) and negative (e.g., aversion, anxiety) affect (Livneh, 1988). The upshot of this is

that, despite outwardly holding good intentions, non-disabled people also experience significant awkwardness and anxiety when interacting with physically disabled people.

What is the basis for non-disabled people's awkwardness when interacting with physically disabled people? Hebl and Kleck (2000) suggest that favorable attitudes observed in the aforementioned interactive experiments, which are generally verbal and controllable, reflect non-disabled people's conscious efforts to adhere to social norms and control their prejudices. On the other hand, unfavorable attitudes, which are generally non-verbal and uncontrollable, reflect an underlying negative affect towards the physically disabled (see also Rohmer & Louvet, 2012). Dovidio et al. (2011) note that this implicit negative orientation may be a result of an evolutionary mechanism that helps humans to perceive genetic fitness and avoid disease (see Neuberg & Cottrell, 2008). Alternatively, negative interactional outcomes might arise due to a conflict between curiosity towards a novel stimulus (e.g., staring) and attempting to suppress that behaviour by acting in a socially desirable, non-prejudiced manner (e.g., not staring). In this explanation, the socially desirable behaviour is not necessarily a "mask" for an underlying bias, but rather the discomfort is produced by the conflict itself. A study by Langer, Fiske, Taylor and Chanowitz (1976) appears to find support for this hypothesis. They observed that participants stared longer at a picture of a physically disabled person when they were alone compared to when they were in the presence of others. Moreover, subsequent avoidance of an actual physically disabled person was reduced when participants were given the opportunity to view them beforehand (see also Fichten, Amsel, Robillard, Sabourin & Wright, 1997). Finally, physically disabled people may also evoke feelings of mortality and existential anxiety among the non-disabled (see Pyszczynski, Greenberg & Solomon, 1997), who become motivated to avoid such emotions. While acknowledging such explanations as one source of non-

disabled people's anxious behaviour during mixed interactions, I wish to shift focus to consider that awkwardness may not just be due to the presence of an underlying negative affect, but instead reflect unique features of mixed physical ability interactions themselves. This has certain advantages. For instance, it allows for a holistic view of these interactions, namely what determines interaction quality for physically disabled people as well. As I have commented, this group has been neglected by social psychologists and contact theorists (see Fine & Asch, 1988; Pettigrew & Tropp, 2006). Secondly, ascribing awkward interactions solely to evolutionary processes or the appearance of disabled people offers little opportunity to progress beyond attempting to cure their biological impairment. Acknowledging that social factors produce this awkwardness may provide more of an impetus for change (see also Oliver, 1990, 1996).

Specifically, non-disabled people may find interacting with physically disabled people awkward for two reasons: a) a lack of prior experience interacting with physically disabled people and b) the prevailing societal "norm to be kind", which can be more accurately termed a *demand* to be kind. In the first case, despite comprising a substantial minority, physically disabled people are statistically infrequent when compared with many stigmatized groups (e.g., the obese; see Hebl, Tickle & Heatherton, 2000). Moreover, members possess high intragroup heterogeneity. That is, there exist numerous physical impairments that may vary vastly from each other in severity, functional effects and visibility. In addition, two people with the same impairments (e.g., cerebral palsy) may differ from each other so far along these criteria that it is difficult to recognize that they live with the same impairment.² This means that, even in the event that a non-disabled person has meaningful prior contact with a

² Note that I am not stating that physically disabled people are generally more heterogeneous than other minority groups. Rather, I assert that they are more heterogeneous along the key dimension that signifies they are a member of a marginalized social category (i.e. physical impairment vs. race or sexuality etc.).

disabled person, it is unlikely to equip them with the requisite experience to smoothly interact with another member of the group (see Chapter 2). According to Zebrowitz-McArthur (1982) one should expect different interactional outcomes from an encounter with a physically disabled person compared to, for example, an obese person. Specifically, the statistical prevalence of the obese person should result in less interactional uncertainty due to a greater repository of contact experience with them. Consequently, unlike most stigmatised groups, there may be a lack of agreed “rules” around how to interact with the physically disabled (Keith, 1999). Although non-disabled people may be acutely concerned about this, they may continually fall foul of this uncertainty by acting in an inappropriate manner (e.g., through invasive questioning) thus making life uncomfortable for those with impairments as well (Makas, 1988). Of course, uncertainty may play a role in other mixed encounters as well, such as interracial or interethnic interactions (e.g., Butz & Plant, 2006; Plant & Butz, 2006; Plant & Devine, 2003; see also Vorauer, 2006, 2013), but it is here posited to be especially salient in the mixed physical ability context due to their statistical rarity and heterogeneity.

Non-disabled people’s awareness of the prevailing norm to be kind may also contribute to awkward interactions with the physically disabled. The root of this norm may be prevailing stereotypes about this group. Fiske, Cuddy, Glick and Xu (2002) have argued that beliefs about all social groups constitute a mixture of two key dimensions: warmth and competence. In this Stereotype Content Model, physically disabled people, in common with groups like the elderly and housewives, are believed to be warm but highly incompetent³ (Cuddy, Fiske & Glick, 2007; Fiske et al., 2002; Louvet, Rohmer & Dubois 2009). The authors note that this reflects a paternalistic blend of antipathy,

³ Fiske and colleagues (2002, 2007) actually use the term ‘disabled people’ but this was differentiated from the ‘retarded’ (i.e. people with a mental disability).

under which group members will be disrespected but given pity and sympathy- kindness in other words. In a comparison of stereotypic beliefs of both non-disabled people and disabled people, Nario-Redmond (2010) also reported findings in agreement. Specifically, she noted that those with impairments are seen as dependent, incompetent and asexual by members of both groups, which she argues is evidence of a consensual-knowledge base about the disabled. The belief that disabled people are both dependent and non-threatening (i.e. warm) may elicit societal pressure on the non-disabled to engage with the physically disabled (e.g., through helping), even when they might rather avoid the interaction (see Dovidio et al., 2011). This demand to be kind might cause non-disabled people to cast unnecessary attention on their own behaviour and how it is perceived, contributing to an interactional concern (see Vorauer, 2006). These concerns (including the unique concerns of physically disabled people), which are based on expectations and beliefs that group members hold about the interaction and out-group members, are discussed in detail in Chapter 3.

A demand to be kind is not unique to the mixed physical ability context. For instance, the elderly are similarly believed to be warm but incompetent (Cuddy, Norton & Fiske, 2005) and traditionally, it is usual to offer assistance and be respectful of them (Nelson, 2011). However, I contend that the demand to be kind may be especially salient in mixed physical ability interactions compared to encounters with members of other groups, like the elderly. This is due to my earlier observation about the statistical infrequency of physically disabled people and the uncertainty that this causes among non-disabled people. Due to lack of knowledge, non-disabled people may not necessarily be sure *how* to be kind, only that there is a demand to do so. Crosby, Monin and Richardson (2008) show that members of majority groups often observe the reactions of minority groups in order to judge their own behaviour (see also Vorauer,

2006). However, interactions between non-disabled people and physically disabled people frequently involve mixed messages and false impressions (Kleck et al., 1966; Kleck, 1969). Thus, feedback from physically disabled people is in danger of being misjudged. At other times, such feedback may be withheld or simply not be available due to the nature of the interactions, which may be casual and fleeting. The heterogeneity of impairment types also make it unlikely that non-disabled people will have obtained this knowledge elsewhere (e.g., campaigns, media, prior contact). For example, in the media disabled characters are still depicted through a narrow range of stereotypic portrayals (e.g., disability as a tragedy; Nario-Redmond, 2010), though national events involving disabled people, such as the Paralympics, provide a real opportunity for change in this respect (see Study 8; see also Ferrara, Burns & Mills, in press). In short, non-disabled people face a Catch-22 situation as without feedback from physically disabled people they have no way of verifying whether their behaviour is appropriate. The potential for social feedback to improve the quality of interactions between non-disabled and physically disabled people is explored in Studies 6 and 7.

Evidently, as long as non-disabled people lack experience of interacting with physically disabled people and there is a prevailing demand to be kind towards them, interactional difficulties will persist. After all, accounts from physically disabled people (e.g., Frank, 1988) suggest that their negative contact experiences result from the reactions of non-disabled people, not say, the functional limitations caused by their disability (e.g., being unable to attend a movie with friends due to access difficulties). The next chapter will discuss in detail why getting members to engage in positive contact (e.g., through psychological interventions) may not ameliorate awkwardness in future interactions. Additionally, it is not being suggested here that the norm to be kind to physically disabled people is necessarily a bad thing, especially considering that, in some

situations, physically disabled people do need assistance. Rather it is the interaction between lack of knowledge and the norm to kind that forms the pre-condition for difficulty, in that, consequently non-disabled people do not know what constitutes appropriate behaviour. Of course, macro-level societal strategies may remedy this. For example, Hebl and Kleck (2000) advocate changing media portrayals or modifying the physical environment (i.e. so physically disabled people do not appear dependent) in order to “unspoil” mixed interactions (see also Oliver, 1990, 1996). However, like all societal strategies, these are notoriously difficult to implement.

What then can be done to understand and improve interactions between non-disabled and physically disabled people? According to this thesis, studying the psychological forces that impair the quality of mixed physical ability interactions may provide an important road for ensuring that members of these two groups are able to enjoy fruitful contact with each other. As noted, this context has been under-researched by social psychologists, including contact theorists, despite the fact that this intergroup relationship holds some unique and challenging features, as evidenced from the examples given above. However, taking the traditional approach of treating contact as an antecedent of positive intergroup relations may not adequately be able to capture the depth of these encounters. Instead, the novel contribution of this thesis is to suggest, and demonstrate, that treating contact as an *outcome* allows for a more elaborate understanding of important processes that operate within interactions between non-disabled and physically disabled people. The next section will explore why examining contact in this way is a powerful tool for understanding mixed physical ability interactions.

Brief summary. Mixed physical ability interactions are frequently awkward in tone. Unlike other contexts, non-disabled people may have very little experience of contact

with physically disabled people leading to uncertainty about how to behave towards them. This uncertainty, coupled with a demand to be kind form a unique pre-condition for these awkward interactions. Additionally, due to the heterogeneity of impairment types, it is difficult to alter these conditions through instigating knowledge. This thesis contends that studying the psychological processes which impair contact quality between the groups offers the best road to understanding this challenging intergroup relationship.

CHAPTER 2

The importance of investigating contact as an outcome

As shown in the last chapter, social psychologists have explored the potency of intergroup contact to reduce prejudice and have demonstrated its efficacy convincingly. Although this is a worthy line of research, it is also important to garner an impression of the psychological forces that impede positive contact from occurring, especially in contexts such as mixed physical ability interactions where everyday contact is frequently characterised by awkwardness. Working towards an understanding of less optimal encounters is a continuing objective of contact research (Al Ramiah & Hewstone, 2013; Hewstone et al., 2014; Pettigrew & Tropp, 2006; Pettigrew & Tropp, 2008; Hewstone, & Swart, 2011). This chapter will justify why treating contact as an outcome can help achieve this aim within the mixed physical ability context. Specifically, I will critically discuss some of the theoretical, methodological and applied limitations of the traditional approach to contact for understanding these interactions and contrast this with outlining the value to be gained by investigating contact quality as an outcome.

How is investigating contact as an outcome useful for understanding everyday interactions between non-disabled and physically disabled people?

In the traditional approach, contact is investigated as an antecedent of reduced intergroup bias (Allport, 1954). However, writing at a time when there were very few longitudinal studies on the contact hypothesis, Pettigrew (1998) noted that it was difficult to divine the causal sequence of the contact – prejudice effect (see also Herek & Capitanio, 1996). In other words, does contact reduce prejudice or do prejudiced people avoid contact? This question was answered more definitively by the advent of

Pettigrew and Tropp's (2006) meta-analysis. They distinguished between contact studies which gave people full choice in whether to participate in intergroup encounters, partial choice or no choice at all, reasoning that if the effect is due to prejudiced people avoiding contact, its statistical strength should be significantly weaker in the no choice selection. In fact, they found that this was not the case and that choice to engage in contact did not appear to correlate with the strength of the contact-prejudice effect. At present, empirical evidence is supportive of a reciprocal, bi-directional relationship between contact and prejudice (e.g., Anderssen, 2002; Binder et al., 2009; Levin et al., 2003; Swart et al., 2011). However, the question of whether contact or prejudice effects are stronger is a more open one. For example, Levin et al. (2003) found effect sizes of comparable strength in their study, while Binder et al. (2009) found that, in some cases, prejudice effects were stronger than contact effects. On the other hand, Swart et al. (2011) found more support for the traditional formulation of the contact hypothesis (i.e. contact reduces prejudice) as this relationship was observed to be fully mediated by intergroup anxiety and empathy while the link between prejudice and contact was not. These disparate findings could be due to methodological differences between studies so a conclusive answer is not possible. However, what seems fairly certain from this literature is while contact reduces prejudice, prejudiced people also avoid contact. Thus, we must appreciate that, although intergroup contact may be beneficial in the mixed physical ability context, prejudiced group members are also avoiding this contact.

If prejudiced people are wont to avoid contact, this could have implications for areas in which intergroup relationships are at the most frayed and tense. It is no coincidence that some of the staunchest critics of intergroup contact originate from contexts where intergroup violence and segregation has been entrenched for decades (e.g., Northern Ireland, South Africa). For example, McGarry and O'Leary (1995) suggest that, under

conditions like Northern Ireland, where hostility is normative, intergroup contact will exacerbate rather than reduce prejudice. This criticism can be refuted by studies demonstrating the potency of contact to ameliorate bias within Northern Ireland itself (e.g., Hewstone et al., 2006; Tam, Hewstone, Kenworthy & Cairns, 2009; Tausch, Hewstone, Kenworthy, Cairns & Christ, 2007; Turner, Tam, Hewstone, Kenworthy & Cairns, 2013) and other areas of historical conflict (e.g., Čehajić & Brown, 2010; Swart et al., 2011), though with the caveat that it should not be considered a panacea (Hewstone, 2003; Hodson, Hewstone & Swart, 2013). However, McGarry and O’Leary’s (1995) criticism does touch upon the wider issue of how to encourage positive contact in areas where strife and segregation are part and parcel of daily life. This problem of “leading the horses to water” (Pettigrew & Tropp, 2011) has been articulated in more depth by Dixon et al. (2005). They suggest that a preoccupation with idealized forms of contact is detrimental to the study of “mundane...encounters that constitute the overwhelming majority of contact experiences” (p. 703). As an example, they point to their own work on the interracial contact in South Africa. Dixon and Durrheim (2003) observed that two stories could be told in their post-apartheid society- a tale of segregation or a tale of integration. They found that though beaches were now open to all Black and White South Africans, existing patterns of segregation were maintained by each group using them at different times. Later work also identified divided racial seating patterns at popular clubs and bars along a street in Cape Town (Tredoux & Dixon, 2009), as well as seminar seating at a local university (L. Alexander & Tredoux, 2010; see also Finchilescu & Tredoux, 2008). The underlying point here is that by focusing on the potential of positive contact in a specific setting, contact researchers may miss deeper issues that may be keeping groups apart. Thus, Dixon et al.

(2005) suggest, contact research may be detached from certain realities (e.g., historical, physical) that characterise everyday encounters between groups.

Dixon et al. (2005) make a valid argument, but two qualifications are in order. Firstly, intergroup contact has been shown to be effective in the absence of the optimal conditions outlined by Gordon Allport (see Pettigrew & Tropp, 2006; Pettigrew & Tropp, 2011). Investigation of the benefits of contact does not therefore represent a preoccupation with “utopianism” that Dixon et al. (2005, p. 699) seem to suggest. Secondly, by focusing on the *psychological* aspects of intergroup relations, contact specialists do not mean to exclude or deny the fact that cross-group interactions are nearly always impacted by material, non-psychological factors. Rather, they choose to emphasise what researchers in other disciplines may not (Hewstone, 2009). However, the issues that Dixon et al. (2005) raise do have ramifications for studying contact in the mixed physical ability context. As stated in the last chapter, the literature has generally paid attention to structured settings where positive contact is more likely to occur (e.g., schools, organisations; cf. Fichten & Amsel, 1988). For example, recall that while the classroom may contain potential for cross-group friendships to develop, a brief meeting between two strangers is unlikely to. As such, these settings are unfortunately somewhat detached from the everyday encounters that non-disabled people and physically disabled people are likely to have. It is these encounters that Dixon et al’s., (2005) critique invites us to consider.

As evidenced from the examples above, Dixon and colleagues try to understand everyday encounters between groups by analysing them within wider non-psychological contexts (e.g., L. Alexander & Tredoux, 2010; Dixon & Durrheim, 2003; Finchilescu & Tredoux, 2008). Indeed, disability scholars have also traditionally emphasised the material, environmental obstacles that people with impairments encounter (e.g., Oliver,

1990, 1996; cf. Reeve, 2012). For example, physically disabled people still regularly document difficulties with access to public places and events (e.g., Carew, 2013; Perry, 2014), transport (e.g., Bellisario, 2014) and even housing (e.g., Todino, 2014). While it is essential be aware of such factors, it is also important to note that our understanding of the psychological elements of everyday intergroup encounters between these groups is by no means complete. Firstly, as stated, this intergroup context is under researched in general and skewed towards atypical examples of contact between these groups (see Pettigrew & Tropp, 2006). Thus, there has been a lack of focus on everyday encounters. Secondly, the traditional approach to contact (i.e. as a predictor of prejudice) does not investigate what happens during interactions, only if (and often, what sort of) contact has occurred (Hebl & Dovidio, 2005). Consequently, it lacks the power to explain *why* interactions should be as they are between these groups. This is unfortunate because extant literature suggests that these encounters may be an awkward affair for members of both groups (see Chapter 1; e.g., Dovidio et al., 2011; Reeve, 2012). However, thus far, work has not investigated the quality of contact that members of these groups experience during everyday encounters, or what may determine it. This thesis addresses these gaps.

The present work argues that treating contact quality as an outcome may allow for a richer understanding of these encounters. Specifically, shifting from the traditional formulation affords researchers the flexibility to examine daily life encounters between these groups, without the fear that these lack facilitating conditions for prejudice reduction. Additionally, it allows for an examination of what factors may detract or contribute to the interaction quality between non-disabled and physically disabled people. As the next sections will show, this approach is important for understanding the complexities of the mixed physical ability context.

Briefsummary. Although contact reduces prejudice, prejudiced people also avoid contact. This is an example of the “leading horses to water problem”- that is, of how to encourage positive contact. Some critics suggest that a focus on the non-psychological barriers which divide groups is vital for understanding real-life contact between members. Conversely, this thesis highlights that currently we also still have very little knowledge of the psychological aspects of such casual interactions. It is here proposed that treating contact as an outcome will allow for greater comprehension of everyday encounters between non-disabled and physically disabled people, specifically by allowing for the identification of factors that may contribute or detract from the quality of interactions.

How can investigating contact as an outcome provide new routes to improving interactions between non-disabled and physically disabled people?

Contact was originally proposed as a strategy to improve interactions between groups via prejudice reduction (Allport, 1954). This section will discuss the limitations of the traditional approach for altering the tone of interactions within the mixed physical ability context and argue that treating contact as an outcome may provide new strategies for change. As noted, interactions between non-disabled people and physically disabled people generally involve anxiety (e.g., Amsel & Fichten, 1986; Comer & Pillavin, 1972). A wealth of empirical evidence exists to show that contact can attenuate anxiety within mixed interactions (commonly referred to as intergroup anxiety; W. G. Stephan & Stephan, 1985). For instance, several studies indicate that intergroup contact, particularly of high quality or involving cross-group friendship, is associated with reduced intergroup anxiety (e.g., Greenland & Brown, 1999; Islam & Hewstone, 1993; Paolini, Hewstone, Cairns & Voci, 2004; Swart et al., 2011; Turner, Hewstone & Voci, 2007). One strong example of the causal nature of this relationship comes from an

experimental study conducted by Page-Gould, Mendoza-Denton and Tropp (2008). Using cortisol reactivity as an indicator of stress, the authors observed a reduction in anxiety after repeated contact encounters with an out-group member. After the third meeting, anxiety levels within the cross-group interaction pairs were almost equal to that of the same-group interactions pairs (see also Blascovich, Mendes, Hunter & Lickel, 2000; Blascovich, Mendes, Hunter, Lickel & Kowai-Bell, 2001). Additionally, Swart et al. (2011) provide convincing longitudinal evidence for the contact-anxiety effect among a minority status group in the South African context (see also Binder et al., 2009). Thus, despite the fact that the contact literature had traditionally neglected the role of affective processes in contact (see Pettigrew, 1998), there is now a general consensus that changes in intergroup anxiety drive the contact-prejudice link (R. Brown & Hewstone, 2005). Perhaps the strongest evidence for this mediational role derives from a second meta-analysis conducted by Pettigrew and Tropp (2008), which sought to investigate the mechanisms by which contact reduces prejudice. Their review confirms that a reduction in intergroup anxiety mediates contact effects, along with increased empathy and knowledge about the out-group. In fact, Pettigrew and Tropp (2011) suggest that attenuating anxiety may be necessary within initial cross-group interactions for increased empathy and knowledge about the out-group to develop in subsequent encounters (see also Page-Gould et al., 2008). In sum, this body of research suggests, prior contact, particularly of good quality or involving friendship potential, could therefore ease underlying anxiety that make interactions between non-disabled and physically disabled people a frequently awkward affair.

In the last chapter, I described how the anxiety that non-disabled people and physically disabled people experience may be related to beliefs and expectations about a mixed interaction. For example, for non-disabled people these concerns may stem from a lack

of experience and a societal norm to be kind to physically disabled people. This type of concern is classed as the cognitive component of intergroup anxiety according to W. G. Stephan (2014), as distinct from its affective and physiological components. The studies cited above, and others (e.g., Dhont, Roets & Van Hiel, 2011; Mähönen, Jasinskaja-Lahti & Liebkind, 2011; Pagotto, Voci & Maculan, 2010) have generally used W. G. Stephan and Stephan's (1985) broad, affect-based measure of intergroup anxiety to gauge its mediational role between contact and intergroup bias (cf. Amodio, 2009; Blascovich et al., 2001; Page-Gould et al., 2008; Page-Gould et al., 2010). The measure invites participants to gauge how they feel on a number of adjectives (e.g., "tense", "uncertain"; W. G. Stephan & Stephan, 1985). However, these items do not capture *what* group members are concerned about, or the qualitative differences between majority and minority group members (Britt, Bonieci, Vescio, Biernat & Brown, 1996; R. Brown, 2011). W. G. Stephan (2014) notes that cognitively, intergroup anxiety is induced through the expectation of negative consequences for the self. These expectations can take four forms: a) people may worry about negative psychological consequences for themselves (e.g., embarrassment), b) negative behavioural consequences (e.g., physical harm), c) negative evaluations from the out-group, or d) derogation from the in-group as a consequence of associating with a member of the out-group. He asserts that the provision of positive intergroup contact should increase knowledge about out-groups and their beliefs, thereby lessening expectations of negative consequences and reducing the uncertainty of mixed interactions, including of how group members will be evaluated (see also Vorauer, 2013; Yuker, 1994). Moreover, such contact should also teach in-group members to interact more effectively, which could in turn lessen the concerns of out-group members, who may mistake anxiety for the presence of deeper negative affect (Pearson et al., 2008). Indeed,

Plant and colleagues show support for the idea that contact can attenuate cognitive concerns. They established that higher existing contact quality was associated with more positive expectations about an upcoming intergroup encounter (Plant, 2004; Plant & Devine, 2003; Plant, Butz & Tartakovsky, 2008). Additionally, Barlow, Louis and Hewstone (2009) found that cross-group friendship negatively predicted majority group member's cognitions of rejection in mixed interactions.

However, the effectiveness of intergroup contact to reduce cognitive concerns may be limited. For instance, speaking of intergroup interactions in general, Vorauer (2013) notes that it may be difficult for in-group members to obtain clear information about out-group evaluations because it is uncommon to give explicit feedback within social interactions (Blumberg, 1972; see this thesis: Studies 6 & 7). This may be especially likely within the mixed physical ability context, which is frequently characterised by communicative difficulty (Gouvier, Coon, Todd & Fuller, 1994; Kleck, 1968, 1969), misinterpretations (Strenta & Kleck, 1985) and false feedback (Hastorf et al., 1979). Vorauer (2013) also suggests that evaluative-based concerns may prevent positive contact from occurring in the first place as they may contribute to the ambivalent messages displayed by interactants during encounters (see also Dovidio et al., 2011). It may also be difficult to remove negative beliefs and expectancies within the mixed physical ability context because of the pressing demand to be kind to those with impairments, which may keep self-presentation and evaluation relevant to group members with each new encounter. That is, because it is highly socially normative to be kind to disabled people, worry about whether this can be achieved may persist (see Pettigrew & Tropp, 2011, Chapter 3, para 3). Moreover, even if researchers do manage to remove cognitive concerns with positive contact, consider that physically disabled people possess high intragroup heterogeneity in terms of impairment. Prior contact may

not necessarily equip non-disabled people with correct or accurate knowledge of the next disabled person they meet (e.g., consider an intervention involving people who use wheelchairs vs. meeting someone with dwarfism). Subsequent employment of the wrong behaviour or interactional strategy may cause awkwardness to quickly flourish again among members of both groups and previous expectations of positive contact may go awry. It is true that prior contact may also accrue other benefits, such as increasing empathy (Pettigrew & Tropp, 2008; Swart et al., 2011) and self-disclosure (Turner et al., 2007), which could drive positive attitudinal change and smooth future interactions, in spite of any experienced anxiety. However, this is predicated on the ability of contact effects to generalise from one contact situation to another (R. Brown & Hewstone, 2005). While generalisation has been observed in a range of different contact studies involving non-disabled people (e.g., Krahe, & Altwasser, 2006; Cameron et al., 2008; Fichten et al., 2005) scholars from other areas remain divided on whether non-disabled attitudes towards people with heterogeneous impairments are consistent (e.g., Deal, 2003). This poses a further potential limitation for the effectiveness of intergroup contact in the mixed physical ability context.

One solution to the problem that cognitive-based concerns pose to the effectiveness of contact interventions is to use strategies that are able to remove them. For instance, Mallett, Wilson and Gibson (2008) note that negative expectancies regarding cross-group interactions are often examples of *forecasting errors*. That is, people usually underestimate the extent that an interaction with a member of another group will be positive because they focus on cross-group dissimilarities. Due to this, Mallett and Wilson (2010) suggest a method of “correcting” these tendencies. Specifically, they showed White participants a video of a positive interracial encounter and asked them to write about an experience where they formed an unexpected friendship. They found that

this process attenuated participants' negative expectations about an interracial interaction, allowing them to feel less discomfort and more interest in future encounters with out-group members. This study is an example of how researchers can focus on changing other factors aside from prejudice that can detract or contribute to a positive contact experience (see also Vorauer, 2013). In a similar vein, treating contact quality as an outcome may identify new routes to positive contact between non-disabled and physically disabled people. If important factors that affect interactional quality within the mixed physical ability context can be identified, then further strategies for change can be developed. However, as should be clear from the above discussion, researchers currently have very little idea of what determines contact quality between groups, especially within daily life encounters. Ergo, it is also not clearly known how easily contact quality can be shifted. This thesis addresses these important issues within the mixed physical ability context. Specifically, a series of interventions to improve the quality of contact between non-disabled people and physically disabled people are proposed and tested (see Chapter 3; Study 6-8).

Brief summary. Intergroup contact has shown to be effective at reducing anxiety in mixed interactions, but may be less adept at removing the cognitive basis for these negative feelings (i.e. beliefs and expectations). This, among other potential aspects (e.g., absence of generalisation) may limit the effectiveness of intergroup contact in the mixed physical ability context. One solution is to focus on interventions that tackle other factors which can be detrimental to cross-group interactions. In a similar vein, treating contact as an outcome may allow for the identification of new, or more effective, strategies that can improve the quality of contact between non-disabled and physically disabled people.

How has the traditional approach to contact limited our understanding of physically disabled people's perceptions?

The third issue that I will discuss is our lack of understanding of contact from the minority group perspective. That is, how would using the traditional approach to contact prevent us from gaining an accurate picture of what these interactions are like for physically disabled people? Recall that the contact-prejudice effect has generally been examined using majority group participants (Pettigrew & Tropp, 2006). Thus, there is a general gap of knowledge regarding how minority groups experience contact in mixed interactions. This is important because, as R. Brown (2011) states: “we must... appreciate that majority and minority group members do not come to intergroup encounters as equals, nor do they bring with them the same experiences and expectations” (p. 271). For example, overall, a contact effect among minority groups has been observed, but it is weaker in strength (mean $r = -.18$) compared to majority groups (mean $r = -.22$; Tropp & Pettigrew, 2005). Binder et al. (2009) provide a striking demonstration of this. These researchers conducted a longitudinal survey across three European countries utilising both majority and minority group members to test the causal direction of the contact – prejudice effect (i.e. does contact reduce prejudice or do prejudiced people avoid contact?). They found that while contact effects were present for majority group members, they were absent for the minority group members. Binder et al. (2009) also noted that the mediation of the contact-prejudice effect by intergroup anxiety was weaker among the minority compared to the majority. They therefore suggest that this diminished reduction in anxiety is responsible for the differential effects observed among groups of different status. However, R. Brown (2011) notes that some studies have evinced no differences in anxiety between majority and minority groups (e.g., Hyers & Swim, 1998; Shelton, 2003), while some have found higher levels within the minority status participants (e.g., Islam & Hewstone, 1993).

Thus, differences in anxiety levels may only be one of several factors leading to differential experiences of mixed interactions. For instance, Tropp (2003, 2006, 2007) focuses on perceptions of discrimination within interracial encounters. She found that minority group members generally perceive more discrimination than do majority group members and that this negatively predicts feelings of intergroup closeness (see also Strenta & Kleck, 1985; Vorauer, 2006). Moreover, the relationship between contact and closeness was moderated by perceived discrimination only for the minority (Tropp, 2007). Andrighetto, Durante, Lugani, Volpato and Mirisola (2013) also show that minorities who expected to be the target of discrimination were more anxious when they also expected to interact with an anxious out-group partner versus an (non-anxious) in-group partner. Therefore, the unique perceptions and experiences that different status group members' bring to mixed interactions likely weave a complex web that social psychologists have only recently begun to uncover.

Unfortunately, the contact hypothesis in its traditional form is not best placed to answer *why* majority and minority groups may experience interactions differently. Pettigrew and Tropp (2011) note that traditional intergroup contact theory represents a general conceptualisation of what occurs when members of different groups interact. From the discussion above, it is evident that, in an effort to test a general method of prejudice reduction, the theory has sometimes papered over the intricacies of mixed contact, such as those produced by status differences. In order to uncover these intricacies, a different approach to the traditional may be necessary. As intergroup contact is always used as the independent variable in such research (see Pettigrew & Tropp, 2006), we only gain a general impression of what happens during mixed interactions, especially with the use of broad mediators, like intergroup anxiety (see Binder et al., 2009, Turner, Hewstone, Voci & Vonofakou, 2008). That is, the traditional approach to contact does not

investigate what happens during interactions, only if (and often, what sort of) contact has occurred (Hebl & Dovidio, 2005). For example, consider that the literature will commonly employ scale measures to gauge if contact has taken place or experimental designs to compare the outcome of different natural or manipulated contact interventions (see Pettigrew & Tropp, 2006)⁴. Of course, this is not a theoretical criticism of the contact hypothesis itself and further strides can be taken using contact as a predictor of prejudice. For instance, thanks to statistical and methodological advances it is now possible to model the effects of contact at different levels (e.g., neighbourhood, country; e.g., Christ et al., 2014; see also Christ & Wagner, 2013). However, I do wish to draw attention to the fact that single-minded use of the traditional formation would limit researchers in the types of questions they can ask (and answer) about intergroup contact, specifically in regard to minority group members. Luckily, a plethora of approaches are being encouraged to advance our understanding of intergroup contact by specialists in the area (e.g., Hewstone & Hodson, 2013, see also Pettigrew & Tropp, 2011). A prominent example is the interactive approach, which contra to the majority of extant contact research (see Pettigrew & Tropp, 2006), examines how the perceptions of both majority and minority group members jointly shape cross-group interactions (see Hebl & Dovidio, 2005; T. V. West & Dovidio, 2013). This is primarily achieved through the observation of encounters between actual group members in the laboratory (e.g., Shelton, 2003). However, this work has thus far

⁴ Of course, longitudinal designs do allow us to test what is predictive of contact, of which there are now several examples. I use the term 'traditional' loosely to denote most of the sixty years of contact research (i.e. pre-Pettigrew, 1998), which used contact only as an independent variable and in which longitudinal designs were conspicuously rare (but not entirely absent; cf. W. G. Stephan & Rosenfield, 1978).

not been applied to the mixed physical ability context⁵ or to the investigation of contact quality, which the present thesis addresses.

Research from these areas has tended to support the notion that majority and minority group members have differential perceptions of mixed interactions. For instance, Shelton and colleagues have found that while Whites may experience anxiety due to the concern that they will appear prejudiced to an out-group member, Blacks may get anxious because they expect to be the target of bias (Shelton, 2003; Shelton, Richeson, & Salvatore, 2005; Shelton, West & Trail, 2010; see also Son & Shelton, 2011). These concerns impact not only the actor's (i.e. the holder of the concerns) perceptions of a mixed encounter but those of the interaction partner as well. That is, these authors found that Blacks who interacted with a concerned White partner enjoyed the interaction more than Blacks who interacted with a non-concerned White. Similarly, White partners' enjoyed an encounter with a concerned Black more compared to a mixed interaction involving a non-concerned Black⁶ (see Shelton, 2003; Shelton, et al, 2005; Shelton, Richeson, Salvatore & Trawalter, 2005). Converging evidence on the outcome expectancies that Whites and Blacks hold toward mixed interactions (e.g., I will be prejudiced/They will reject me) also suggest that different concerns can engender unique affective and behavioural consequences (Butz & Plant, 2006, Plant, 2004, Plant & Butz, 2006, Plant & Devine, 2003, Plant et al., 2008). For example, the belief that one will appear socially incompetent (i.e. prejudiced) engenders anxiety, anger and contact avoidance, while expectations of rejection are more likely to engender only anger and partner blame (Plant et al., 2008; see also Barlow et al., 2009; Barlow, Louis & Terry, 2010). Additionally, group members may also be concerned about how they

⁵ While the work of Kleck and colleagues does investigate actual interactions between non-disabled and physically disabled people, the role of the latter was played by an able-bodied confederate.

⁶ These 'ironic' effects of concerns are suggested by these authors as due to the concerned individuals trying harder in these interactions (e.g., to appear non-prejudiced, to appear more likeable).

are perceived differently. Specifically, Vorauer and Sakamoto (2008) show that (ethnic) majority group members wish to be seen moral, while (ethnic) minorities strive to be seen as competent (see also Bergsiker, Richeson & Shelton, 2010; Shnabel & Nadler, 2006). To this end, the authors find that evaluative concerns are exacerbated among majorities when group differences are illegitimate (i.e. group status is morally unjust). On the other hand, minorities show the opposite trend, exhibiting more evaluative preoccupation with increasing legitimacy (i.e. group members are seen as better judges of competencies). Overall, this body of work appears to lend veracity to R. Brown's (2011) statement and to that of other researchers who have encouraged a psychology of intergroup relations from the perspective of minorities (e.g., Devine & Vasquez, 1998; Hebl & Dovidio, 2005; Pettigrew & Tropp, 2011; Shelton, 2000; Tropp, 2006).

As stated, work enshrining these interactional differences between majority and minority group members has predominantly been conducted in an interracial or interethnic setting (e.g., Barlow et al., 2009; Hyers & Swim, 1998; Plant et al., 2008; Vorauer and Sakamoto, 2008). To my knowledge, there exists no research tapping the distinct nature of these concerns within the mixed physical ability context, which the present thesis will address. This is unfortunate, because quite clearly the distinct psychological baggage which majority and minority group members bring to interactions has potent ramifications for their ability to enjoy positive contact with one another. Consider that, for instance, Vorauer (2006, 2013) has shown that evaluative concerns may contribute to the mixed messages and misattributions that characterise this and other intergroup contexts. The existing work in the area also indicates that a preoccupation with deleterious social outcomes, such as appearing prejudiced, can contribute to a negative affective experience (e.g., Plant & Devine, 2003, Shelton, Richeson et al., 2005; Shelton et al., 2010), impair enjoyment of an interaction (Shelton,

2003), partner liking (Shelton et al., 2010) and lead to contact avoidance (e.g., Plant et al., 2008). In a similar vein to the above, examining what specifically may detract from the quality of interactions between non-disabled and physically disabled people offers the best opportunity for understanding how members of these groups perceive mixed physical ability encounters (see Hebl & Dovidio, 2005; Shelton, 2000). This is important, because as stated, gaining an insight into the psychological barriers to positive contact between members of these groups may also allow for an insight into further strategies that could be used to improve matters.

Of course, that it is not to say that no work exists examining encounters within the mixed physical ability context. In the last chapter, I spoke about a body of work conducted by Kleck and colleagues which quickly established that both non-disabled people and physically disabled experienced more discomfort and avoidance tendencies when interacting in cross-group, as opposed to same-group, pairs (e.g., Comer and Pillavin, 1972; Kleck et al., 1966; Kleck, 1969), even if this was sometimes masked by a surface layer of positivity (e.g., Kleck et al., 1966; see Dovidio et al., 2011). However, what these studies do not do is examine what is contributing to this interactional discomfort and detrimental contact outcomes, beyond group status. That is, these studies only vary whether the confederate that participants interact with appears as non-disabled or physically disabled. As a consequence, we know that cross-group interactions between non-disabled people and physically disabled people are more awkward than same-group interactions, but we know very little about why this might be. Additionally, these experiments did not directly examine the contact quality. The present thesis addresses this gap by examining antecedents of contact quality within the mixed physical ability context. Specifically, it adopts a rare interactive approach by looking at the perceptions of both non-disabled people and physically disabled people,

often through the use of actual cross-group encounters (Study 5 & 6). Unlike earlier experiments however (e.g., Kleck et al., 1966), these studies make use of actual physically disabled confederates as opposed to abled-bodied actors, thus more accurately representing actual contact between these groups.

Brief summary. Majority and minority group members experience contact differently, though researchers have generally neglected the perspective of the latter. As intergroup contact theory posits to be a general conceptualisation of how groups interact, the traditional approach (contact-prejudice) may miss some of these intricacies. An emerging body of work has shown that majority and minority groups may possess distinctive psychological concerns which influence the quality of their interactions. This work has not yet been applied to the mixed physical ability context.

CHAPTER 3

Social psychological antecedents of contact quality in the mixed physical ability context

Having explained why investigating contact quality as an outcome is important within the mixed physical ability context, this chapter will discuss the social psychological constructs that likely impact on it. As stated, although contact is a well-established area of inquiry, researchers have thus far not begun to directly examine what determines the quality of mixed interactions, especially within the daily life encounters that constitute the bulk of cross-group contact. This thesis addresses this issue in several important ways. Firstly, I identify one antecedent that has been examined mainly in the context of interracial interactions (psychological concerns). Although researchers are beginning to understand that holding such concerns can have deleterious outcomes (e.g., contact avoidance), their impact on contact quality has not been tested. Moreover, the *content* of these concerns for non-disabled and physically disabled people has not been examined; to my knowledge this thesis is the first to do so. Additionally, the present work proposes a relatively novel antecedent within intergroup relations that, surprisingly thus far, has not received much empirical attention from social psychologists (embarrassment). As such, the following discussion will integrate the interpersonal literature on embarrassment with extant work on intergroup emotions. This synthesis forms the basis for my empirical work to explore how embarrassment may operate within cross-group contexts, specifically how it may negatively impact the contact quality that non-disabled and physically disabled people enjoy. Lastly, after highlighting the importance of these antecedents this thesis will identify potential interventions that can be used to improve interaction quality between these groups. As stated, testing these methods may also allow for key insights into how easy it is to shift contact directly.

Psychological concerns

As stated, the social psychological literature has traditionally focused on psychological concerns as an affect-based construct, in the form of intergroup anxiety (W. G. Stephan & Stephan, 1985). Recent research has also begun to examine its cognitive element, usually referred to as expectancies (e.g., Plant & Devine, 2003), cognitions (e.g., Barlow et al., 2009) or evaluative concerns (e.g., Vorauer, 2006, 2013). Moreover, where research examines these facets together, usually the ability of cognitions to predict (intergroup) anxiety, they are normally treated as separate variables (e.g., Barlow et al., 2009; Plant & Devine, 2003; Shelton, 2003; Vorauer & Turpie, 2004; cf. Greenland, Xenias & Maio, 2012). Conversely, in my understanding, it is more representative to treat these harmful beliefs and anxiety as co-occurring. That is, although these components can be separated, as in the above studies, the real-life experience of these concerns likely involves cognition and affect together. Further, it may be difficult for people to identify which comes first or where belief and affect ends, a conclusion that W. G. Stephan (2014) also comes to. Specifically, he suggests that the cognitive and affective (anxiety) elements of psychological concerns likely exhibit casual reciprocation and their experience likely occurs in rapid succession. Although W. G. Stephan (2014) uses the term intergroup anxiety to refer to both the cognitive and affect components, this is in contrast to his previous work (e.g., W. G. Stephan & Stephan, 1985; W. G. Stephan, Diaz-Loving & Duran, 2000) and the work of others (e.g., R. Brown & Hewstone, 2005; Pettigrew, 1998; Pettigrew & Tropp, 2008) which has generally emphasised the affective nature of this variable. Moreover, researchers continue to measure intergroup anxiety using just an affect-based scale, of which there are some limitations. Specifically, recall that this scale may not be detailed enough to capture interactional differences (e.g., cognitions) between groups (R. Brown, 2011)

which is a primary motivation of the present work. In light of the general lack of consensus in the literature, the position adopted in this thesis is that *psychological concerns* refers to *both* the cognitions and anxiety that take hold when non-disabled and physically disabled people engage in interactions with each other.

The affective component of these psychological concerns (anxiety) is thought to result from the anticipation of negative consequences, prior to or when engaging in social interaction (Schlenker & Leary, 1982; W. G. Stephan & Stephan, 1985). This is experienced as an acutely aversive emotional state. For instance, a person may feel apprehensive, distressed or uneasy at the prospect of an upcoming encounter (W. G. Stephan, 2014; see W. G. Stephan & Stephan, 1985; C. W. Stephan, Stephan, Demitrakis, Yamada & Clason, 2000). At group-level, anxiety can be experienced during an encounter with a member of any out-group (see W. G. Stephan & Stephan, 1985). Indeed, the comparatively small amount of work conducted in the physical disability context has supported the notion that non-disabled people and physically disabled people do experience anxiety when interacting with each other (e.g., Amsel & Fichten, 1986; Comer & Pillavin, 1972; Kleck, 1966). This experience of anxiety may have significant and detrimental consequences for the quality of mixed physical ability interactions. Although predominantly investigated as a mediator between contact and out-group evaluations (e.g., Swart et al., 2011; Voci & Hewstone, 2003; see Pettigrew & Tropp, 2008) it has been recognised that the relationship between contact and anxiety is bi-directional (e.g., Paolini, Hewstone, Voci, Harwood & Cairns, 2006). That is, just as contact reduces anxiety within cross-group encounters, anxious people also experience reduced contact. This has been evinced by longitudinal studies, among others (e.g., Henderson-King & Nisbett, 1996; Plant & Devine, 2003; Plant et al., 2008). For example, in their study of roommate relationships, Levin et al. (2003) found that

initial levels of intergroup anxiety predicted reduced cross-group friendship over time in addition to the reverse. Thus, clearly anxiety experienced in mixed interactions has detrimental implications for contact quality in addition to out-group judgements.

One way of understanding *why* anxiety occurs within intergroup encounters is to investigate the cognitions associated with experiencing it. Traditionally, these beliefs and expectations have not received as much empirical attention as the affective component of psychological concerns but this is slowly being remedied (see W. G. Stephan, 2014). This work has established that specific cognitions (e.g., about appearing prejudiced, rejection or evaluation; see Chapter 2) are predictive of anxiety in mixed interactions (e.g., Barlow et al., 2009, 2010; Plant et al., 2008; Shelton, 2003; Son & Shelton, 2011; Vorauer & Turpie, 2004). For example, Plant and Devine (2003) found that anxiety mediated between Whites' expectations of appearing prejudiced and desire to avoid contact with Blacks. However, concerns have also been found to lead to other detrimental outcomes for the self beyond anxiety. For instance, research indicates that concerned majority and minority group members feel more cognitively exhausted by mixed interactions (e.g., Richeson & Shelton, 2003, 2007; Richeson & Trawalter, 2005; Richeson, Trawalter & Shelton, 2005). They may also be vigilant to negative cues and overestimate the impact of their own behaviour on their partner, all in the process of striving for an accurate picture of how they are being evaluated (see Vorauer, 2005, 2006, 2013). For example, Vorauer and Sakamoto (2006) found that White Canadians who were likely to hold concerns because they had little prior intergroup contact and exaggerated the extent that their behaviour communicated interest in friendship to a Chinese Canadian partner (see also Vorauer & Sakamoto, 2008; Vorauer, Cameron, Holmes & Pearce, 2003).

To my knowledge, researchers have not so far investigated psychological concerns within the mixed physical ability context (see Chapter 2; e.g., Barlow et al., 2009, 2010; Greenland et al., 2012; Plant et al., 2008; Shelton, 2003; Shelton et al., 2010; Vorauer, 2013). This begs the question, *what* are non-disabled people and physically disabled people anxious about when interacting with one another? Tackling the cognitions of non-disabled people first, it is likely that they, akin to majority groups in interracial interactions (see Plant & Devine, 2003; Shelton, 2003), may be concerned about appearing prejudiced or otherwise socially incompetent. Like Plant and Devine (2003), I draw from the literature on social anxiety to explain this. Specifically, in their discussion of social anxiety, Schlenker and Leary (1982) emphasise the self-presentational aspect of interpersonal interactions. They assert that social encounters carry with them the prospect of personal evaluation and that people want to make the best possible impression on others (see also Leary, 1983; Leary & Atherton, 1986). Following this, social anxiety arises in situations where people are motivated, but feel unable, to obtain a desired personal evaluation (see also W. G. Stephan, 2014; Vorauer, 2006, 2013). In the mixed physical ability context, this may be especially likely for non-disabled people because they are both uncertain of how to behave towards the physically disabled and aware of a societal demand to be kind towards them (see Chapter 1; Vorauer, 2006, 2013). Unlike some of these aforementioned researchers however (e.g., Plant & Devine, 2003; Vorauer, 2006, 2013) I view lack of knowledge and uncertainty not as mere antecedents to psychological concerns, but as part of these concerns themselves. There are two reasons for this. Firstly, I allow for the possibility that non-disabled people might become anxious due to an awareness of their lack of knowledge and uncertainty, as this realisation may contribute to their anticipation of negative evaluations from physical disabled people. Secondly, Hebl et al. (2000) note

that uncertainty is an especially salient feature within the physical disability intergroup context compared to others because physically disabled people are statistically infrequent (see Chapter 1; Zebrowitz-McArthur, 1982). Due to this and the heterogeneity of impairment types, in general non-disabled people may be much more inexperienced interacting with a physically disabled person, then, for example, a White British person is with a Black British person. Thus, concern regarding lack of knowledge may be especially likely. Therefore, in my understanding, the concern that non-disabled people experience is broader than expecting to appear prejudiced and includes a wider preoccupation with their own abilities and competencies (see also Greenland et al., 2012).

Moving to my conceptualisation of physically disabled people's psychological concerns, as stated, members of minority and stigmatized groups are often concerned about the possibility of rejection from majority group members. It is likely that this is also a factor in the worries that physically disabled people experience when engaging in cross-group encounters. Recall Shakespeare et al's., (1995, p. 42-43) comment that "[dealing with] daily...experiences of rejection and humiliation are among the hardest aspects of being a disabled person". Many other accounts from disabled people also highlight their preoccupation with how non-disabled people will respond to their impairment (see Chapter 1; e.g., Goffman, 1963; Frank, 1988; Reeve, 2002, 2012). However, in many of these accounts, the concern displayed by participants is broader than rejection. For instance, non-disabled people often offer help when it is not needed or ask invasive personal questions in an effort to be kind to the physically disabled (see Makas, 1988; Morris, 1991; Reeve, 2012). Such behaviour does not constitute rejection in the sense that the aforementioned researchers have typically conceived it (i.e. exclusion, avoidance; see Barlow et al., 2009, 2010; Barlow, Sibley & Hornsey, 2012;

Butz & Plant, 2006; Plant et al., 2008) but rather represents a reluctance to treat the physically disabled person in the same fashion as an in-group member (i.e. a rejection of them as normative). Importantly however, the tone of this differential treatment can be more positive than the norm as well as the other way around. Thus, it may be more valid and representative to postulate that physically disabled people are concerned that their physical impairment will become the focus of social interactions they engage in, irrespective of the consequences this may bring. This notion is conceptually similar to Pinel's (1999) stigma consciousness scale. However, that measure is broader, and includes for example how conscious the person is of the stereotypicality of own behaviour and how other members of their group are judged (see also Son & Shelton, 2011). Conversely, the key cognition discussed here is that the impairment is the focus of the out-group members' attention, regardless of the valence or content of their gaze, which Hebl et al. (2000) term "being on stage". Similar to non-disabled people, the belief that one will be reduced to their disability may cause anxiety because it implies that a negative evaluation (i.e. in the sense of normative deviance) from the out-group will have taken place (see also Vorauer, 2013).

Aside from evaluative reasons, a second method by which the aforementioned cognitions could cause anxiety may be that group members are also anticipating negative psychological outcomes for themselves, in particular emotional outcomes. Although these consequences, such as fear, irritation and embarrassment, have been theorised, very little empirical research exists to link them to psychological concerns (W. G. Stephan, 2014). In the work available, specific cognitions (i.e. about appearing prejudiced, about rejection) have been shown to positively predict feelings of anger and hostility (e.g., Barlow et al., 2012; Butz & Plant, 2006; Plant et al., 2008), while the affective experience of anxiety has been linked with both fear (Van Zomeren, Fischer &

Spears, 2007) and general negative affect (Binder et al., 2009). In this thesis, I extend this work by investigating the connection between psychological concerns and embarrassment (discussed below).

From the above, it is not a stretch to imagine that psychological concerns could negatively impact self-perceptions of contact quality in the mixed physical ability context. Experiencing psychological concerns involves anxiety and appears to lead to negative outcomes, like cross-group miscommunications. Consistent with existing models of how psychological concerns engender deleterious outcomes (e.g., W. G. Stephan, 2014; Vorauer, 2013), it is conceivable that the negative affect generated by these processes would lead concerned non-disabled and physically disabled people to experience poorer contact quality with each other in mixed encounters. That is, the affective unpleasantness from these outcomes may transfer onto the wider encounter (see R. Brown & Hewstone, 2005).

Brief summary. The existing literature suggests that holding psychological concerns may have detrimental outcomes for intergroup encounters (e.g., cognitive exhaustion, avoidance). However, these concerns have not been investigated in the mixed physical ability context and their impact on contact quality has not been tested, which the present thesis addresses. Specifically, while non-disabled people may be concerned about their own behaviour and competency in mixed interactions, physically disabled people may worry about their disability becoming the focus of the encounter. This may negatively impact self-perceptions of contact quality in both groups.

Embarrassment

In the existing work on psychological concerns, it is suggested that one reason that anxiety occurs is because people anticipate negative consequences for the self. This has

been theorised to include emotional consequences, such as embarrassment (e.g., W. G. Stephan, 2014; W. G. Stephan & Stephan, 1985). However, as yet, there appears to be no empirical work investigating the link between concerns and embarrassment and also none examining their impact on contact quality. This thesis addresses this gap.

Specifically, as will be shown, there is good reason to suppose that experiencing embarrassment may negatively impact the quality of interactions between non-disabled people and physically disabled people.

Embarrassment is defined by R. S. Miller (1996, p. 129) as the “acute state of flustered, awkward, abashed chagrin that follows events that increase the threat of unwanted evaluations from real or imagined audiences”. It is a social emotion, in that it is difficult to experience embarrassment in private, unless from the memory of a past event or vicariously, upon witnessing a mishap befall someone else (Tangey, Miller, Flicker & Barlow, 1996; cf. shame). It is also an intrinsically familiar one. Nearly everyone will recall experiencing embarrassment in a variety of benign contexts, such as tripping over, spilling a drink, or otherwise doing something silly in front of others (see R. S. Miller, 1992). The perception of these incidents as embarrassing gaffes or faux pas arises from the perception that their occurrence has violated a normative and prescribed societal standard. In relation, although the first-hand experience of embarrassment is unpleasant, inducing feelings of foolishness, discomfort and awkwardness (see R. S. Miller, 1996, 2007; Parrot & Smith, 1991), modern theorists suggest that it may form part of adaptive social behaviour (R. S. Miller, 1996, 2004, 2007). That is, embarrassment may allow the transgressor a method of recouping their damaged social standing (see also Goffman, 1956). For instance, Semin and Manstead (1982) asked participants to judge a confederate who was seen accidentally knocking down a supermarket display. The confederate was evaluated more positively when they appeared to show embarrassment

compared to when they did not. Additionally, Feinberg, Willer and Keltner (2012) have found that embarrassed individuals are generally rated as more generous and pro-social. Despite these beneficial consequences however, the literature also documents a tangible downside to experiencing this emotion. Namely, people will attempt to avoid future embarrassing circumstances (see R. S. Miller, 1996), especially if the emotion is experienced intensely (B. R. Brown & Garland, 1971) and in front of an audience perceived as particularly judgemental (Garland & Brown, 1972). Given that embarrassment occurs in social contexts, its avoidance can therefore include of contact with others as well (Fish, Karabenick & Heath, 1978; L. Friedman, 1981). As yet, the literature has mainly surveyed the implications of this avoidant behaviour within the context of healthcare. This body of work has found, for example, that people abashed by actions associated with healthcare procedures and precautions can avoid taking steps to maintain their own health (e.g., buying condoms, going to check-ups; see Leary & Kowalski, 1995; McCambridge & Consedine, 2014; Moore, Dahl, Gorn & Weinberg, 2006).

At the basic level, embarrassment is caused by a failure of impression management. This viewpoint was first proposed by Goffman (1959) who suggested that the unpleasant experience of feeling foolish resulted from the inability to maintain a smooth public performance. Since then, four main accounts have emerged to explain why such breaches may be intrinsically aversive (R. S. Miller, 1996). The dramaturgic model asserts that disruptions to public performances are embarrassing by nature. That is, people feel awkward by virtue of the realisation that they cannot continue to act gracefully in front of others (Silver, Sabini & Parrott, 1987). Conversely, the social evaluation model suggests that what is really driving this awkwardness is the threat of negative judgements that accompany these performative failures (Edelmann, 1987).

Embarrassment has also been described as a temporary loss of self-esteem from negative self-evaluations of our *public* acts (Modigliani, 1971) and as a reaction to a violation in one's own *private*, personal standards (Babcock, 1988). Empirical evidence, mainly gathered by manipulating one or the other of these components through vignettes and gauging the emotional response, has suggested that all feature in embarrassment to some extent, but that the necessary condition is the threat of negative evaluation (see R. S. Miller, 1996). This highlights what Baumeister and Leary (1995) call humanity's fundamental need for inclusion (see also R. S. Miller, 1996). In other words, primarily, embarrassment appears to be the affective response that results when a person's acceptance by others is perceived to be under threat due to their transgressive conduct.

Given its status as a social emotion, it is strange that theorists working both in this area and intergroup relations have generally not extended analysis of embarrassment from the interpersonal to the intergroup context⁷ (cf. Eller, Koschate & Gibson, 2011; Garland & Brown, 1972; Harré, 1990). One possible explanation is that affective constructs have been traditionally neglected in favour of cognitive explanations for group-based processes, such as intergroup contact itself (see Allport, 1954; cf. Pettigrew, 1998). Thankfully, this has changed and there is now widespread recognition of the importance of affect within intergroup relations (e.g., R. Brown & Hewstone, 2005; Tropp & Pettigrew, 2004). One benefit of this is that there has been a widening of interest in the role that emotions can play in group contexts (see Mackie, Devos & Smith, 2000; Mackie, Smith & Ray, 2008). In addition to contact (e.g., Esses & Dovidio, 2002; D. A. Miller, Smith & Mackie, 2004; Paolini et al., 2006), research has

⁷ I use this term broadly, inclusive of situations where a specific group membership is salient for interactants, even though the encounters themselves may be taking place at an interpersonal level (see T. V. West & Dovidio, 2013).

recognised that group level emotions are important to various phenomena like intergroup reconciliation (e.g., R. Brown & Čehajić, 2008; Čehajić, Brown & Castano, 2008), stereotypes (e.g., Fiske et al., 2002) and in-group attributions (Petrocelli & Smith, 2005; see also Iyer & Leach, 2008). This investigation of emotions at group level has also extended to the family of self-conscious emotions, of which embarrassment is a member. For instance, Schmader and Lickel (2006) find that shame (as distinct from anger), in response to witnessing in-group members conform to out-group stereotypes, is responsible for both distancing behaviour and trying to repair the group's image (see also Iyer, Schmader & Lickel, 2007). However, these researchers and others (e.g., R. Brown & Čehajić, 2008; Lickel, Schmader & Spanovic, 2007; Shepard, Spears & Manstead, 2013) have not extended their work on self-conscious emotions to include embarrassment. This may be due to the fact that embarrassment has traditionally been seen (and measured) as a weaker form of shame (e.g., Iyer et al., 2007; Mosher & White, 1981). Actually, the available evidence suggests this is not the case. A convincing refutation comes from Tangney et al. (1996), who in a survey of 182 university students, found that embarrassment was phenomenologically distant from both shame and guilt (see also R. S. Miller, 1996; R. S. Miller & Tangney, 1994). Work has also distinguished humiliation from the experience of embarrassment (Elison & Harter, 2013).

Thus, it is evinced from the body of work above that embarrassment is a qualitatively distinct emotion, which has both positive and negative social consequences, but that has almost exclusively been theorised and studied at the interpersonal level (cf. Harré, 1990). In fact, aside from examining sex differences between women and men (e.g., Garland & Brown, 1972; see R. S. Miller, 1996), there exists, to my knowledge only one study examining this emotion at group-level. This research examined how group

membership can shift the *experience* of embarrassment. Specifically, Eller et al. (2011) asked participants to read a series of embarrassing scenarios while varying the group membership and status (high/low) of the audiences depicted in these vignettes. They found that embarrassment was experienced more intensely when the audience comprised in-group members or equal status out-groups compared with low status out-groups. In contrast, the present thesis will address a gap in the literature that should by now be evident, namely by examining what the *consequences* of embarrassment are within intergroup encounters, specifically for contact quality between non-disabled and physically disabled people.

What type of events could cause embarrassment within intergroup contexts? These faux pas or gaffes would have to be, by definition, group related, though the consequent unpleasantness would not necessarily have to be experienced on behalf of the entire in-group or applied to the whole out-group (cf. Mackie et al., 2000, 2008). That is, embarrassment experienced, for example, during an interaction with a physically disabled person would have to have some grounding in the experience of the embarrassee as a non-disabled person for the emotion to take on an intergroup flavour (Iyer & Leach, 2008; Parkinson, Fischer & Manstead, 2005). Following this, while non-disabled people and physically disabled people can obviously make general blunders, such as spilling coffee, in front of each other, the resultant embarrassment would not be group-related. Instead, I consider embarrassment to occur in group contexts when it stems from a chronic violation of standards specifically associated with the relationship between the transgressor and their audience. For example, non-disabled people may feel embarrassed if they think they have helped a disabled person when their assistance was not wanted. This violation is predicated on the recognition that this action is especially inappropriate because this person is physically disabled and may make the (negative)

judgement that they have been stereotyped on the basis of their impairment (see also Fiske et al., 2002). On the other side, being the focus of such behaviour is similarly embarrassing for physically disabled people for this reason, because it indicates that they have been evaluated as non-normative. In other words, the primary psychological cause of embarrassment in mixed encounters is that of a perceived threat to acceptance caused by mishaps that specifically reference the relationship between the embarrassee and their audience. Like embarrassment at the interpersonal level, the awkwardness caused by a failure in smooth public performance may also contribute to its intensity.

It is reasonable to believe that embarrassment is common in group contexts in general, but especially so among non-disabled people and physically disabled people, for number of reasons. Firstly, because of the value that majority and minority groups place on the judgements of out-group members, evaluations take on special power and relevance in mixed encounters (Crosby et al., 2008; Vorauer, 2006, 2013). Secondly, due to a lack of experience, majority group members are generally unaware of how to behave towards minorities (Hebl et al., 2000; Vorauer, 2013). This is especially true for non-disabled people, as physically disabled people are both a statistically infrequent group and possess a heterogeneous range of impairments. Moreover, the prevailing norm to kind may exert pressure for non-disabled people to initiate these interactions. The frequency of genuine transgressions in these encounters may therefore be relatively high compared to both intra-group encounters and other intergroup contexts. Thirdly, intergroup interactions, including those that take place between non-disabled people and physically disabled people are normally characterised by ambivalent messages and misinterpretations (Vorauer, 2013). Given that it is uncommon to divulge explicit social feedback during encounters (Blumberg, 1972), it may be relatively easy for members of these groups to mistakenly believe that they have caused offense or are the target of

stereotypic behaviour (e.g., Strenta & Kleck, 1985). The existence of embarrassment in the mixed physical ability intergroup context is probed qualitatively in Study 1.

From the above, it should be clear that experiencing embarrassment may have detrimental consequences for contact quality between non-disabled and physically disabled people. At the interpersonal level, embarrassment causes unpleasant affect which leads to the avoidance of potentially embarrassing situations. It is reasonable to think that, like concerned individuals, embarrassed non-disabled and physically disabled people should transfer their negative affect to the wider interaction (see R. Brown & Hewstone, 2005), leading to poorer reported contact quality.

Brief summary. In the interpersonal literature, embarrassment is associated with an unpleasant affective experience and contact avoidance. At the intergroup level, the emotion should occur when an embarrassing mishap references the group membership of the both the transgressor and their audience. This may be especially common in mixed interactions involving non-disabled and physically disabled people, where embarrassment should negatively impact contact quality.

The relationship between concerns and embarrassment and intervention strategies to improve contact quality

As should be clear from the above, psychological concerns and embarrassment share a central primary cause (i.e. perceived negative evaluations). While there is conceptual similarity between the affective component of concerns (i.e. anxiety) and embarrassment, there is also a key difference. Namely, anxiety results from the *anticipation* of negative consequences, such as negative evaluations, while embarrassment is the *response* to these consequences having been perceived to occur (Leary & Kowalaki, 1995; R. S. Miller, 1996). This distinction engenders unique

characteristics beyond the temporal order in which these constructs occur. For concerns, the underlying cognitions associated with anxiety are related to the self (e.g., “I do not know how to interact with physically disabled people/My disability is obvious”) as well as others’ evaluations. Hence, one can feel concerned, in private, at an upcoming encounter. In embarrassment on the other hand, the self is much less implicated. The extent that a disrupted performance is perceived as a failure is predicated on whether the transgression is public and, as proposed here, the group identity of the interactants involved. In other words, aside from perceived negative evaluations, beliefs and expectancies about ourselves and interactional outcomes no longer play a key role. Consider also that embarrassment may also be one of the negative consequences that concerned individuals are anticipating. The link between concerns and embarrassment in intergroup contexts has long been theorised, but to my knowledge, never directly tested (see W. G. Stephan, 2014). In relation to this issue, I examine the distinction between concerns and embarrassment and their predictive power on contact quality in Study 4.

Due to the features of mixed interactions that contribute to the formation of psychological concerns (see Chapter 1; Vorauer, 2006, 2013) and the fact that these concerns cause misinterpretations and miscommunications, it is hypothesised that the presence of psychological concerns will positively predict embarrassment among non-disabled people and physically disabled people. Moreover, because embarrassment is the affective *response* to negative consequences, while psychological concerns represent *anticipation* of deleterious outcomes, it is hypothesised that embarrassment will fully mediate the link between concerns and contact quality. That is, when non-disabled people and physically disabled people receive confirmation that what they are concerned about has come true, the associated unpleasantness should negatively impact

their contact quality. This proposed mediational relationship explains situations where people hold psychological concerns but subsequently appear to enjoy the encounter. This is explained through expectancy disconfirmation (i.e. the absence of embarrassment when it was anticipated). This mediational model is depicted in Figure 1.

Recall that a central problem for contact theorists is how to encourage groups to interact in the first place (see Dixon et al., 2005; Pettigrew & Tropp, 2011). As stated, researchers have identified that psychological concerns can often pose a barrier to such a goal by increasing the tendency to avoid future cross-group encounters. At the interpersonal level, embarrassment has also been shown to engender avoidance of situations which the embarrassee associates with the emotion (e.g., McCambridge & Consedine, 2014). Though the primary aim of this thesis is to investigate the impact of concerns and embarrassment on contact quality, the present work constituted a unique opportunity to test which of the two antecedents would be more important for determining contact avoidance. Specifically, it is reasoned that embarrassment will fully mediate the link between concerns and reduced contact avoidance. Similar to the above, when non-disabled people and physically disabled people receive confirmation that what they are concerned about has come true, the associated unpleasantness should transfer to their contact quality perceptions. However, a caveat is that there may be differences between non-disabled and physically disabled people. Trawalter, Richeson and Shelton (2009) have advocated a stress and coping approach to understanding mixed encounters. They view avoidance as a behavioural strategy elicited when an interactant does not have adequate resources to cope with a cross-group encounter. However, where these reserves are low and demand for an interaction is high (e.g., such as the moral pressure to help physically disabled people), the authors acknowledge that

people may simply “freeze” (see also Greenland et al., 2012). As there is generally less social pressure for them to engage in cross-group interactions (in part because they are far less novel), physically disabled people should be less at risk from this response.

One of the other key developments in intergroup contact within the last thirty years has been the recognition of the central role of affect in contributing to or ameliorating prejudice. Specifically, while intergroup anxiety has been shown to increase intergroup bias, empathy has been shown to decrease it (R. Brown & Hewstone, 2005; Pettigrew & Tropp, 2008). In a similar vein, this thesis provided a unique opportunity to test whether embarrassment may contribute to prejudiced attributions in mixed physical ability interactions. Given that the emotion is overall a negative affective experience, it was reasoned that experiencing embarrassment may increase prejudice by way of negative affect transfer.

This thesis has emphasised how treating contact as an outcome may allow for the development of new strategies to improve interactions between non-disabled and physically disabled people. Moreover, the preceding theoretical discussion has suggested that the experience of embarrassment, may drive changes in contact quality (i.e. embarrassment will operate as a mediator). This suggests that potential intervention strategies to improve the quality of contact between groups should target embarrassment, rather than psychological concerns. To my knowledge, the present work is the first to investigate this. Specifically, as embarrassment is an affective response to perceived negative outcomes, particularly threatening social evaluations (R. S. Miller, 1996), it is reasonable to suggest that social feedback which disconfirms these beliefs may ameliorate embarrassment and restore contact quality. As out-group members are seen to have the authority to deliver such feedback in mixed encounters (Vorauer,

2013), the extent that feedback from physically disabled people can restore positive perceptions of contact quality for non-disabled people was tested (Study 6). Moreover, as this thesis takes a rare holistic approach to investigating the mixed physical ability context, it was of interest to examine this strategy from the other perspective; namely, how giving this feedback affects physically disabled people's contact quality perceptions (Study 7). Lastly, to complement the preceding empirical work, this thesis examines a potential strategy at the societal level, namely how powerful a nationwide disability event (the 2012 Paralympic Games) can be for promoting good quality contact between non-disabled and physically disabled people (Study 8). While theorists have generally examined ways of achieving prejudice reduction through intergroup contact within the mixed physical ability context, this study provides a unique opportunity to test the efficacy of a macro-level strategy to *directly* improve contact quality.

Brief summary. It is likely that psychological concerns will predict embarrassment among both non-disabled and physically disabled people. Moreover, embarrassment may reasonably be expected to mediate the relationship between concerns and contact quality among both groups. Further to the above, this thesis will also explore the impact of these antecedents on contact avoidance, prejudice and crucially, potential strategies that could improve contact quality in the mixed physical ability context.

Overview of the major aims and objectives of this thesis

The primary aim of the present thesis is to examine social psychological antecedents of contact quality within the mixed physical ability context. Previously, researchers have adhered to the traditional formulation of contact as a predictor of prejudice. Conversely, this work argues that treating contact as an outcome may address key gaps in the

literature. Specifically, this thesis contributes to our understanding of what may determine contact quality by empirically testing two social psychological antecedents (concerns and embarrassment). Moreover, this thesis adds to our knowledge of interactions between non-disabled and physically disabled people, which is severely under-researched at present. It does so by taking a rare holistic approach, in which the perceptions of both non-disabled and physically disabled people are studied.

Essentially, this allowed for an investigation into the differences between these groups, for instance the content and nature of their unique concerns, of which the thesis is the first to examine in this context. Additionally, this work also brings to the fore the importance of embarrassment within intergroup relations, an emotion that thus far has almost exclusively been studied at the interpersonal level. Finally, through the identification of how these variables impact the contact quality between non-disabled and physically disabled people, this thesis goes beyond to investigate potential interventions that could improve quality of contact directly.

Hypotheses

The following hypotheses are proposed:

Hypothesis 1: Concerns will negatively impact contact quality among both non-disabled people and physically disabled people.

Hypothesis 2: Embarrassment will negatively impact contact quality among both non-disabled people and physically disabled people.

Hypothesis 3: Embarrassment will mediate the relationship between concerns and contact quality for both groups (Model 1; see Figure 1).

Hypothesis 4: Concerns will increase contact avoidance among physically disabled people. A similar effect is possible among non-disabled people, however it is possible that their concerns may lead to a freezing response (i.e. a null effect).

Hypothesis 5: Embarrassment will increase contact avoidance among both non-disabled people and physically disabled people.

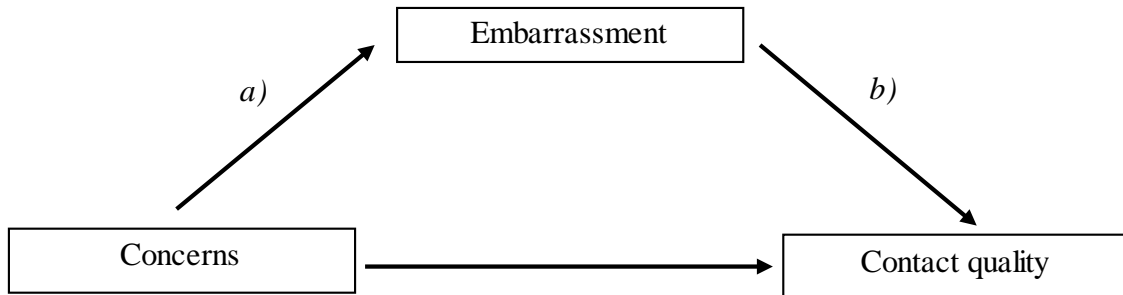
Hypothesis 6: Embarrassment will mediate the relationship between concerns and avoidance for both groups⁸ (Model 2; see Figure 1).

Hypothesis 7: Embarrassment will lead to increased prejudiced attributions among non-disabled people and more negative attitudes toward discrimination among physically disabled people.

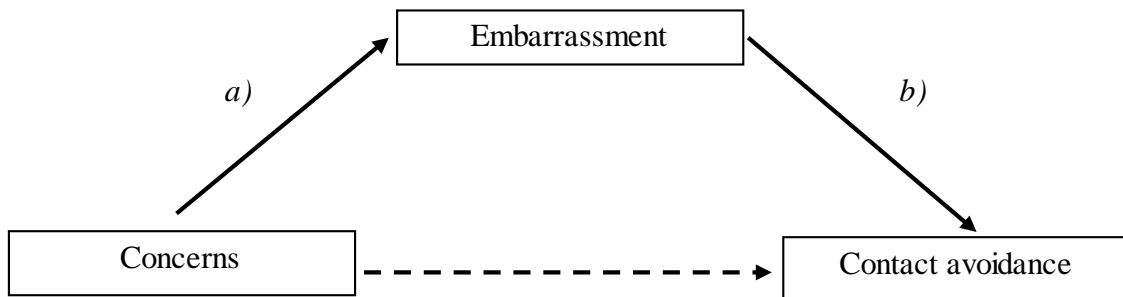
⁸ It is no longer thought that a predictor has to have a significant bivariate relationship with an outcome for mediation to occur (though this is usually distinguished from 'pure' mediation; see Hayes, 2009; Mathieu & Taylor, 2006; see also Baron & Kenny, 1986). Here, non-disabled people's concerns may be indirectly linked to avoidance through embarrassment, despite the lack of an overall relationship between concerns and avoidance.

Figure 1. The proposed mediational models.

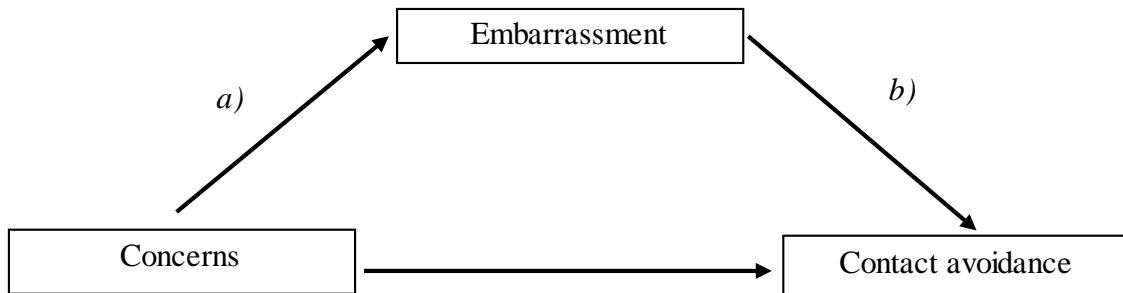
Model 1 (Non-disabled and physically disabled):



Model 2 (Non-disabled):



Model 2 (Physically disabled):



CHAPTER 4

Methodological issues

This chapter will discuss key methodological elements within my work and the rationale for the decisions that I have taken. This includes the measurement of my key variables (i.e. contact quality, concerns, embarrassment, contact avoidance, prejudice), my definition of “physically disabled people”, rationale for my primary modes of data collection (internet + laboratory) and statistical treatment of data.

The measurement of contact quality

Typically, studies measuring contact utilise a range of self-report scales. In their meta-analysis Pettigrew and Tropp (2006) found that 81% of the included research measured participant perceptions of contact (see also Christ & Wagner, 2013; Hewstone, Judd & Sharp, 2011). Modern studies have generally included separate measures of quality and quantity and frequently combine these into an overall index of both (e.g., Voci & Hewstone, 2003; R. Brown, Maras, Masser, Vivian & Hewstone, 2001). For example, R. Brown, Eller, Leeds and Stace (2007) asked participants to rate the frequency (e.g., “less than once a year” [1], “daily” [7]) and quality of their contact (e.g., “co-operativeness”, “equality”) with an out-group member using seven discrete categories. Additionally, given that one of the main focuses of contact literature is now investigating the benefits of cross-group friendship, current studies generally incorporate reference to friendship in their scales (e.g., “I spend a lot of time doing things with friends from the other community”, Turner et al., 2013; see also Al-Ramiah, Hewstone, Little & Lang, 2013; Lolliot et al., 2014; Swart & Hewstone, 2011).

Within the mixed physical ability context specifically, attempts have been made to create a standardised measure of contact with disabled people (e.g., Contact with

Disabled Persons Scale [CDP]; Yuker, 1970). This scale differentiates between various types of interactions (e.g., “How often have you worked with a physically disabled client, student, or patient?”; “How often has a disabled friend visited you in your home?”) but has not been too widely used, especially by psychologists specifically interested in contact effects. This is perhaps due to a general dearth of research in this context, coupled with the fact many researchers have focused on testing the effects of disability contact interventions experimentally using manipulated or naturally occurring settings (e.g., Cameron et al., 2008; Evans, 1976; Florian & Kehat, 1988; R. S. Friedman, 1975; R. Brown & Maras, 1996, 2000).

Unlike extant work in these areas, this thesis treats contact as an *outcome*. That is, I use a predominantly experimental approach⁹, to test variations in the quality of contact that participants experience, as a result of manipulating psychological antecedents (i.e. concerns, embarrassment; see Chapter 3). In other words, the quality of contact that I am interested in is that experienced during the study, rather than a priori (though existing contact is used as a covariate in my work; see below). I therefore primarily measure contact quality using adjectives, rather than via a type of existing relationship (e.g., cross-group friendship), as by design, the contact experienced in each study is with a new out-group member.¹⁰ These types of items are very common in modern scales used in the literature. Researchers frequently use, for example, terms that mirror

⁹ The exceptions are Study 1, an exploratory qualitative study and Study 8. As the latter investigated the efficacy of a naturally occurring societal-level intervention (the 2012 Paralympic Games), it was not practically feasible to experimentally manipulate my predictors.

¹⁰ My initial measure of contact quality (see Studies 2 & 3) used more detailed items that referenced comfort with the differences between non-disabled and physically disabled people (e.g., [I would]... “be able to openly discuss the limitations of my physical disability”). However, for future studies, the assumption that this was indicative of contact quality was questioned. For example, perhaps an interaction would be of higher quality for some if it was felt that an impairment does not have to be discussed. This may be especially true of the casual, daily-life encounters that are the focus of this thesis, as they do not generally hold much opportunity for self-disclosure. This issue is reminiscent of Dixon et al’s., (2005) point that academic operationalisations may often have difficulty capturing how constructs are experienced in everyday life.

Allport's optimal conditions (e.g., "equal", "voluntary"; e.g., Islam & Hewstone, 1993; Greenland & Brown, 1999; R. Brown et al., 2007). Here, I use more general adjectives (e.g., "close", "genuine"), as due to the design and focus of my work (e.g., experimental, with contact as an *outcome*), the various cross-group interactions generally lacked these facilitating conditions (e.g., contact was not voluntary as participants did not have a choice over interacting).

A note on the limitation of self-report measures is relevant here. Firstly, all self-assessed ratings are vulnerable to social desirable responding (SDR; Paulhus, 1991); the tendency to present oneself in a positive light to others. There is some debate over the pervasiveness of SDR (e.g., Piedmont, McCrae, Riemann & Angleleitner, 2000), and recently Hewstone et al. (2011) found negligible effects on SDR on self and observer perceptions of intergroup contact. Nonetheless, it remains a potential issue and consequently, the effect of SDR was directly investigated in Study 5. Additionally, to counteract both SDR and acquiescent bias (frequent agreement or disagreement irrespective of item content; see Paulhus & Vazaire, 2007), Hewstone et al. (2011) have suggested collecting observer ratings to accompany self-report measures of contact (see also Christ & Wagner, 2013). Direct observation of contact would have been especially difficult to implement in this body of work as the mere presence of an audience commonly exacerbates feelings of embarrassment (R. S. Miller, 1996), presenting a potential confound. However, in two of the studies participants interacted with a physically disabled confederate who was able to observe contact due to a direct role in the interaction. Their observations were generally found to correspond with the participant self-reports. While this confederate may hold small biases due to their familiarity with the research, this does provide some confidence that participants could accurately report the tone of the interaction.

Operationalization of concerns

Regarding the psychological concerns that groups may hold about interacting with one another, the literature has not been wholly consistent regarding whether these are purely cognitive, affective or a mixture of both (see Chapter 3). For instance, researchers commonly measure *intergroup anxiety* using W. G. Stephan and Stephan's (1985) scale, which asks participants to rate the extent they experience a number of affective states (e.g., "careful", "defensive", "suspicious") when anticipating or engaging in a cross-group interaction (see also C. W. Stephan et al., 2000). However, this measure does not tap what exactly participants may be concerned about, i.e. the cognitive element (see Britt et al., 1996; R. Brown, 2011). Moreover, Blair, Park and Bachelor (2003) note that, frequently in the operationalization of intergroup anxiety, researchers include states that are only loosely connected to anxiety (e.g., compare "irritated", "frustrated" with "anxious", "tense"; e.g., Islam & Hewstone, 1993; C. W. Stephan et al., 2000; W. G. Stephan & Stephan, 1985). On the other hand, studies investigating the beliefs and expectations surrounding mixed interactions have usually treated these cognitions and the affective experience of anxiety as separate constructs (e.g., Plant & Devine, 2003; Plant et al., 2008; Shelton, 2003; Shelton et al., 2010). While W. G. Stephan (2014) allows for the possibility that anxiety may occur in the absence of conscious awareness of pertinent cognitions, he notes that the cognitive and affective elements of psychological concerns are closely connected and likely reciprocal (i.e. specific cognitions cause anxiety, but anxiety also causes these cognitions). This latter position is the one that is adopted by this thesis.

As such, I generated a scale (based on qualitative data), which prefaced specific beliefs and expectations with the affective state of being worried (e.g., "I worry about

appearing prejudiced towards physically disabled people”; see Study 2 onwards). That is, unlike other studies which have examined cognitions in terms of what participants believe or expect to happen in mixed interactions (e.g., “How likely do you think it would be that members of [out-group] would reject you?”; see Barlow et al., 2009), I tried to also capture the extent participants might feel affective anxiety as well. Specifically, each item began with the phrase (“I worry...”) before leading in to a specific cognition or belief about mixed physical ability interactions (e.g., “I worry about being unfamiliar with the things physically disabled people find important”). Later versions of this scale were influenced by a similar measure created by Greenland et al. (2012).

Operationalization of embarrassment

Due to a lack of focus on embarrassment in the literature as an emotion in its own right, there exist few scales for measuring it (see Robins, Nofle & Tracy, 2013). Of those that have been developed, only one targets embarrassment induced within specific situations and this is currently available only in the Arabic language (Alansari, 1996, 2002, as cited in Robins et al., 2013). The remaining measures attempt to tap people’s embarrassability, i.e. their trait susceptibility to the emotion. Kelly and Jones (1997) do this by presenting a series of items to measure the personality attributes of easily embarrassed people (e.g., “I often feel emotionally exposed in public and in front of groups of people”; see also Maltby & Day, 2000). On the other hand, Modigliani (1968) uses people’s average response to 26 embarrassing situations (e.g., “Suppose you were a dinner guest and could not eat the main course because you were allergic to it”). Obviously these scenarios were too general to adapt for use here (in the sense they are non-group specific). Thus, it was decided, in common with how emotions are

commonly measured in social psychological research (e.g., Iyer et al., 2007; Mackie et al., 2000), to add a series of adjectives that had previously been identified as central components of the experience of embarrassment and used in extant scales (e.g., “awkward”, “embarrassed”, “uncomfortable”, “incompetent”; see Modigliani, 1968; R. S. Miller, 1996; Parrot & Smith, 1991). A key advantage of this is that adjective-based scales are easy to understand and an intuitive approach to measuring scale or trait embarrassment (see Robins et al., 2013).

Operationalization of “contact avoidance” and prejudice

Like some extant contact work (e.g., Barlow et al., 2009), this thesis examined multiple forms of avoidance. Primarily, a scale of approach/avoidance intentions was adapted from the intergroup emotions literature (Mackie et al., 2000). The decision to use an intention-based measure was taken because many of the studies were conducted on-line, meaning that gauging actual participant behaviour may have been difficult. To supplement this, one experiment that examined actual interactions between non-disabled participants and a physically disabled confederate did use a more behaviour-orientated method of gauging contact avoidance, namely how willing the participant was to offer help (see Study 5).

As is common in the contact literature, prejudice was measured using the General Evaluation Scale (GES; S. C. Wright, Aron, McLaughlin-Volpe & Ropp, 1997). Unlike attitudinal measures specifically targeted at disabled people (e.g., Seifert & Bergmann, 1983, Yucker, 1970), which ask participants to rate their agreement with a series of statements (e.g., “Disabled people are often grumpy and moan about everything”¹¹; Seifert & Bergmann, 1983), the GES asks participants to rate their feeling toward the

¹¹ Translated from the original German by a native speaker.

target out-group along a series of bipolar adjective pairs (e.g., “contempt –respect”). Lollot et al. (2014) comment that the GES is a psychometrically sound measure that has been used across multiple groups and contexts. They also note that it is easy to use and simple to understand. These factors merited the inclusion of the GES in the present thesis. To capture how physically disabled people felt about encountering prejudice, a scale to capture their attitudes toward discrimination was generated (e.g., “You can handle disability discrimination from non-disabled people should it arise”). An existing measure was not used because it was felt that there was no adequate choice on offer.

Definition of “physical disability” and treatment of “physical disabled people” as a group

The modern paradigm of disability (“the social model”) asserts that it is primarily a product of external factors separate from the physical body (see Pledger, 2003). That is, social model theorists see disability as something constructed by social context, rather than the corollary of an unchangeable and abnormal aesthetic caused by birth defect or acquired injury (Oliver, 1990, 1996). Proponents of this view therefore place the onus of enablement onto extant political and social organization. For example, an individual is disabled if she or he is in a wheelchair and cannot ascend stairs to enter a building. However, if a ramp is subsequently put in place and this person can access the building with no difficulty, it follows that they are no longer considered disabled (Oliver, 1996). Shakespeare (2006) notes that many disabled people are empowered by the social model because it gives them legitimacy not solely as a member of a minority group within their community, but also as a minority that are oppressed by extant and identifiable structures within the societies they inhabit. This oppression can exert itself through environmental barriers, like access to public places, events and transport (see

Bellisario, 2014; Carew, 2013; Perry, 2014) or though negative social attitudes, such as the pervasive stereotype that the disabled are incompetent and dependent (Nario-Redmond, 2010; see also Fiske et al., 2002). Thus, although members of the group may possess different functional limitations, they likely share important experiences of “disablement” with each other (e.g., being treated differently; see Frank, 1988; Reeve, 2002, 2012).

Crucially, this allows for the following conceptualisation: a collection of people who possess wide-ranging and disparate impairments are nevertheless likely to be described and to describe themselves using the common label “physically disabled”. This follows the notion some scholars have proposed that sharing a common fate is what defines group boundaries (R. Brown, 2001). Though any aggregation of people with impairments may possess different functional limitations, it is likely that certain experiences of disablement will be shared by members. Moreover, the commonality of being physically non-normative will likely be picked up by non-disabled people who will proceed to group these people together accordingly (see R. Brown, 2001). Finally, it is evidently necessary that individuals should also self-categorise as members of the group in question (Tajfel, 1981). Thus, a wheelchair user facing discrimination should be likely to attribute this as a reaction to their “physical disability”, in addition to perhaps making less inclusive, impairment-specific comparisons. Group definition at this categorical level of “physically disabled” therefore contains objective (e.g., recognition by others), subjective (e.g., self-categorisation) and intersubjective components (e.g., perceptions of sharing a common fate).

With this in mind, the present thesis focuses on interactions which involve physically disabled people, rather than a specific impairment group (e.g. wheelchair users). This is keeping with recent work that has moved towards identifying shared psychological

processes across the group (e.g., stereotypes; Nario-Redmond, 2010; see also Dovidio et al., 2011). Members of different impairment communities have partaken in this research as long as they have self-identified as physically disabled, while the term “physically disabled people” was used to define the group to non-disabled people. Specifically, the current legal definition of physical disability in Britain¹², from the Equality Act 2010, was used in all studies to guide participants. This states that it is “[a] physical impairment that has a substantial and long-term adverse effect on the person’s ability to carry out normal day-to-day activities” (p. 6). In addition to its inclusiveness, this definition allows non-disabled participants to easily access prototypical examples of physically disabled people. If a single impairment group had been specified (e.g., cerebral palsy, spina bifida), due to lack of experience, many participants may have found it different to recall or imagine relevant interactions. However, all non-disabled participants were instructed not to think of people with mental or learning disabilities and the elderly (i.e. people over 65). This was to avoid conflation with attitudes towards members of these distinct groups, which can be different in content and intensity than toward physically disabled people (see Deal, 2003; Fiske et al., 2002).

Modes of data collection

Two main modes of data collection were used in this thesis: internet-based and laboratory research.¹³ The advantages of these for studying mixed interactions between non-disabled and physically disabled people are discussed below.

The internet has become a widely used research tool within psychology. Given that users can give their answers within the comfort of their own home, it has been noted that internet-based studies generally engender more truthful responses to socially

¹² The Act does not currently apply to Northern Ireland.

¹³ Pen and paper surveys were also used as part of some studies (noted where applicable).

sensitive topics (Booth-Kewley, Larson & Miyoshi, 2005). Specifically, a sense of isolation and anonymity may prevent participants from perceiving negative consequences associated with honest answers (e.g., social sanctions), thus promoting truthful responding (Joinson, 1999). This is important in the current context, because in light of the prevailing norm to be kind to the physically disabled, non-disabled people may be generally reluctant to discuss any negative experiences of these interactions. Furthermore, given that mixed physical ability interactions are rare, they may not previously have given them much thought. Internet-based responding affords the time and space to give this important topic careful consideration. In relation, disability is also a socially sensitive issue for many with impairments, who may also welcome the opportunity to discuss and think about potentially hurtful interactions with non-disabled people in private. Practically speaking, the internet also provides a cost-effective and inclusive method of reaching participants. Indeed, it may be the best way of enabling physically disabled people to take part in academic studies, whose impairments often prevent participation by traditional means. For instance, it would be both impractical and ethically questionable to ask participants with severe functional limitations to journey to a laboratory, without ensuring that this space was adapted to each person's needs. Conversely, internet-based research allows physically disabled people to tackle tasks at their own pace and with the use of assistive software if needed.

Critics of internet-based research have questioned whether attitudes expressed over the web are representative of opinions in reality (e.g., K. B. Wright, 2005). Additionally, they have pointed out that internet users may not be representative of samples collected from physical sources. While these points should be borne in mind, evidence suggests that data gleaned from the internet is of high quality and trustworthy. For example, Buhrmester, Kwang and Gosling (2011) found that web responses collected on the

crowdsourcing site Amazon's Mechanical Turk (M-Turk) were significantly more demographically diverse than those collected from (American) university students. Thus, in consideration of the above arguments, it was advantageous to conduct the majority of studies online.

Bolstering this, I also conducted two laboratory experiments where non-disabled participants interacted with a confederate who possessed a real physical disability. This holistic design is relatively rare within social psychology and especially so within the mixed physical ability context. For instance, while the experiments conducted by Kleck (1966; 1968; Kleck & Strenta, 1985; Kleck et al., 1966) ostensibly involved non-disabled people interacting with a physically disabled person, this actually was a non-disabled confederate wearing a prosthetic. While this does not necessarily prohibit conclusions being drawn about real-life interactions, it should be highlighted that these confederates are essentially "faking". That is, even a well-trained able-bodied actor may employ subtle "able-bodied" movements and behaviour that give participants a different impression than if they were interacting with an actual physically disabled person. The experiments conducted in this thesis are therefore more representative of actual mixed physical ability interactions than the preceding work. Of course, in common with laboratory work in general, there were still limitations to the extent a natural encounter could be simulated.

Statistical assumptions and procedures

Throughout this thesis, I was careful to use established statistical procedures and methods, including testing whether data met important statistical assumptions (see Field, 2009; Tabachnick & Fidell, 2001). These are discussed below.

Within each quantitative study, the assumption of normality was checked through visual inspection of histogram and normal probability plot data. This revealed no issues of skewness and kurtosis on the variables of interest (i.e. Skewness < 1.13 and kurtosis < 1.21 values in all studies). This is considered sufficient to assume normality by some sources (Tabachnick & Fidell, 2001) especially for larger samples (e.g., > 50, when comparing means).

Several of my experiments controlled for the influence of other variables (e.g., contact quantity, embarrassability) on the observed effects. Field (2009) notes that covariates should only be included in analyses if they are independent of the variable that is being manipulated. For example, in Study 2 the effect of physically disabled people's psychological concerns on their reported contact quality was tested. In order to control for the influence of participants' existing contact quantity with non-disabled people, I first checked that the concerns manipulation did not impact this variable. This assumption is reported where violated.¹⁴

For each statistical test used (e.g., ANCOVA, MANCOVA, Regression) important statistical assumptions were checked following Field (2009) and Tabachnick and Fidell, (2001). This includes, for example, the assumption of equality of covariance (Box's *M*), the assumption of equality of error variance of the dependent variables (Levene's for tests comparing means (e.g., MANCOVA, ANCOVA)), and the assumption of (no) multicollinearity, homoscedasticity and normally distributed errors (Regression). These assumptions were met across studies, unless otherwise stated. Where violated,

¹⁴ The inclusion of covariates in analyses reduces statistical power, which can lead to Type II errors. To investigate this, all analyses were run without the covariates as well. Their inclusion did not make a difference to the results, except in Studies 7 & 8, where findings became non-significant when accounting for the covariates. To avoid the possibility of making a Type II error, results for these studies are therefore presented *without* the covariates (see footnote 59).

alternative procedures are outlined clearly within the text of each study according to the recommendations of the above authors (Field, 2009; Tabachnich & Fidell, 2001).

Power analysis

Of equal import to following the correct statistical procedures was ensuring that each study had enough statistical *power* to detect the desired effects of concerns and embarrassment on contact quality. In this respect Cohen (1988) suggests the following criteria for *r* and *t* based tests: .20 (small), .50 (medium), .80 (large). By the way of comparison Pettigrew and Tropp (2006) found a small to moderate effect of contact on prejudice among studies conducted within the mixed physical ability context ($-.24, N = 15, 584$).

Good practice dictates that researchers calculate the required sample size for detecting a desired effect a priori, generally assuming 80% power. Given that the extant literature has generally shied away from treating contact as an outcome and the predictive power of concerns and embarrassment for each variable has not been tested, a direct assessment of the desired effect size is not possible. However, given the above (i.e. Pettigrew & Tropp, 2006), striving for a moderate effect size is a reasonable suggestion.

The studies presented in this thesis generally met the criteria to detect small to moderate effect sizes (i.e. effect sizes of .20 to .50). However, due to “spoiled” cases (e.g., participant suspicion), Study 5 and Study 6, which investigated actual contact encounters had only the power to detect medium to large effects (i.e. effect sizes of .50 to .80) through ANOVA. Additionally, due to panel attrition of the non-disabled sample in Study 8b, the regression analyses also had only the power to detect medium to large

effects over time. These aspects of the aforementioned studies are therefore slightly underpowered and should be treated with caution.¹⁵

Acknowledging the rationale for the methodological decisions described above, the following chapters will present my empirical work, beginning with an exploratory qualitative study.

¹⁵ In defence of their conclusion in the present thesis, despite the fact that the specific tests were underpowered, the studies overall still revealed important findings for the present topic. However, I have decided to collect more cases for the laboratory work (i.e. Studies 5 & 6) anyway to rectify this, before dissemination *beyond* this doctoral thesis. Unfortunately, the same procedure cannot be carried out for Study 8b as this data were time-critical. However, it should be noted that longitudinal studies on contact have been carried out with matched sample sizes as low as 40 (e.g., Greenland & R. Brown, 1999).

CHAPTER 5

Non-disabled and physically disabled people's perceptions of interactions with members of the other group (Study 1)

Prior to conducting experimental research to investigate the extent concerns and embarrassment may impair contact quality between non-disabled and physically disabled people, it was important to understand the nature of these constructs and how they are experienced by members of both groups. This chapter presents a qualitative study conducted to achieve this aim. Specifically, it answers the following research question: "How are concerns and embarrassment experienced by non-disabled and physically disabled people in mixed interactions?".

A qualitative method of inquiry was chosen because these approaches allow the researcher to gain rich knowledge of how phenomena are understood subjectively by participants (Camic, Rhodes & Yardley, 2003). This is essential within the current research because it is likely that the experience of concerns and embarrassment is different for non-disabled and physically disabled people (see Chapter 3; see also Devine & Vasquez, 1998; Pettigrew & Tropp, 2011). A quantitative approach may not be able to fully capture the depth of this diversity (see R. Brown, 2011, p. 272). Further, recall that Dixon et al. (2005) criticise contact theorists for not fully capturing how participants experience or make sense of mixed encounters, due to use of scale measures developed from academic theory. Although some interpretation may be lost in translation, the exploratory approach taken here ensures that some of the participants' own meaning and understanding will be preserved in subsequent (quantitative) investigation.

This research follows a significant tradition, primarily within the disability studies domain, that has given both voice and agency to physically disabled people through the

use of qualitative research methods, affording them the opportunity to describe and interpret their own experiences (e.g., Frank, 1988; Reeve, 2002, 2012; Watson, 2002). Indeed, the usefulness of such approaches for investigating physical disability has recently been more widely recognised by social psychologists (e.g., Fichten et al., 2005; see also Goodley, 2012; cf. Altmann, 1981). For example, Nario-Redmond (2010) used a free-response methodology to probe the existence of disability stereotypes. Both non-disabled people and disabled people (i.e. physical + learning) were asked to generate characteristics that come to mind when thinking of those with impairments. She found a cross-group consensus regarding how disabled people were perceived, namely as dependent, incompetent and asexual (see also Fiske et al., 2002). Note that this study does not focus on physically disabled people specifically however.

The present study builds upon the body of work outlined above by being the first to investigate how psychological concerns and embarrassment may operate in a mixed physical ability context. It is also a rare example of work that examines the perceptions of non-disabled and physically disabled people within the same study design (see also Nario-Redmond, 2010). This holistic approach has been emphasised as important to understanding the nuances of social interactions between members of different status groups (Hebl & Dovidio, 2005; Shelton, 2000).

Though, to my knowledge, work has not been done to investigate psychological concerns among non-disabled and physically disabled people, accounts of interactions between majority and minority groups suggest members experience a range of concerns (Allport, 1954; Goffman, 1963; Shelton, 2003; Vorauer, 2013). Work conducted within an interracial context has evinced that the content of these concerns for majority groups are primarily related to their own behaviour (e.g., such as appearing prejudiced; see Plant & Devine, 2003; Shelton, 2003). Less research has been carried out delineating the

concerns experienced by minority groups but some suggest that anxieties could relate to unwanted attentional focus (Hebl et al., 2000) and fear of rejection (e.g., Barlow et al., 2009; Hebl et al., 2000). The present study seeks to elucidate the content of these psychological concerns within the mixed physical ability context.

Embarrassment is an acute state of awkwardness known to follow a real or perceived transgression in a public setting (R. S. Miller, 1996). The emotion is conceptualised to arise due to a failure in impression management (Goffman, 1956), though accounts differ on *why* failures in impression management should cause embarrassment.

Specifically, four models have been proposed, locating the primary cause of embarrassment either as a failure in smooth public performance (Silver et al., 1987), negative judgements from others (Edelmann, 1987), a violation of situational self-esteem (Modigliani, 1971) or a person's more stable, private moral image (Babcock, 1981). Of these, R. S. Miller (1996) suggests negative evaluations are the most central source of the emotion, followed by flustered public performances. At present, the study of embarrassment within intergroup contexts remains a neglected area of social psychological research (but see Eller et al., 2011). However, it is well-known that mixed interactions between non-disabled and physically disabled people are often awkward and rife with misunderstandings (Dovidio et al., 2011; Hebl et al., 2000) which may provide fertile ground for embarrassment to occur. To my knowledge, this study is the first to explore potential sources of embarrassment within both mixed physical ability interactions and intergroup contexts in general.

Method

Sample

Fifty-three non-disabled people [ND] responded to the open-ended online survey, whose age ranged from 19 to 72 ($M = 32.62$, $SD = 12.45$). Thirty one of these

respondents were female, while 20 were male (two did not state their gender). A third of these were British, while all but two of the remainder were American.

Nineteen physically disabled people [PD] filled out the open-ended online survey, 11 of whom were female, while 8 were male (one respondent did not state their gender). Age ranged from 17 to 75 ($M = 44.78$, $SD = 18.17$) and the majority of participants stated their nationality as British ($N = 16$).

In addition, five physically disabled people took part in an in-depth semi-structured interview. Four of these participants were female, while one was male. Mean age was not significantly different from the survey respondents ($M = 42.00$, $SD = 19.65$). All participants reported their nationality as British. Two of these participants were married to each other and were interviewed together.

Materials

Both the semi-structured interviews with physically disabled people and the online surveys utilised six open-ended questions. These questions were designed to elicit respondents' perceptions of the interactions that they commonly have with members of the other group. The first question checked whether respondents were aware of commonly held stereotypes about physically disabled people (see Nario-Redmond, 2010). The next four questions explored whether psychological concerns and embarrassment are a common feature of mixed physical ability interactions and how members of both groups might react to actually being treated unfairly. This set of questions was included in order to establish whether concerns and embarrassment do exist in mixed physical ability interactions and the implications that experiencing these may have for contact between the groups. A final question tapped respondents' perceptions of how far non-disabled people could understand what it is like to be

physically disabled. This question was included to encourage respondents to reflect on what would help increase knowledge about physical disability among non-disabled people.

Questions varied slightly according to the group membership of respondents, though the essential meaning was preserved. The six questions and these variations are outlined below:

- 1) *What characteristics does society commonly associate with physically disabled people?*
- 2) *What are you most concerned about when you interact with [out-group] who don't know you personally (on public transport, shopkeepers, someone on the street, future employer, etc.)?*
- 3) *Imagine yourself in a situation where you think you have unintentionally offended a physically disabled person. For example, you may have acted in a stereotypical way and highlighted the person's disability in some fashion. Describe how you would feel in that situation [ND]*
Imagine yourself in a situation where you notice a non-disabled person treating you differently because of your disability. For example, the other person is focusing mainly on your disability rather than on other aspects of who you are. Describe how you would feel in that situation. [PD]
- 4) *Would you ever feel embarrassed in the above situation? If yes, tell us more why you might feel embarrassed.*
- 5) *How would you react to a physically disabled person if you are accused of treating him/her differently because of their disability?[ND]*
If you feel that you have been treated differently by a non-disabled person, how would you react to him/her? [PD]
- 6) *To what extent do you think non-disabled people can understand exactly what it means to live with a physical disability?*

During the interviews, issues raised were probed spontaneously. On occasion, respondents would also begin talking about areas in the interview schedule of their own accord. In these cases, the interviewer let the conversation flow naturally and changed the order that the questions were asked in to reflect the new direction. At the end of each interview respondents were given the chance to go back and add to their comments regarding any of the topics that had been talked about.

Procedure

Adverts were placed in mailing lists (e.g., JISCmail) to recruit non-disabled people and disability forums (e.g., Ouchtoo) to recruit physically disabled people for participation. Additionally, disabled students at a local university in the south-east of England were contacted and recruited for interviews. These interviews were audio-recorded and took place either on campus or at the respondents' homes (due to their mobility difficulties). Both interviewees and survey respondents were told that the study investigated how physically disabled and non-disabled people interact. All respondents received a full written debriefing after participation.

Analysis

Thematic analysis was used to analyse the data. This was the most suitable method, because it is informed by theory and based on existing research and data. However, it also allows the researcher to explore the specific experiences, meanings and realities of the respondents (Braun & Clarke, 2006). This was important given that concerns and embarrassment have not been investigated before in a mixed physical ability context. As the aim of this study is specifically to identify the content and possible relationship between concerns and embarrassment, thematic analysis was focused towards identifying the existence and content of these constructs. Although a theoretical (vs. an inductive) approach can result in less rich data, this method allows for the identification and elaboration of material most relevant to the research question (Braun & Clarke, 2006). More importantly, it preserves the exploratory nature of the research. That is, while the study specifically sought to identify sources of concerns and embarrassment, using thematic analysis allowed this to be driven by participants' own experiences and subjective understanding.

Coding

All recorded data were transcribed by the researcher and the corpus of written material was read and re-read in order to get to know the data. Data were then coded to identify specific references to concerns and embarrassment in mixed physical ability interactions. These codes were intended to represent “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way” regarding these phenomena (Boyatzis, 1998, p. 63). Codes were then organised into broader themes, through the identification of reoccurring patterns and topics across the interviews (Braun & Clarke, 2006). Finally, these themes were subsequently reviewed, with attention paid to their internal homogeneity and external heterogeneity (Braun & Clarke, 2006; Patton, 1990). That is, it was ensured that the material within each theme was similar, while retaining a clear and identifiable distinction between themes. The possibility for the same theme(s) to arise in both the non-disabled and physically disabled data was freely considered, and the origin of each theme is clearly explained below.

Analysis

Thematic analyses revealed six key themes, which are discussed in reference to the two main constructs of interest (concerns, embarrassment). Each theme is illustrated by quotations and extracts from the data and the source of the theme is clearly noted (i.e. whether it was present for both groups or group-specific). Survey respondents are numbered and identified by their group (e.g., PD Respondent 1). Interviewees are similarly numbered but identified by a different label (e.g., Interviewee 1).

Concerns

A majority of non-disabled ($N = 50$) and physically disabled respondents ($N = 22$) listed one or more concerns about interacting with members of the other group.

Concern about how to behave towards physically disabled people [ND]

This theme was present only for non-disabled respondents. Specifically, they commonly noted concerns over whether they would cause offence when interacting with a physically disabled person. Often, this arose in the context of providing help, but it was also present in other situations, for example whether it is appropriate to notice an impairment:

I would be concerned about appearing patronising - for example, if I thought the person needed assistance I might be hesitant in case it turned out they could manage fine themselves [sic]. I would also be unsure about the appropriateness of acknowledging their disability [ND Respondent 10].

In several cases, this concern about offending was linked to an uncertainty of how to behave around disabled people. A dominant pattern was that of conflicting schemas regarding how respondents should behave around physically disabled people, who often highlighted how they might be negatively evaluated no matter which course of action was taken. Several respondents captured this “damned if you do, damned if you don’t” conflict:

My main concern would be that they may find my actions or behaviour patronising if I were to offer to help them, or that they may consider me rude if I were not to offer help (if the situation called for such an offer - e.g., helping someone in a wheelchair to board a bus etc.) [ND Respondent 21].

Interestingly, some physically disabled respondents were also aware of the concerns that non-disabled people face. This further highlights that non-disabled anxiety over using appropriate behaviour may be a common feature of mixed physical ability interactions, to the point where it is easily noticeable by physically disabled interactants:

...because [non-disabled people] can't understand what you are going through and what you have got they sort of forget and get scared that they are going to offend you... they sort of start to tread on eggshells around you. It's a bit weird [PD Interviewee 5].

Concerns about impairment being the focus of interactions [PD]

A primary concern of physically disabled respondents was that their impairment would be the focus of mixed interactions. Often, specific examples of this included overt and hurtful examples of deliberate discrimination from non-disabled people:

That they will ask invasive questions, try and take a photo of me or assume I am like the dwarfs they see on TV, which is that I enjoy being laughed at because of my height [PD Respondent 13].

In other instances, respondents outlined behaviour from non-disabled people that was well-intentioned but also brought impairment into focus (e.g., being described as “brave”). This suggests that the anticipation of *negative* intent behind non-disabled people's actions is not necessary for these concerns to appear. This may be because physically disabled people are aware of pervasive negative stereotypes associated with disability (see Nario-Redmond, 2010) and different treatment from non-disabled people reminds physically disabled people of this fact. One respondent provides an explanation along these lines:

Although I'm in a chair, I don't actually see myself in a chair, it's kind of *odd*. I don't know, I think because I've been in it all my life, it's sort of- it's no different to me. Um, so when someone sort of singles you out because you're in a chair it kind of reinforces that fact [PD Interviewee 3].

What this example also suggests is that physically disabled people may not always be self-conscious of their functional limitations (see Watson, 2002) or of negative perceptions of disability in general, a fact that tallies with a line of research that conceptualises disability primarily as a social construction (i.e. created situationally; Oliver, 1990, 1996). Some respondents went on to contrast the concerns they held during interactions with strangers to the perception that family and friends were less likely to focus on their impairments. A subset of these respondents also described concerns over contexts that they felt could emphasise their impairments to these important groups of people (e.g., socialising with friends at a restaurant when eating is physically difficult).

For some respondents, there were additional concerns about their impairment being misinterpreted:

I think for me, it is not knowing the response I am likely to experience. Although my disability is visible in a sense that I have a different walking style to the non-disabled community, I do not require any mobility aid. For example, I could easily be seen as drunk rather than disabled. I think on the whole, there is a societal demand to be "nice to people in wheelchairs", whereas there is not that requirement for binge drinkers. This means that I cannot always predict how people will respond to me [PD Respondent 7].

In this example, being treated differently as a disabled person is framed as the lesser of two evils, because, as the respondent notes, behaviour towards those with impairments is often well-intentioned. However, in some cases, there is also a concern that misinterpretation will accompany different treatment, which may follow non-disabled people assuming those with impairments are members of other, highly stigmatized out-groups (e.g., binge drinkers, people with mental health disabilities; see Dovidio et al., 2000). The acute difficulty of not knowing when this will be the case seems to compound this concern.

The idea that being the subject of attention from others may cause anxiety within stigmatized individuals has been suggested before (e.g., Goffman, 1963; Hebl et al., 2000). It is important to note that such attention is almost exclusively interpreted in a negative light, as evidenced from the examples above. This may be because it demonstrates a failure to fit in with normal patterns of social interaction. Thus, being the subject of non-disabled people's gaze implicitly carries a notion of rejection, in the broad sense that it entails non-normativity:

If you were put into groups but there was several people that were disabled, and they were put all in the same group. I'd feel like I'd been singled out... because it's highlighting the fact... that you're different [PD Interviewee 3].

Here, the respondent does not imagine being singled out in the "pure" sense of being isolated. Instead, she talks about being put into a group with other physically disabled people. This may carry with it a feeling of rejection, because it serves as a reminder that the respondent is different from the norm- represented through being associated with other physically disabled people instead of non-disabled people.

Concerns about the functional limitations of the disabled person [ND + PD]

A few non-disabled respondents noted that their primary concern would simply be to make sure that the physically disabled person could manage unaided:

I would be concerned about safety and comfort of physically disabled people.

E.g., ensuring they were able to get on whatever mode of transport safely and had appropriate space [ND Respondent 7].

These respondents did not note any concerns over whether the physically disabled person would want any help.

Similarly, some physically disabled respondents noted concerns over their personal and physical safety:

When I am danger of being knocked over (e.g., in crowds); when I need help (e.g., I fall over, or need help to get to standing from a seat) [PD Respondent 6].

This highlights that while psychological concerns may be common to many interactions between non-disabled and physically disabled people, sometimes functional concerns may take precedent.

Embarrassment

The majority of respondents confirmed that they would feel embarrassed after unintentionally treating a physically disabled person differently (non-disabled respondents, $N = 50$) or being on the receiving end of such treatment (physically disabled respondents, $N = 20$).

Embarrassment due to negative evaluations from the out-group [ND + PD].

Many non-disabled respondents were empathetic in their agreement that they would feel embarrassed:

YES! I would feel horrifically embarrassed that I had acted in a way that had made another individual feel uncomfortable or singled-out in any way [ND Respondent 21].

As in the above example, the emotion was described above with a measure of negative intensity (i.e. “horrifically”) in these instances. This contrasts the lay perception that embarrassment is a harmless emotion that occurs exclusively in the context of humorous gaffes (see R. S. Miller, 1992).

Some non-disabled respondents described negative evaluations from physically disabled people or onlookers as the primary cause of their embarrassment:

Yes, because I would have presented myself in a negative light to both the person in question and any onlookers [ND Respondent 17].

You may have unintentionally hurt their feelings or you might be considered as socially ignorant - and either way you would be judged by others around [ND Respondent 18].

The second example in particular suggests that being judged is key to experiencing embarrassment. This is known as the social evaluation model within the literature (Edelmann, 1987), and it assumes that an individual cares about how others perceive his behaviour. This is likely in mixed interactions because members of minority groups are often used as reference points for appropriate behaviour by majority groups (Crosby et al., 2008; Vorauer, 2013).

Negative evaluations were also cited as a cause of embarrassment by several physically disabled respondents. Several noted that they felt differential treatment from non-disabled people represented negative judgements against them. This was especially true in situations where disabled individuals felt they were overtly or subtly being grouped with other disabled people:

I probably would [feel embarrassed] because I have an embarrassing disability.

My disability is associated with humour and freak shows and thus by focusing on it most people think of oompah lumpahs and silly dwarfs humiliating themselves and thus if the focus is on my disability, it is embarrassing [PD Respondent 13].

Negative evaluations may be especially relevant to physically disabled people because they stem from those who are perceived to set the standards of social competence (Vorauer & Sakamoto, 2008). In the example above, embarrassment is linked to the perception that one is being associated with a derogated group, rather than one that is held as socially acceptable. This, again, also highlights the fact that negative perceptions of physically disabled people are widespread (Nario-Redmond, 2010).

Embarrassment due to feeling a failure [ND + PD]

Some physically disabled respondents asserted that they would feel like a failure after being treated differently by a non-disabled person:

I would feel embarrassed as I would feel like a failure in some way [PD Respondent 10].

“Failure to perform” is thought to be the cause of embarrassment in dramaturgic accounts of the emotion (Silver et al., 1987). Specifically, it is suggested that embarrassment follows a poor public performance that leaves the individual flustered

and feeling awkward. Notably, in this model, negative social judgements are not necessary for embarrassment to occur. Instead, it is the awkwardness and clumsiness of the interaction itself. One respondent describes how being treated differently may disrupt her ability to give a smooth public performance:

Yeah, that's how you feel, if someone looks at you differently or treats you differently from everybody else then you would feel embarrassed and you sort of go into yourself and you can't speak up. Sometimes I- I'm quite a confident person but I lose it. I lose my confidence because of the way someone may look at me or if someone whisperers something [PD Interviewee 2].

She describes a process of psychological retreat and disengagement from the social interaction. Notably, her confidence is described as something that is "lost". This highlights how embarrassment is associated with an inability to engage in smooth social interaction with non-disabled people. Being treated differently by non-disabled people may cue to physically disabled people that they have failed somewhat to engage in normal patterns of social interaction – in other words to "pass" as non-disabled (see Goffman, 1963).

Though this theme was less common among non-disabled respondents, some made reference to experiencing embarrassment simply because they had committed a gaffe:

Yes, because I would have made a social faux pas [ND Respondent 20].

I've made a mistake most people wouldn't make [ND Respondent 38].

In both of these examples, respondents draw attention to the fact that their behaviour is not considered a usual part of social interaction with a physically disabled person. The public nature of the disruptive performance is emphasised especially by the second

comment, who describes it as something “a mistake most people wouldn’t make”.

Some respondents also noted the predicament that such failure left them in, for example, by describing it as “a difficult thing to come back from”.

Embarrassment due to a violation of situational and personal standards [ND +PD]

Some non-disabled respondents drew a link between experiencing embarrassment and their self-perceptions:

The main motives [sic] for my embarrassment is that it completely goes against my moral values to insult others this way & I wouldn't want someone to do this to me if I was ever in this situation [ND Respondent 41].

This highlights the importance of self-image within embarrassing interactions.

Committing an embarrassing act against a physically disabled person may conflict with the non-disabled people’s positive self-image. This assumption underpins both the situational self-esteem model (Modigliani, 1971) and the personal standards model of embarrassment (Babcock, 1981). In the former model, people feel embarrassed due to a temporary loss of self-esteem that is limited in duration and specific to public situations. In the latter, embarrassment arises due to a long-lasting violation in more chronic personal standards. Ergo, it follows that under the personal standards model, people should experience embarrassment even in private (R. S. Miller, 1996). Some respondents appeared to mitigate against this, for example, commenting that their embarrassment would be worse in front of a large number of people. However, for others the process seems to be more private and internal (see Respondent 41 above). Therefore, it is not possible to distinguish whether these standards are purely situational or more personal in nature.

One respondent also commented on the antecedents to feeling this violation of standards:

You feel as if you should know better than to ever offend someone. As you grow up social etiquette is ingrained on you. It's normally pretty clear what would offend someone. When dealing with a disabled person you no longer have a baseline measurement or a set of etiquette tools to rely on. Your perception of how to act has little grounding in a previous experience. That's made harder because of variances in how individual disabled people expect to be treated [ND Respondent 1].

Specifically, it is linked to the uncertainty of how to behave towards physically disabled people. Knowledge and experience of disabled people are described as necessary precursors of forming a comprehensive idea of etiquette for such interactions. Given that non-disabled people do indeed have little contact with physically disabled people (BT, 2011; Hebl et al., 2000), this highlights how common experiencing embarrassment might be when members of these groups do interact.

This theme was also present to a lesser extent among physically disabled people. Specifically, some respondents noted that they would feel embarrassed on behalf of the non-disabled person who had behaved inappropriately:

I was embarrassed that I was with this person who could be insensitive and stupid. I was embarrassed for her that she acted so unkindly, and her laughter was a reflection on her own attitude toward impairment and disability [PD Respondent 4].

Discussion

The objective of the present study was to explore how non-disabled people and physically disabled people experience concerns and embarrassment in mixed physical ability encounters. Importantly, the study aimed to garner a holistic impression of these constructs, allowing for the possibility that they may be experienced *differently* by members of both groups, a subject not explored by past research in this context. In sum, the findings convincingly demonstrate that non-disabled people and physically disabled people frequently hold concerns and feel embarrassed when interacting with each other.

Specifically, like other majority groups, non-disabled people seem to hold concerns over their own behaviour, such as being offensive to physically disabled people (see Plant & Devine, 2003; Shelton, 2003). They wish to avoid negative evaluations of their actions from people with impairments, perhaps because members of this group are seen to possess the authority to decide what constitutes appropriate behaviour in mixed physical ability interactions (see Vorauer, 2013; Vorauer & Sakamoto, 2008). Striving to behave appropriately is complicated by the fact that non-disabled people are often unsure of how to act around physically disabled people (see Hebl et al., 2000). This means, when facing a decision such as whether to help, non-disabled people are often concerned about receiving negative judgements whatever course of action they take.

On the other side of the coin, the study suggests physically disabled people are concerned about impairment being the focus of interactions with non-disabled people. This can manifest itself through differential treatment, such as instances of deliberate discrimination, but also extends to examples where non-disabled people possess good intentions (e.g., attempting to help). Specifically, differential treatment may place the physically disabled people “on-stage” (Hebl et al., 2000) and present unwanted

reminders that they belong to a stigmatised group and are consequently non-normative. Differential treatment by association with other physically disabled people may pose a particular threat in this manner. There is also a danger that non-disabled people will focus on impairment but that this will also involve an element of misinterpretation. For example, due to an ambiguous or uncommon ailment, physically disabled people may be treated like members of another, more severely derogated group (e.g., binge drinkers, people with mental health disabilities).

Respondents confirmed that unintentionally treating a physically disabled person differently (for non-disabled respondents) and receiving differential treatment (for physically disabled respondents) would cause embarrassment. Several explanations for this were given, which are generally supportive of prior work on the source of this emotion (e.g., R. S. Miller, 1996). The most common reason for physically disabled respondents' embarrassment was the perception that they were being negatively evaluated, often through association by acutely derogated examples of their impairment group (e.g., oompah lumpahs for a respondent with dwarfism). Non-disabled respondents also felt that their embarrassment resulted from the notion of being judged by the offended physically disabled person. This supports the social evaluation model which posits that the central cause of embarrassment is the threat of unwanted judgements from others (Edelmann, 1987).

A relatively prominent theme among physically disabled people was that embarrassment represented the inability to meet an interactional standard (Silver et al., 1987). Respondents described how differential treatment from non-disabled people disrupted their ability to give a smooth public performance (e.g., through confidence loss). This theme was present, but less common among non-disabled respondents.

However, a few described the process of making an awkward social gaffe itself as the primary cause of their embarrassment.

Non-disabled respondents also commonly asserted that they would feel embarrassed due to a violation in moral standards. In some cases, the public nature of this violation was emphasised, as in the situational self-esteem model (Modigliani, 1971). In others, these image violations were conceptualised as more personal and private in nature, following the personal standards model (Babcock, 1981). Physically disabled respondents also displayed an awareness of moral standards as some noted feeling embarrassed for non-disabled people due to their poor behaviour.

Finally, not every respondent felt they would experience these concerns or embarrassment during interactions with members from the other group. Indeed, some respondents from both groups noted that their only worry would be to manage functional limitations resulting from impairments. This may be due to the fact that the degree to which these processes are experienced likely varies from person to person. That is, other factors, such as prior contact experience and self-perceptions of social competency may have generated more positive expectations towards these encounters among a minority of respondents in this study.

Both the qualitative data from this study and existing research on mixed interactions (e.g., Hebl et al., 2000) supports the idea that concerns and embarrassment may be prevalent within mixed physical ability interactions. Such interactional concerns are generally associated with misperceptions and misinterpretations about an interactant's own behaviour and the behaviour of others (Vorauer, 2006, 2013; Vorauer & Sakamoto, 2006; see also Dovidio et al., 2011). In the mixed physical ability context, concerns could conceivably lead to behaviour that causes embarrassment. For example, non-

disabled people who are acutely concerned about committing offensive behaviour may believe that a transgression has occurred, when in fact, the physically disabled person does not. On the other hand, concerns over impairment being the focus of an interaction for non-disabled may lead physically disabled people to perceive differential treatment where there is none (see also Kleck & Strenta, 1985).

Chapter summary

This chapter presented an exploratory qualitative study that aimed to tap the phenomenology behind concerns and embarrassment in the mixed physical ability context.

The findings indicated that both non-disabled people and physically disabled people hold unique concerns about interacting with members of the out-group (e.g., about their own behaviour [ND], about impairment becoming the focus of the interaction [PD]). Moreover, they suggested that embarrassment is common to these encounters and may stem from a variety of factors (e.g., perceived negative out-group evaluations).

The next chapter will test the proposed model of concerns, embarrassment and contact quality (see Chapter 3, Figure 1). Firstly, the extent that concerns might negatively impact embarrassment will be examined (path *a*; Study 2 & 3). Secondly, the effect of embarrassment on contact quality will be investigated (path *b*; Study 4).

CHAPTER 6

The effect of physically disabled people's psychological concerns on embarrassment, contact quality and approach intentions in vignette-based interactions (Study 2)

Findings gathered in Study 1 suggest that both physically disabled people and non-disabled people hold a unique set of concerns when interacting with members of the other group. The aim of this chapter is to examine the impact of these concerns on embarrassment, contact quality and approach intentions among members of both groups. To achieve this, three empirical studies were conducted in which concerns were experimentally manipulated.

The first of these studies was conducted with physically disabled people. Past literature, primarily within the disability studies domain, attests that physically disabled people are often preoccupied with whether their impairment will be noticed by non-disabled people (e.g., Frank, 1988; Gill, 2001; Goffman, 1963; Hebl et al., 2000). Similarly, in Study 1, physically disabled participants reported concerns about their impairment becoming focus of encounters with non-disabled people. Thus, an experimental manipulation and scale were generated to reflect this.

As previously discussed, the aim of the current research is to build upon existing psychological research with physically disabled people, while using a novel approach within the large body of contact literature: that of looking at contact as an outcome rather than a predictor of social psychological constructs (see R. Brown & Hewstone, 2005).

Thus, the objective of the present study was to investigate the impact of psychological concerns on embarrassment, contact quality and approach intentions towards non-disabled people. Due to potential vulnerabilities within a physically disabled sample,

vignette-based interactions were used in place of fabricating actual experiences of stigmatisation.

The following hypotheses were tested:

H₁ Participants in whom concerns are induced will experience higher levels of embarrassment compared to those who are not induced to experience concerns.

Embarrassment is conceived as an affective response to committing a transgression in a public context (R. S. Miller, 1996). Extant research suggests holding concerns about interactions with an out-group leads the perceiver to expect negative consequences for the self (e.g., W. G. Stephan, 2014; Vorauer, 2013). As a result, concerned individuals may perceive negative outcomes when in fact there are none (Vorauer & Sakamoto, 2008). Findings from Study 1 suggest two routes by which concerns could engender embarrassment. Firstly, it is plausible that participants who hold disability-focused concerns will perceive their disability as more disruptive to their ability to maintain a smooth public performance (Silver et al., 1987). Additionally, participants may become embarrassed as they may interpret attentional focus on disability as synonymous with negative evaluations from the out-group (Edelmann, 1987).

H₂ Participants in whom concerns are induced will report reduced contact quality and reduced approach intentions towards non-disabled people compared to those in whom concerns are not induced. In an interracial context holding concerns about an upcoming interaction has been shown to deter participants from approach behaviour (e.g., Plant & Devine, 2003). While contact quality as an outcome of these concerns has not been researched, it is plausible that expecting negative consequences for the self may also negatively impact participants' contact quality perceptions. One possibility is that the negative affect generated by concerns may transfer directly to participants' contact

quality perceptions (R. Brown & Hewstone, 2005). Additionally, holding concerns may lead to other negative consequences, such as embarrassment, which may impact contact quality (see H₃).

H₃ The link between concerns and decreased contact quality will be mediated by embarrassment. Specifically, holding concerns about interacting with non-disabled people will increase embarrassment, which in turn will account for a reduction in contact quality. It is proposed that the negative affect generated by embarrassment may transfer to participant perceptions of the interaction.

H₄ The link between concerns and approach intentions will also be mediated by embarrassment. Specifically, it is plausible that the negative affect generated by embarrassment will also lead concerned participants to want to avoid further interaction.

Method

Participants

One hundred and forty-two physically disabled people participated in the study, 39 of whom were male, 96 who were female and nine who did not state their gender. 71% of respondents were British in origin, while a further 28% identified as North American, Australian or New Zealander. The mean reported severity of disability (measured via a nine-point self-report scale) was 5.89 ($SD = 1.86$). The most common physical disabilities listed were: arthritis ($N = 40$), cerebral palsy or hip dysplasia ($N = 27$), and impairments involving muscle weakness such as muscular dystrophy ($N = 26$). The age of the sample ranged from 19 to 76 years ($M = 45.48$, $SD = 14.05$).

Design

The study comprised of three between-subjects experimental conditions designed to vary the amount of concerns physically disabled people hold when anticipating

interactions with non-disabled people (disability-focused x personality-focused x control). This was achieved by presenting bogus materials on the subject of these concerns. As Study 1 found that physically disabled people hold concerns about disability being the focus of social interactions with non-disabled people, a disability-focused condition was created to induce these concerns. This was compared to both a personality-focused condition (designed to reduce concerns) and a control condition. Each participant was randomly allocated to one of these three experimental groups, consisting of the disability-focused ($N = 52$), personality-focused ($N = 40$) and control conditions ($N = 52$).

Procedure

Physically disabled people were recruited from several online disability websites (e.g., OuchToo), forums (e.g., Apparalyzed), and social media groups (e.g., Hemihelp-Facebook) to take part in a short online questionnaire. Prior to beginning the survey, participants were told that the study investigated how physically disabled people behave towards non-disabled people in certain situations and that some of them would receive extra information to read and respond to on this subject. Each participant was then randomly assigned to one of three conditions. In the disability-focused and personality-focused conditions, participants were given a bogus newspaper article citing research into how non-disabled and physically disabled people interact and were then required to respond to a number of brief statements that acted as manipulation checks. Conversely, those in the control condition were instead taken to the beginning of the survey immediately after giving consent. After beginning the questionnaire, participants were shown a vignette depicting an interaction with a non-disabled person and asked to answer a series of items imagining how they would respond. A second vignette was

then presented along with the same items and instructions. Participants received a full written debriefing after completing all stages of the questionnaire.

Materials

Article. One of two articles, ostensibly from a popular U.K. newspaper's (The Guardian) website, was presented to participants in the disability-focused and personality-focused conditions (see Appendix C). Both articles were entitled "Does physical appearance count?" but critical content in each varied.

The first article, used in the *disability-focused* condition, referred to research that suggested non-disabled people found it difficult to ignore physically disabled people's impairments during interactions with them. In the outlined research, participants were told that a group of non-disabled people and physically disabled people were paired up randomly and asked to have a conversation about their personalities and interests. When tested two weeks later, the non-disabled participants were found to remember several details about the physical disability of their interaction partner, but very little of the conversation itself. A further study was then mentioned in which non-disabled people were found to group physically disabled people together based on their impairment, rather than based on their personalities and social interests. The article ended with a brief comment from the lead researcher designed to help participants process the main message of the manipulation. Specifically, participants read that "The upshot of this research is that physically disabled people are likely to experience situations where they are defined by their disability rather than other aspects of their personality".

The second of these articles, used in the *personality-focused* condition, referred to the same research but altered the results so that findings suggested non-disabled people found it easy to ignore physically disabled people's impairments during interactions.

For example, the lead researcher's comment was now that "The upshot of this research is that physically disabled people are unlikely to experience situations where they are defined by their disability rather than other aspects of their personality". Full details of the article content and layout can be found in Appendix C.

Vignettes. One of the challenges of this study was to provide participants with concrete contexts to respond to without exposing them to actual experiences of stigmatisation. For this reason vignettes were used. Vignettes are a commonly used method in social science research to produce more reliable participant responses (C. S. Alexander & Becker, 1978) and are generally considered powerful and adaptable tools for experimental survey research (Atzmüller & Steiner, 2010).

Two vignettes were presented. The first vignette (V1) was work-focused and asked participants to imagine starting a new job and meeting new non-disabled colleagues for the first time. However, the participant encounters a broken lift and subsequently arrives late to meet these colleagues due to their difficulty in climbing the stairs.

The second vignette (V2) was social-focused and asked participants to imagine meeting an attractive non-disabled person in a coffee shop who may not have noticed their impairment. At some point the participant has to go to the bathroom, revealing the full extent of their physical disability, before returning to continue the conversation.

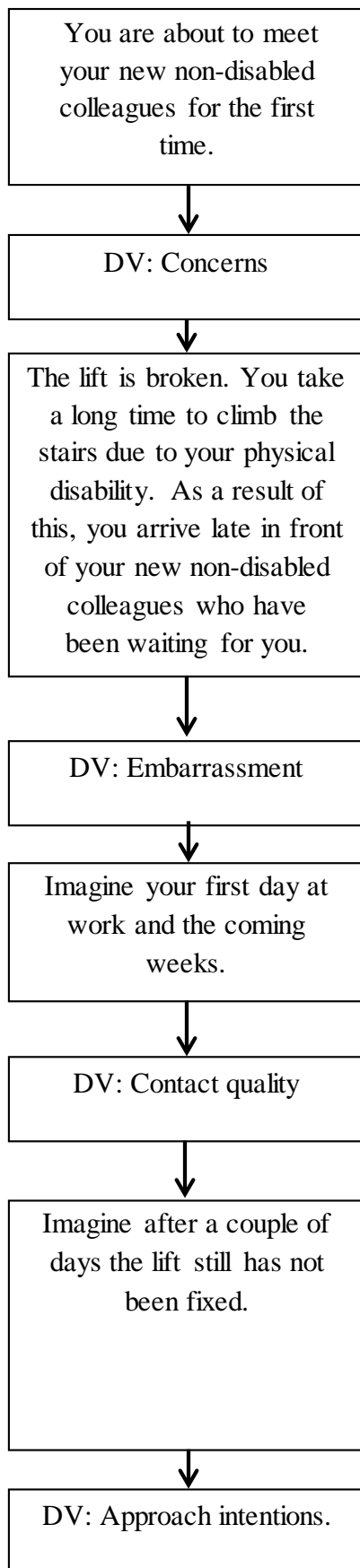
Both vignettes were structured to represent common experiences that physically disabled people have when interacting with non-disabled people (see Study 1). In the work-focused vignette, the participant faces exclusion (Kitchin, 1998) and being seen as incompetent by their colleagues (Nario-Redmond, 2010) due to access issues. In the social-focused vignette, the participant faces a dilemma of self-presentation when they are suddenly unable to hide or minimise their disability (Frank, 1988; Goffman, 1963).

Both vignettes recall the wider common experiences of being different and not belonging (Reeve, 2012).

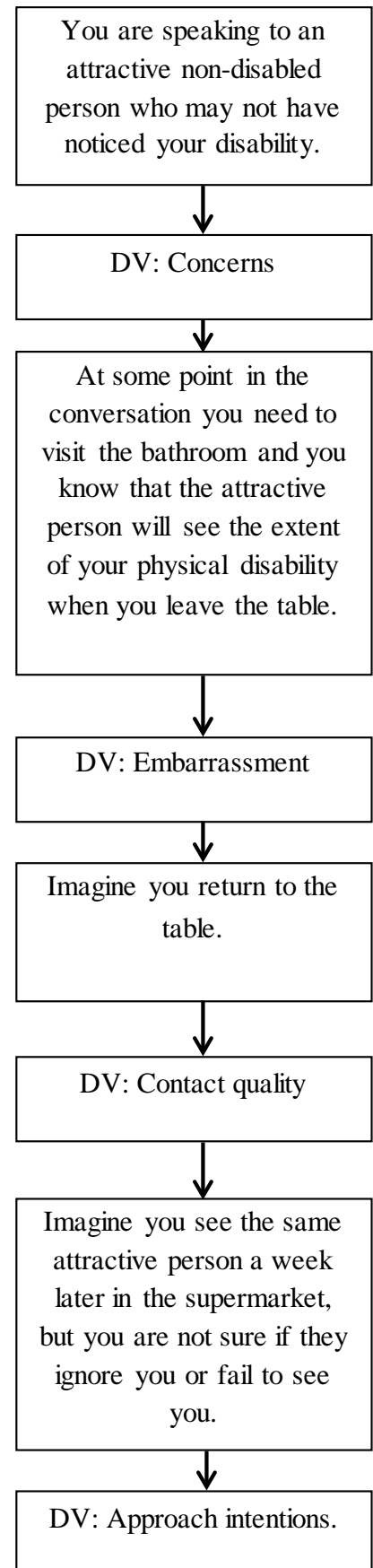
The content of each vignette and presentation order of the dependent measures can be seen in Figure 2.

Figure 2. Vignette content and presentation order of dependent measures.

Vignette 1: Work



Vignette 2: Social



Manipulation checks

Article content. Participants in the disability-focused and personality-focused conditions had to answer four questions regarding the content of the article that they read to ensure that they had read and understood the content of the article. Two of these statements referred to physical disability as the focal point for non-disabled people during interactions (e.g., “The research...found that non-disabled people tend to judge physically disabled people based on their physical disability”). The remaining two questions referred to personality characteristics as the focal point for non-disabled people during interactions (e.g., “The research...found that non-disabled people tend to judge physically disabled people based on their personalities and interests.”). The latter two questions were reverse coded so that high scores indicated perceived content specifying physical disability as the focal point for interactions.

Agreement. Participants were asked how much they agreed with the findings of the research article. They responded to a single item (1 = *Not at all*, 9 = *Very much so*).

Concerns. Concerns over interacting with non-disabled people were measured with four items for each vignette (1 = *Not at all*, 9 = *Very much so*). These items were generated based on the qualitative data derived from Study 1 (I would be...“worried that my physical disability is the only thing my new colleagues will notice about me”, “worried that my new colleagues will treat me differently because of my physical disability”, “worried that my new colleagues will not be able to see past my physical disability”, “worried that my new colleagues will judge me because of my physical disability”). Items were identical apart from altering the target out-group between vignettes (i.e. from colleagues to an attractive person). Scores were averaged both separately for each vignette and together to create an overall score. High scores on the scale indicated a

greater degree of concerns over interacting with non-disabled people (V1 α =.93, V2 α =.94, Total Vx α = .92).

Dependent measures

Participants responded to each item using a nine-point Likert scale (1 = *Not at all*, 9 = *Very much so*) for all measures.

Embarrassment. Embarrassment was measured with four items for each vignette.

Participants were asked how “awkward”, “embarrassed”, “uncomfortable” and “incompetent” they felt in response to each situation. These were derived from commonly defined epiphenomena of embarrassment (see Modigliani, 1968; R. S. Miller, 1996; Parrot & Smith, 1991). Scores were averaged both separately for each vignette and together to create an overall mean score. High scores indicated greater levels of embarrassment in response to each vignette (V1 α = .90, V2 α = .92, Vx α = .91).

Contact quality. Contact quality was measured with seven generated items, with participants being asked to rate the contact quality they imagined experiencing in response to each vignette. Although there are several contact quality measures in existence (e.g., R. Brown et al., 2007; Islam & Hewstone, 1993), these were deemed too generic for use with these rich, context-driven scenarios. Specifically, participants were asked to what extent they felt able to be: “relaxed”, “motivated to get to know”, “able to talk freely with”, “enjoy the company of”, “discuss limitations of [their] physical disability”, “share details of [their] physical disability” and “share personal details” with the non-disabled person(s) specified in the vignette. Scores were averaged both separately for each vignette and together to create an overall mean score. High scores

indicated greater reported contact quality in each vignette (V1 $\alpha = .87$, V2 $\alpha = .91$, Vx $\alpha = .93$).

Approach intentions. Approach intentions were measured with four items for each vignette. In the first vignette, these related to the issue of a broken lift in the workplace that appears to have been ignored. Participants were asked if they would “avoid raising the subject again [reverse-coded]”, “arrive earlier to get to the office on time [reverse-coded]”, “confront the management about the broken lift” and “ask the management to explain the delay in fixing the lift”. Similarly, in the second vignette, participants are told that they see the attractive non-disabled person a week later in the supermarket, but this person appears to ignore or fail to see them. Participants were asked to gauge the extent they would “avoid [reverse-coded]”, “keep...distance from [reverse-coded]”, “confront”, or “ask them to explain their behavior”. These items were adapted from Mackie et al. (2000). Scores were averaged both separately for each vignette and together to create an overall mean score. High scores indicated greater intentions of contact with the non-disabled people specified in each vignette (V1 $\alpha = .66$, V2 $\alpha = .75$, Vx $\alpha = .73$).

Contact quantity. Existing contact quantity with non-disabled people was measured using three generated items based on those used in Islam and Hewstone (1993). Participants were asked to what extent they mixed with non-disabled people “...in the area you live in”, “...when socialising”, and “...when engaging with leisure activities”. Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact ($\alpha = .88$).

Personal experience. A single generated item to measure existing personal experience was presented at the end of each vignette. Participants were asked “have you personally

experienced a similar situation to the one described?” High scores indicated more extensive personal experience with the events detailed in the vignette.

Demographics. Demographic information was also collected, including age, gender and severity of disability (1 = *Not at all severe*, 9 = *Very severe*).

Results

Preliminary analyses

Table 1 shows the correlations between the measured variables and the concerns manipulation.

Table 1. Correlations between all measured variables and the concerns manipulation.

Variable	1	2	3	4
Work-focused vignette (V1)				
1. Concerns	-			
2. Embarrassment	.29***	-		
3. Contact quality	.081	-.20*	-	
4. Approach intentions	-.15	-.32***	.34***	-
Mean (SD)	5.77 (2.28)	5.49 (2.43)	6.06 (1.58)	6.14 (1.78)
Social-focused vignette (V2)				
1. Concerns	-			
2. Embarrassment	.22**	-		
3. Contact quality	-.03	-.47***	-	
4. Approach intentions	-.15	-.45***	.58***	-
Mean (SD)	6.14 (2.28)	5.12 (2.43)	5.90 (1.81)	4.30 (1.86)
General				
1. Concerns (Vx)	-			
2. Contact quantity	-.04	-		
3. Personal experience (V1)	-.10	.15	-	
4. Personal experience (V2)	-.06	.08	.34***	-
Mean (SD)	5.94 (2.04)	7.25 (2.09)	4.56 (2.80)	4.51 (2.09)

Note. Concerns was coded 1 = control, 2 = personality-focused, 3 = disability-focused. $N = 142$, * = $p < .05$, ** $p < .01$, *** $p < .001$. Means and standard deviations of concerns are given for the appropriate scale manipulation checks.

Note that concerns and embarrassment are only weakly positively related in both vignettes. This lends confidence to the proposal by this thesis that they are distinct constructs.

Manipulation checks

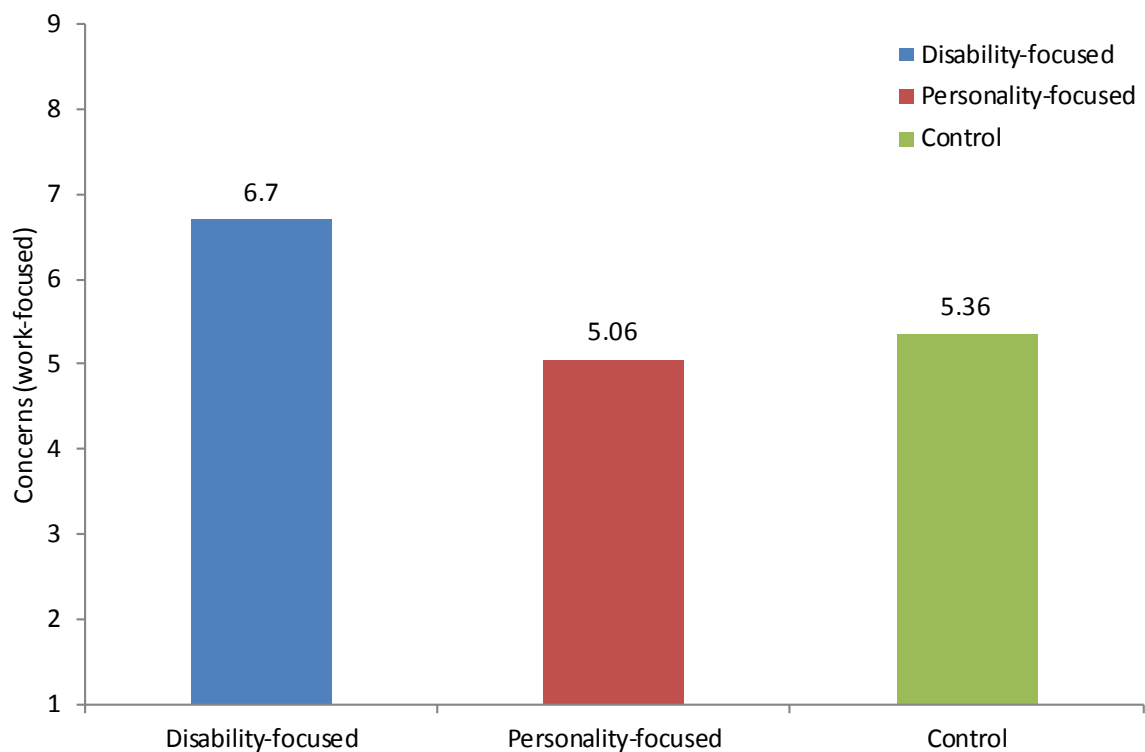
Article content. An independent samples *t*-test was carried out to examine whether participants in the disability- focused vs. personality-focused conditions correctly understood the article content. As expected, those in the disability-focused condition agreed that non-disabled people focused largely on disability during interactions ($M = 7.75$, $SD = 1.37$), significantly more than those in the personality-focused condition, ($M = 3.15$, $SD = 1.85$), $t(50.78) = 11.90$, $p < .001$, $d = 2.83$.

Agreement. Mean level of agreement with the presented articles was above the mid-point of the scale ($M = 6.13$, $SD = 2.14$), suggesting participants believed the material that they were presented with. An independent samples *t*-test was performed to compare mean levels of agreement between the disability-focused and personality-focused conditions. A significant difference was found, $t(89) = 5.97$, $p < .001$, $d = 1.26$. Specifically, participants in the disability-focused condition ($M = 7.12$, $SD = 1.77$) agreed significantly more with the findings of the research article than did those in the personality-focused condition ($M = 4.82$, $SD = 1.88$). Though those in the personality-focused condition agreed significantly less with the presented article, it is important to note that their levels of agreement are still above the scale mid-point, suggesting both articles were believable. Still, the implication of this result is that the article used in the personality-focused condition did not approximate the experiences of physically disabled people as well as the one used in the disability-focused condition.

Concerns. Two one-way ANOVA's were conducted to investigate differences in concerns within each vignette between the experimental conditions.¹⁶

The analyses revealed that the difference in concerns within the work-focused vignette was significant, $F(2, 140) = 7.78, p = .001, \text{partial } \eta^2 = .100$. Post-hoc Bonferroni comparisons suggested that participants in the disability-focused condition were significantly more worried about interacting with their new non-disabled colleagues ($M = 6.70, SD = 1.97$) than those in the personality-focused condition ($M = 5.06, SD = 2.24, p = .001$) and the control condition ($M = 5.36, SD = 2.33, p = .006$). However, no differences were observed between the personality-focused condition and the control condition ($p = 1.00$).

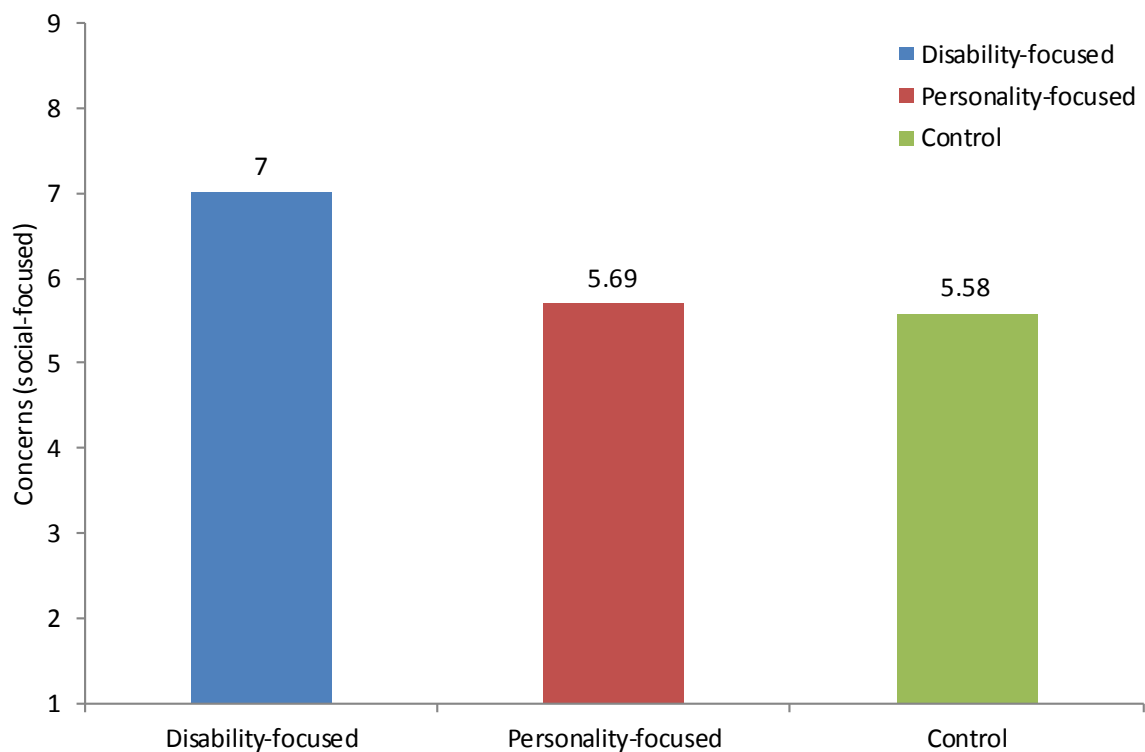
Figure 3. Difference in reported concerns within the work-focused vignette.



¹⁶ Bonferroni comparisons were favored as a post-hoc test because they provide the best level of control against a Type 1 error rate (Field, 2009).

Differences in concerns within the social-focused vignette also varied according to condition, $F(2, 138) = 6.48, p = .002$, partial $\eta^2 = .086$. Post-hoc Bonferroni comparisons suggested that participants in the disability-focused condition were significantly more worried about interacting with the non-disabled stranger ($M = 7.00, SD = 1.89$) than those in the personality-focused condition ($M = 5.69, SD = 2.14, p = .016$) and the control condition ($M = 5.58, SD = 2.52, p = .004$). Moreover, in line with the work-focused vignette, no differences were observed between the personality-focused condition and the control condition ($p = 1.00$).

Figure 4. Difference in reported concerns within the social-focused condition.



Taken together, these findings suggest that the experimental manipulation was successful, with participants in the disability-focused condition holding significantly more concerns than those in the personality-focused and control conditions within both vignettes. Given that there are no significant differences between the latter two

conditions, the observed effects are likely due to the disability-focused condition inducing concerns, rather than the success of the personality-focused condition in putting participants at ease.

The effect of concerns within each vignette

In the next section, the effect of the experimental manipulation on embarrassment, contact quality and approach intentions is examined within each vignette.

Analytic strategy. A series of MANCOVA's were conducted with matched pairs of each dependent variable (e.g., V1 embarrassment, V2 embarrassment) and experimental condition as the independent variable. Planned contrasts were used to compare the disability-focused condition to the personality-focused and the control condition to test hypotheses formulated a priori (see Field, 2009). Planned contrasts were not carried out between the control and personality-focused condition as there were no observed differences on the manipulation check. Existing personal experience of each vignette and contact quantity were added as covariates to control for their influence within each model (noted below where significant).¹⁷

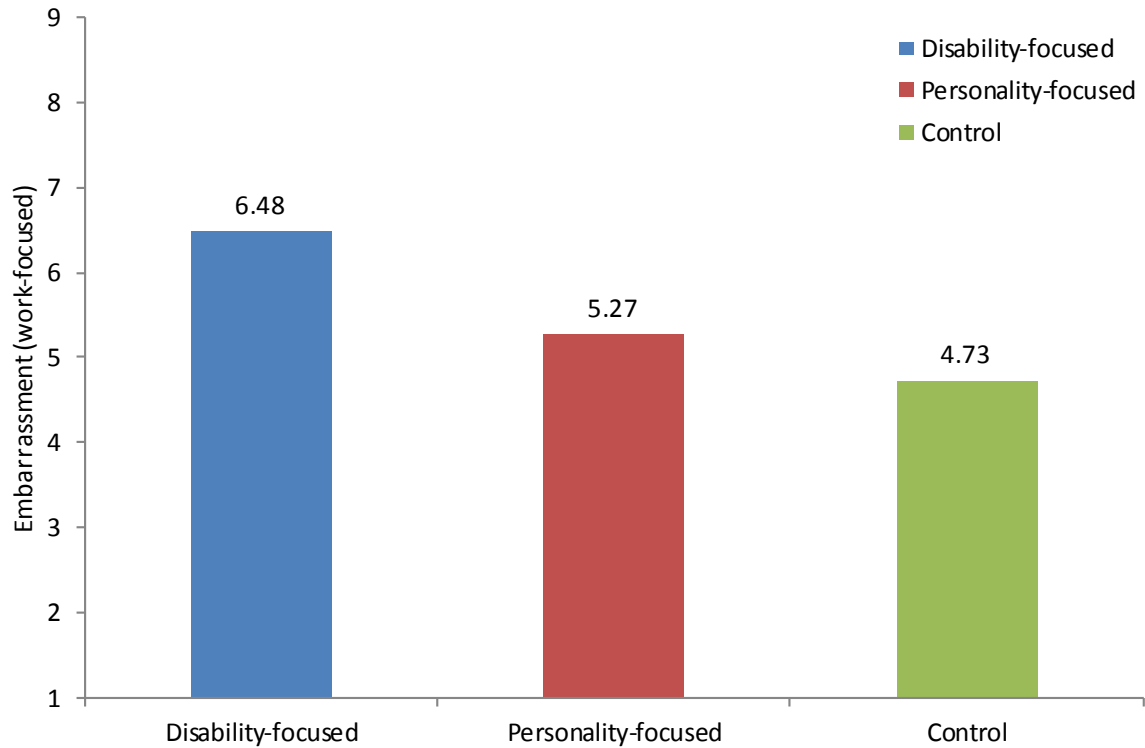
Embarrassment. There was a significant multivariate difference in embarrassment ratings based on experimental condition, $F(4, 262) = 3.55$, Wilks' $\lambda = .900$, $p = .008$, partial $\eta^2 = .052$.

Specifically, within the work-focused vignette, those in the disability focused condition ($M = 6.48$, $SE = .328$) were significantly more embarrassed than those in the

¹⁷ Demographics (i.e. age, gender, severity of disability), while possible covariates, were not added to the model because of the presence of missing data on these variables ($N = 20$), leading to large inequalities in condition sizes, which can unduly influence multivariate models (Field, 2009). Wilks' lambda (λ) is the reported criterion for statistical inference, as recommended by Tabachnick and Fidell (2001).

personality-focused condition ($M = 5.27, SE = .383, p = .018$) and the control condition ($M = 4.73, SE = .341, p < .001$), $F(2, 132) = 7.19, p = .001$, partial $\eta^2 = .09$.

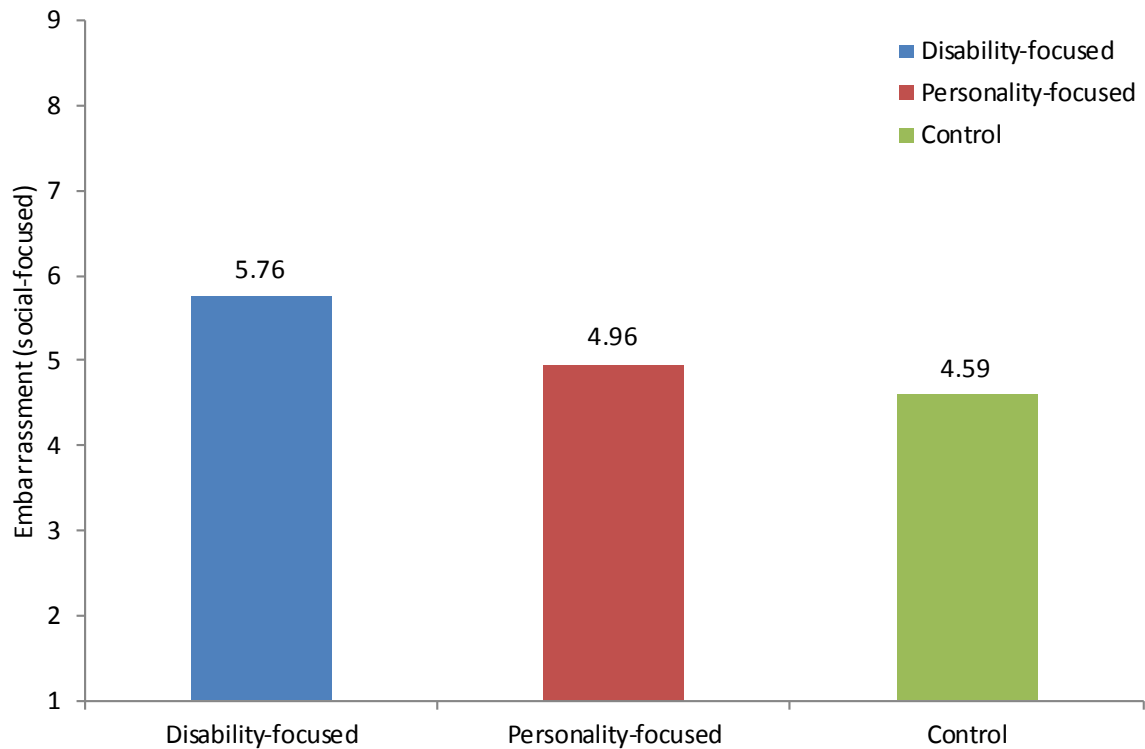
Figure 5. Difference in reported embarrassment within the work-focused vignette.



Differences in embarrassment within the social-focused vignette were significant in the same direction. Specifically, participants in the disability-focused condition were higher in embarrassment ($M = 5.76, SE = .321$) than those in the control condition ($M = 4.59, SE = .333, p = .013$), but not the personality-focused condition ($M = 4.96, SE = .375, p = .109$), $F(2, 138) = 3.31, p = .040$, partial $\eta^2 = .048$.¹⁸

¹⁸ Contact quantity was the only covariate to exert a multivariate effect within the model, $F(2, 131) = 5.55, Wilks' \lambda = .922, p = .005$, partial $\eta^2 = .078$. Further inspection revealed that the covariates influence lay within the social-focused vignette, $F(2, 132) = 10.11, p = .002$, partial $\eta^2 = .071$.

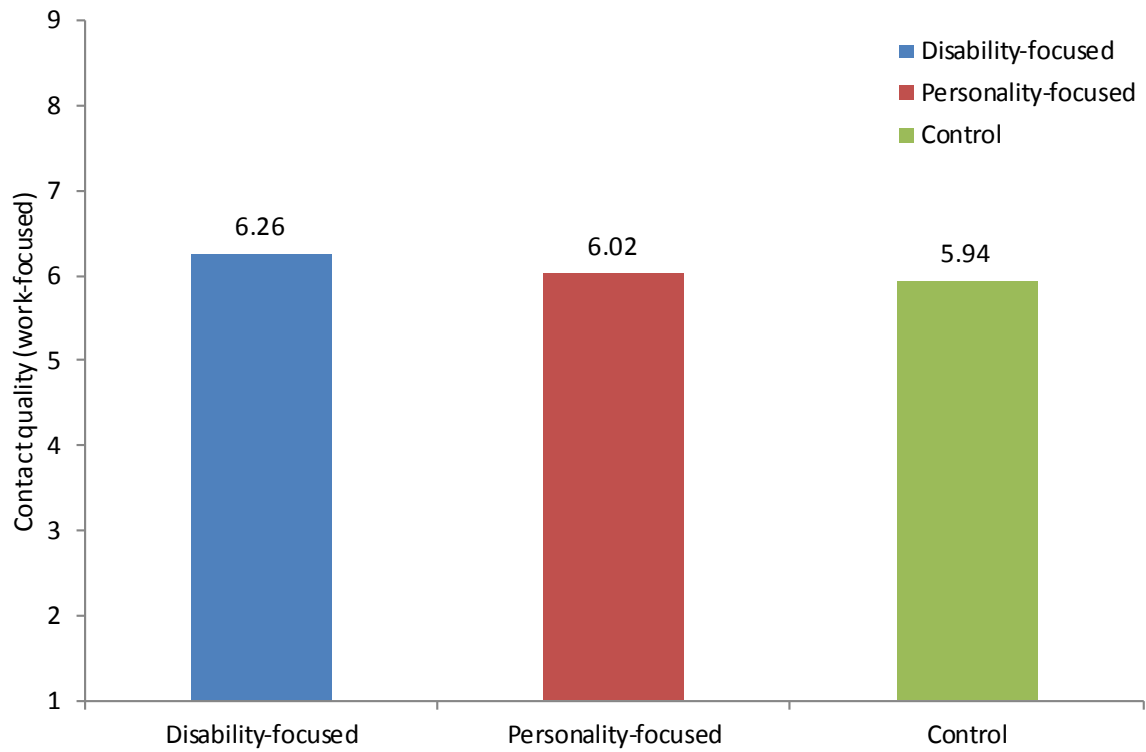
Figure 6. Difference in reported embarrassment within the social-focused vignette.



Contact quality. No significant multivariate differences in contact quality ratings were found between the experimental conditions, $F(4, 264) = .896$, Wilks' $\lambda = .973$, $p = .467$, partial $\eta^2 = .013$.

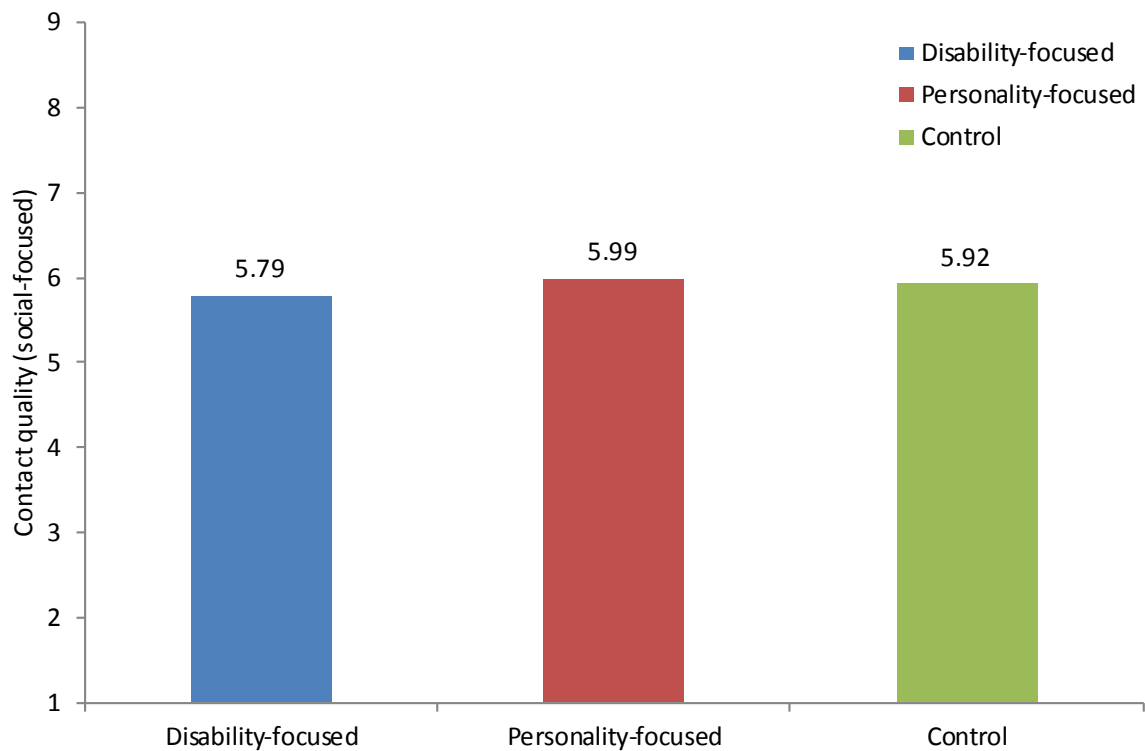
Within the work-focused vignette, reported contact quality in the disability-focused condition ($M = 6.26$, $SE = .219$) did not significantly differ from the personality-focused ($M = 6.02$, $SE = .256$) or control condition ($M = 5.94$, $SE = .226$), $F(2, 133) = .542$, $p = .583$, partial $\eta^2 = .008$.

Figure 7. Difference in reported contact quality within the work-focused vignette.



Similarly, within the social-focused vignette, reported contact quality in the disability-focused condition ($M = 5.79$, $SE = .254$) was not significantly different from the personality-focused ($M = 5.99$, $SE = .297$) or control conditions ($M = 5.92$, $SE = .262$), $F(2, 133) = .128$, $p = .880$, partial $\eta^2 = .002$.

Figure 8. Difference in reported contact quality within the social-focused vignette.



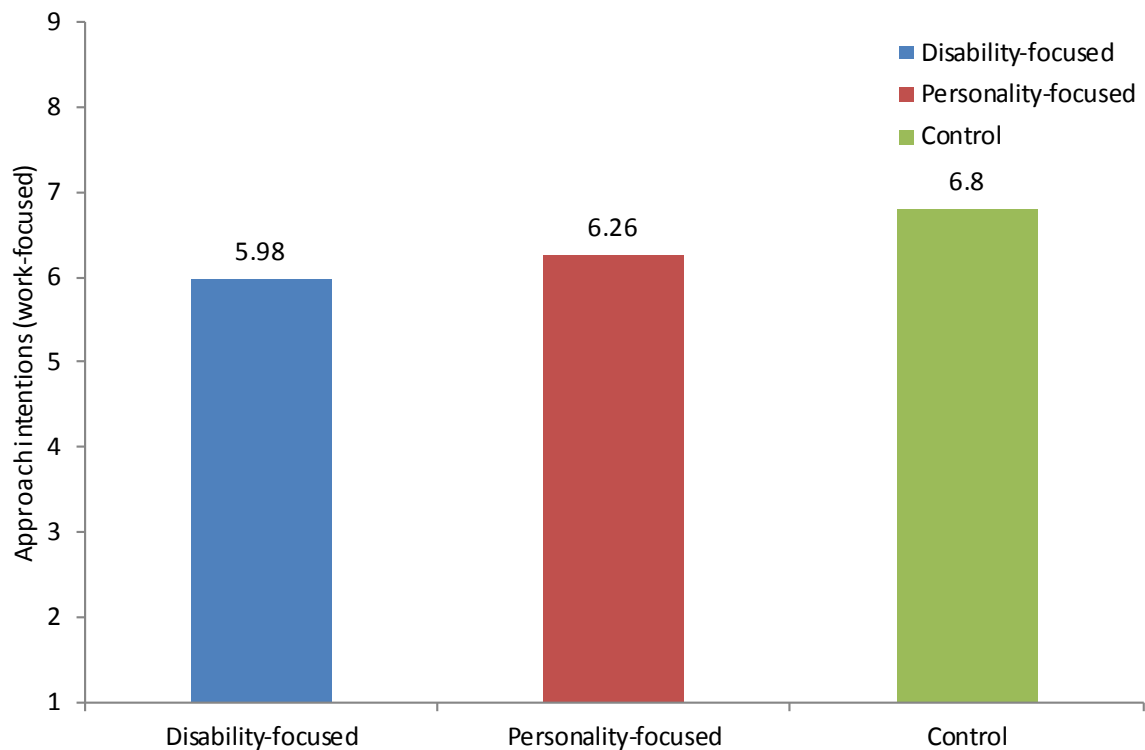
Approach intentions.¹⁹ No significant multivariate difference in approach intentions was found between the experimental conditions, $F(4, 220) = 1.95$, Pillai's $V = .068$, $p = .103$, partial $\eta^2 = .034$, with existing contact quantity and personal experience controlled for.

Within the work-focused vignette, the omnibus effect of the manipulation on approach intentions was non-significant, $F(2, 110) = 2.17$, $p = .120$, partial $\eta^2 = .038$. However, inspection of the contrasts revealed that while intentions did not differ between the disability-focused condition ($M = 5.98$, $SE = .279$) compared to the personality-focused

¹⁹ Unlike previous models, Box's M was found to be significant, suggesting the assumption of equality of covariances had not been met. As certain test statistics, like Pillai's Trace (V) are robust to violations when group sample sizes are equal, one recommendation is to randomly delete cases until condition sizes are matched (Field, 2009). Analyses of this variable therefore proceeded with 40 cases in each condition.

condition ($M = 6.26$, $SE = .282$, $p = .483$), those in the disability-focused condition did report significantly lower approach intentions than those in the control condition ($M = 6.80$, $SE = .280$, $p = .043$).

Figure 9. Difference in reported approach intentions within the work-focused vignette.

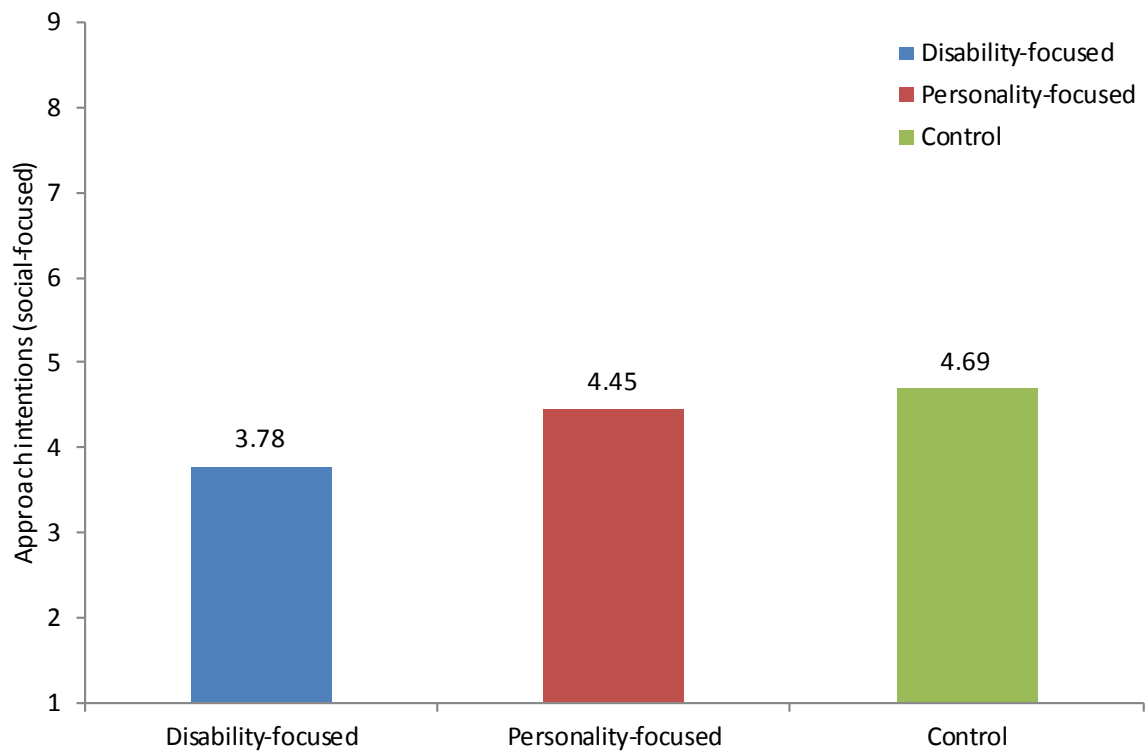


Within the social-focused vignette, there was a marginally significant effect of the manipulation on approach intentions, $F(2, 110) = 2.67$, $p = .074$, partial $\eta^2 = .046$.

While there was no observed difference between the disability-focused ($M = 3.78$, $SE = .285$) and personality-focused conditions ($M = 4.45$, $SE = .289$, $p = .104$), those in the disability-focused condition again reported significantly lower approach intentions than those in the control condition ($M = 4.69$, $SE = .286$, $p = .028$).²⁰

²⁰ The assumption of equality of error variance (Levene's) was violated in this case. Though F tests are generally thought to be robust to violations of this type (Field, 2009), these findings should thus be treated with requisite caution.

Figure 10. Difference in reported approach intentions within the social-focused vignette.



In summary, effects of the experimental manipulation were observed on embarrassment and approach intentions. Specifically, planned contrasts revealed that, within both vignettes, participants in the disability-focused condition were higher in embarrassment and lower in approach intentions than those in the control condition. Additionally, within the work-focused vignette, those in the disability-focused condition were significantly higher in embarrassment than those in the personality-focused condition. No effects of the experimental manipulation were observed on reported contact quality.²¹

Mediation analyses

Analytic strategy. PROCESS (Hayes, 2013) was used to test two models. In Model 1, the following mediational sequence was tested using the average scores across both

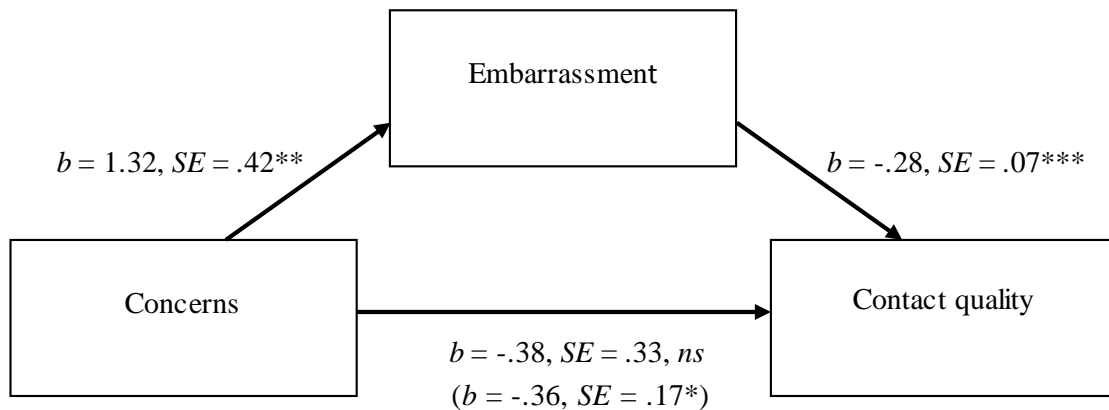
²¹ The effect of the experimental manipulation was also tested across both vignettes (i.e. using the average scores). As might be expected, these findings supported those presented above.

vignettes: a) that concerns might increase embarrassment and b) that embarrassment might lead to reduced contact quality. In this model, the experimental manipulation (disability-focused vs. control) was the independent variable, while contact quality was the dependent variable. Embarrassment was the proposed mediator. Model 2 was identical to this but approach intentions replaced contact quality as the dependent variable.

In both models, the contrast between the personality-focused and control condition was added as a covariate (see Shnabel, Halabi & Noor, 2013, for a similar procedure). Like previous analyses, existing personal experience and contact quantity were included as covariates. Additionally, age, gender (dummy coded, 0 = Male, 1 = Female), and severity of disability were added as further controls (as missing data was unlikely to influence the analyses in this case).

Contact quality (Model 1). Concerns were found to positively predict embarrassment, while embarrassment negatively predicted contact quality. Importantly, the analysis revealed that embarrassment accounted for the relationship between concerns and contact quality (95% CI [-0.76, -0.11]; see Figure 11). However, note that a *total effect* of concerns on contact quality was absent, $b = .02$, $SE = .33$, $p = .960$, suggesting that embarrassment exerts an *indirect effect* on the relationship (see below).

Figure 11. Model 1 (concerns-embarrassment-contact quality).

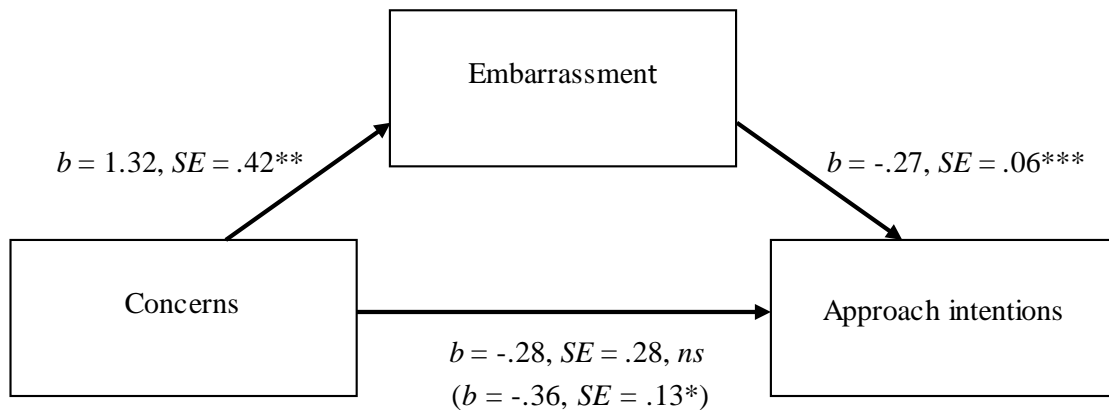


Note. The total effect of concerns on contact quality is non-significant, $b = .02$, $SE = .33$, $p = .960$, indicating that this is an example of indirect mediation. The indirect effect (i.e. the effect of concerns on contact quality through embarrassment) is given in parentheses. $N = 124$, due to twenty missing values for severity, age and gender, $*p < .05$, $**p < .01$, $***p < .001$.²²

Approach intentions (Model 2). The model showed that embarrassment negatively predicted approach intentions. Further, it was found to mediate between concerns and approach intentions (95% CI [-0.69, -0.15]; see Figure 12). In addition, a *total effect* of concerns on approach intentions was observed, $b = -.64$, $SE = .29$, $p = .031$, suggesting that embarrassment exerts a *direct effect* in this case.

²² Of the covariates, only gender, $b = 1.61$, $SE = .39$, $p < .001$, and contact quantity, $b = -.19$, $SE = .09$, $p = .040$, significantly influenced path *a* (concerns-embarrassment) while gender, $b = -.65$, $SE = .31$, $p = .041$, significantly influenced path *b* (embarrassment-contact quality).

Figure 12. Model 2 (concerns-embarrassment-approach intentions).



Note. The total effect of concerns on approach intentions is significant, $b = -.64$, $SE = .29$, $p = .031$, indicating that this is an example of full mediation. The indirect effect (i.e. the effect of concerns on approach intentions through embarrassment) is given in parentheses. $N = 124$, due to twenty missing values for severity, age and gender, $*p < .05$, $**p < .01$, $***p < .001$.²³

Comparing the models, it can be seen that there is also an absence of a *total effect* of concerns on the outcome variable (i.e. an overall link between the two) in Model 1. While the presence of a total effect is no longer a necessary criterion for mediational analysis (cf. Baron & Kenny, 1986), some authors (e.g., Hayes, 2009, Mathieu & Taylor, 2006) advise making the distinct between full mediation and ‘indirect effects’. Following this criteria, the observed findings in Model 1 are an example of *indirect effects*, (i.e. concerns and contact quality are not related directly, but are linked through embarrassment) while those in Model 2 are an example of (full) *mediation* (i.e. a significant relationship exists between concerns and approach intentions that is accounted for fully by embarrassment).

²³ Of the covariates, only gender, $b = 1.61$, $SE = .39$, $p < .001$, and contact quantity, $b = -.19$, $SE = .09$, $p = .040$, significantly influenced path *a* (concerns-embarrassment) while gender, $b = -.65$, $SE = .31$, $p = .041$, significantly influenced path *b* (embarrassment-contact quality).

Discussion

The objective of the present study was to investigate the impact of psychological concerns within a physically disabled sample on embarrassment, contact quality and approach intentions towards non-disabled people.

The experimental manipulation could be considered effective. Participants in the disability-focused condition reported increased levels of concerns when compared to those in the personality-focused and control conditions. Given that there were no significant differences between the latter two conditions, it can be assumed that this is a result of the disability-focused condition inducing concerns rather than the personality-focused condition putting participants at ease. Moreover, high levels of agreement with both articles (above the scale mid-point) suggest that participants found the manipulation believable, although perhaps the disability-focused condition was more representative of the experiences of the sample, given the lower levels of agreement observed with the personality-focused article.

An experimental effect was observed on embarrassment, with those participants who were higher in concerns reporting increased levels of embarrassment when compared to the control condition. These effects were consistent within each vignette. Additionally, within the work-focused vignette and on average, participants higher in concerns also reported more embarrassment than those in the personality-focused condition.

Within both vignettes, participants higher in concerns also reported reduced approach intentions, when compared to those in the control condition, but not the personality-focused condition.²⁴ Additionally, no experimental effects were observed on reported

²⁴ However, it should be noted that the overall multivariate effect on approach intentions was non-significant, while the univariate effect within in the work-focused and social-focused vignette was non

contact quality. Therefore, the findings of this experiment support H₁, but only partially support H₂.

Lastly, embarrassment was found to exert an indirect effect on the relationship between concerns and contact quality (Model 1) and mediate between concerns and approach intentions (Model 2) in the hypothesised directions. Thus, the causal links predicted by H₃ and H₄ were supported. However, due to the absence of a total relationship between concerns and contact quality, it should be noted that in Model 1, embarrassment is a linking mechanism rather than a mediator in the traditional sense (Hayes, 2009, Mathieu & Taylor, 2006). However, the causal links predicted by H₃ were supported

To conclude, the effectiveness of the concerns manipulation used in this experiment was encouraging. Yet, as has been noted, minority and majority groups can experience mixed interactions differently (see Devine & Vasquez, 1998; Hebl & Dovidio, 2005). Before probing the observed findings further, it is prudent to examine whether any effects exist within a non-disabled sample and if so, whether they are in the same direction as observed here.

marginally significant respectively. This is likely because differences were located only between the disability-focused and control conditions.

The effect of non-disabled people's psychological concerns on embarrassment, contact quality and approach intentions within vignette-based interactions (Study 3)

The objective of the next study was to investigate the impact of psychological concerns, held by non-disabled people, on embarrassment, contact quality and approach intentions towards the physically disabled.

Study 2 found that concerns held by physically disabled people in mixed interactions may lead to increased embarrassment and reduced approach intentions across different contact situations. While concerns did not impact contact quality directly, they were found to exert an indirect negative influence through embarrassment. The objective of the present study was to investigate the impact of concerns among non-disabled people. This is important as majority and minority group members may experience mixed interactions differently (Hebl & Dovidio, 2005; Shelton, 2000). For example, recall that Study 1 showed that, while non-disabled and physically disabled people both hold concerns about mixed interactions, the content of these worries is distinct for each group.

Specifically, in Study 1, non-disabled participants reported concerns that were related to their own behaviour and how it would be perceived when interacting with physically disabled people. This is consistent with existing research which suggests that members of majority groups often hold concerns about their actions when interacting with minorities (e.g., about appearing or being prejudiced; see Plant & Devine, 2003; Shelton, 2003).

Given the effectiveness of the experimental manipulation in the last study (i.e. in inducing concerns in the disability-focused vs. other conditions), it was adapted for use with a non-disabled sample by changing the article content to reflect these unique

concerns. The present study also utilised similar vignette-based interactions, but altered the events so that they were seen from a non-disabled person's perspective. This provided a useful degree of comparability between the studies.

The following hypotheses were tested:

H₁ Participants in whom concerns are induced will experience higher levels of embarrassment compared to those who are not induced to experience concerns. As discussed, embarrassment has been conceived as an affective response to committing a perceived social transgression (R. S. Miller, 1996). Moreover, extant literature suggests holding concerns about interacting with an out-group leads the perceiver to expect negative consequences for the self (e.g., W. G. Stephan, 2014). It is plausible that participants who hold concerns about their own behaviour will more readily believe that they have offended a physically disabled person (see also Vorauer, 2006, 2013).

Findings from Study 1 suggest three routes by which this could engender embarrassment among non-disabled people. Specifically, the emotion may arise due to the perception that the participant is the target of negative out-group evaluations, has failed to maintain a smooth public performance and/or has violated a situational or personal standard (see R. S. Miller, 1996).

H₂ Participants in whom concerns are induced will report reduced contact quality with physically disabled people compared to those who are not induced to experience concerns. Specifically, the negative affect generated by concerns may transfer directly to participants' contact quality perceptions (see R. Brown & Hewstone, 2005), though this was not observed in the last study. Additionally, holding concerns may lead to other negative consequences, such as embarrassment, which may impact contact quality (see H₄).

H₃ Participants in whom concerns are induced will report reduced approach intentions towards physically disabled people compared to those who are not induced to experience concerns. As stated, this may happen due to negative affect transfer. However, non-disabled participants may also face countervailing pressure to engage in these interactions due to a societal norm to be kind to the physically disabled. This may lead to “freezing” response and a consequent null effect (Greenland et al., 2012).

H₄ The link between concerns and contact quality will be mediated by embarrassment. Specifically, holding concerns about interacting with non-disabled people will increase embarrassment, which in turn will account for a reduction in contact quality. As previously, it is proposed that the negative affect generated by embarrassment may transfer to participants’ perceptions of the interaction. Taking the results of the last study into account, it is possible that this will be an indirect effect rather than “pure” mediation (see Mathieu & Taylor, 2006).

H₅ The negative affect generated by embarrassment may also account for the link between concerns and reduced approach intentions. That is, even in the event of an overall freezing response (i.e. a null total effect), concerns may exert an indirect effect on approach intentions through embarrassment.

Method

Participants

Four hundred and fifteen people took part in the study using the Amazon’s Mechanical Turk (M-Turk) website, 177 of whom were male and 277 of whom were female.

Participant age ranged from 18 to 73 ($M = 35.40$, $SD = 13.76$). 36 of these participants reported having a disability and were subsequently removed from the dataset. Of the remaining 379 participants, 110 reported having a close relationship with a physically

disabled person. The most common relationship reported was “Friend”, appearing in 40 cases.²⁵

The majority of the sample (92%) reported being American in origin. This is somewhat unsurprising given that American residency is required for use of M-Turk. However, it is also unproblematic. The USA and the UK have comparable disability rights movements and provision of welfare for disabled people, though there are divergences, for example, in accepted terminology (e.g., “handicapped”). Moreover, Nario-Redmond (2010) suggests that stereotypic beliefs about disabled people are global in their scope. Participants were also given a definition of physical disability to help standardize who they would imagine interacting with (see below).

Design

The present study comprised three between-subjects experimental conditions designed to vary the amount of concerns non-disabled people experience when interacting with physically disabled people (no knowledge x knowledge x control). Like the previous study, this was achieved by presenting bogus materials on the subject of these concerns. As Study 1 suggested that non-disabled people hold concerns about appearing prejudiced and not knowing how to behave towards physically disabled people, the no knowledge condition ($N = 146$) was designed to induce these concerns. This was compared to both a knowledge condition (designed to reduce concerns, $N = 129$) and a control condition ($N = 104$).

Procedure

Participants were recruited from Amazon’s Mechanical Turk (M-Turk) website. M-Turk is a relatively new crowdsourcing site which allows researchers to collect data quickly

²⁵ Independent samples *t*-tests were conducted to compare the *close relationship* group with the *no close relationship* group on the measures of interest. No significant differences were found.

and effectively. Members of the site complete tasks (e.g., surveys) for small monetary reimbursements (usually \$0.30-\$1.00). According to Buhrmester et al. (2011), M-Turk participants are more varied than both standard internet samples and standard student samples. Moreover, they suggest that the derived data is both reliable and unaffected by moderate variations in the amount of reimbursement given to participants. For these reasons M-Turk is considered a useful data collection tool within the present body of work.

After accessing the study details on the M-Turk platform, participants were told that the study investigated how non-disabled people behave towards physically disabled people in certain situations and that some of them would receive extra information to read and respond to on this subject. “Physical disability” was defined as “a physical impairment that has a substantial and long term adverse effect on the person's ability to perform normal day to day activities e.g., walking, eating, going shopping” (UK Equality Act 2010, p.6). Furthermore, the study was presented as specifically interested in attitudes towards people under 65 who possess a visible physical disability and who do not possess a mental or learning impairment (see Chapter 4). The remaining procedure was identical to that of the previous experiment. Each participant was given \$0.30 for completing the study.

Materials

Article. One of two articles were presented to participants in the no knowledge and knowledge conditions, utilising the same layout and format as the previous experiment (see Appendix C). Again, critical content in each was varied. Both articles were titled “Do non-disabled people know enough about physical disability?”. Participants in the *no knowledge* condition were told about research which suggested that non-disabled

people were not aware of appropriate ways to interact with physical disabled people. In the bogus study, researchers asked a group of non-disabled people to generate a list of inoffensive words to refer to physical disability along with reasons for their choices. However, when these words were presented to a group of physical disabled people they were rated as very offensive. Additionally, presenting the physically disabled people with reasons for the choices triggered further strong negative feelings among the group. The article ended with a quote from the main researcher, who asserted that “there are major gaps in the understanding of non-disabled people regarding socially appropriate ways to refer to physically disabled people”.

Similar to the previous experiment, the second article, used in the *knowledge* condition, referred to the same research but altered the results so that findings suggested non-disabled people had a good degree of knowledge about appropriate ways to refer to physically disabled people. Full details of article content and layout can be found in Appendix C.

Vignettes. Two vignettes were presented. These were created to be close counterparts to the interactions depicted in the previous study through outlining very similar situations from the non-disabled person’s perspective. Both vignettes tapped into a common experience for non-disabled people- that of not knowing how to behave towards physically disabled people (BT, 2011; Hebl et al., 2000).

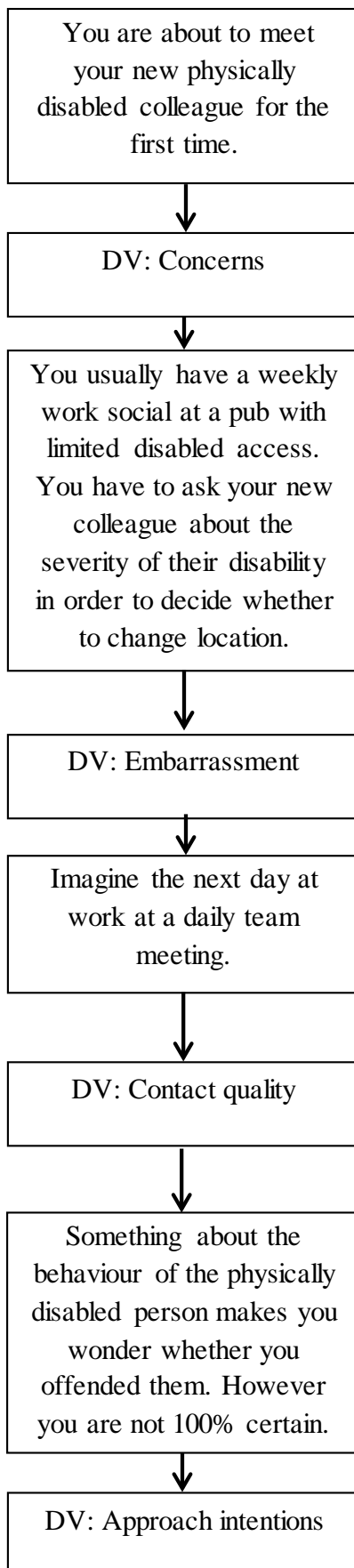
Specifically, the work-focused vignette (V1) asked participants to imagine a new physically disabled colleague is starting at their place of work. The team usually go for a weekly social at a pub with limited disabled access. The participant has to ask the new colleague about the severity of their disability in order to decide whether to change the location of the meeting.

The second vignette (V2) was social-focused and asked participants to imagine meeting a physically disabled person in a coffee shop. At some point in the conversation, this person indicates that they are attracted to the participant and invites them to have coffee again. However, the participant is not attracted to them and does not want to give the wrong impression.

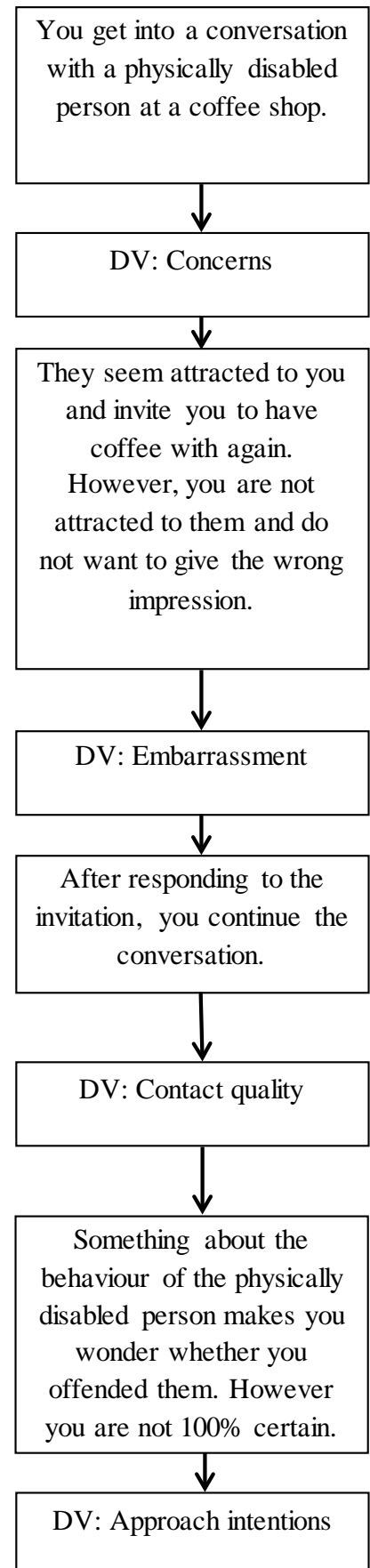
The presentation order of the dependent measures was very similar to that of the last experiment. The content of each vignette and this order can be seen from Figure 13.

Figure 13. Vignette content and presentation order of dependent measures.

Vignette 1: Work



Vignette 2: Social



Manipulation checks

Article content. Participants in the no knowledge and knowledge conditions had to answer four dichotomous questions regarding the content of the article that they read (1 = *Not at all*, 2 = *Very much so*). Two of these questions suggested non-disabled people had the ability to gauge what physically disabled people find offensive (e.g., The research mentioned that...“non-disabled people are aware of appropriate ways to refer to physically disabled people”), while two suggested the opposite (e.g., “...non-disabled people do not have a good idea of what physically disabled people find offensive”). Participants were excluded if they responded to any of the four statements incorrectly. Including more stringent criteria than Study 2 was a way to check that participants read the articles closely and thus were engaging with the experimental manipulation.

Agreement. Participants were asked how much they agreed with the findings of the research article. They responded to a single item (1 = *Not at all*, 9 = *Very much so*).

Concerns. Concerns over interacting with non-disabled people were measured with four items for each vignette (1 = *Not at all*, 9 = *Very much so*). Participants were asked if they would be worried about interacting with the person depicted in each vignette (e.g., “I would be worried about unintentionally treating the physically disabled person differently because of their disability”, “...worried about offending my new colleague by accident”, “...worried about not knowing how to correctly behave towards my new colleague”, “...worried about appearing prejudiced towards my new colleague”). Items were identical apart from altering the target group between vignettes. Scores were averaged both separately for each vignette and together to create an overall score. High scores on the scale indicated a greater degree of concern over interacting with the physically disabled person in each vignette (V1 $\alpha = .94$, V2 $\alpha = .95$, Vx $\alpha = .96$).

Dependent measures

Participants responded to each item using a nine-point Likert scale (1 = *Not at all*, 9 = *Very much so*) for all measures.

Embarrassment. As in the previous study, embarrassment was measured with four items for both vignettes. Participants were asked how “awkward”, “embarrassed”, “uncomfortable” and “incompetent” they felt in response to each situation (see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Scores were averaged both separately for each vignette and together to create an overall score. High scores indicated greater levels of embarrassment (V1 $\alpha = .93$, V2 $\alpha = .90$, Vx $\alpha = .92$).

Contact quality. Contact quality was measured with seven generated items for each vignette. These were very similar in content to the previous study. Specifically, participants were asked to what extent they felt: “relaxed in the presence of”, “motivated to get to know”, “able to talk freely with”, “enjoy the company of”, “able to openly discuss limitations of the [out-group’s] physical disability with”, “happy to find out more about the...physical disability [of]”, and “able to find out more about the personal life of” the physically disabled person specified in each vignette. Scores were averaged both separately for each vignette and together to create an overall mean score. High scores indicated greater reported contact quality in each vignette (V1 $\alpha = .92$, V2 $\alpha = .96$, Vx $\alpha = .94$).

Approach intentions. Approach intentions were measured with four items for each vignette. In both situations, participants were faced with the possibility of having offended the physically disabled person and were asked to what extent they would “avoid the subject [of the offence]”, “confront them over their behavior” or “ask them to explain their behavior” (Mackie et al., 2000). Additionally, in vignette 1, participants

were asked if they would “try to think of an excuse to leave the meeting early”. In vignette 2, they instead asked if they would “try to end the conversation as soon as possible”. Scores were averaged both separately for each vignette and together to create an overall mean score. High scores indicated greater approach intentions with the non-disabled people specified in each vignette (V1 $\alpha = .63$, V2 $\alpha = .77$, Vx $\alpha = .83$).

Contact quantity. Like the previous study, existing contact quantity with physically disabled people was measured using three generated items. Participants were asked to what extent they mixed with physically disabled people “...in the area you live in”, “...when socialising”, and “...when engaging with leisure activities”. Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact ($\alpha = .90$)

Embarrassability. A three-item scale was included to measure embarrassment as a stable personality trait. Specifically, participants were asked whether they often felt “easily embarrassed regardless of where I am and what I do”, “anxious to make a positive impression on others” and “mortified over making minor embarrassing mistakes”. These items were adapted from Kelly and Jones (1997). Items were averaged to form a single scale, with high scores indicating greater levels of embarrassability ($\alpha = .73$).

Personal experience. As before, a single item to measure existing personal experience was presented at the end of each vignette. Participants were asked “have you personally experienced a similar situation to the one described?”. High scores indicated more extensive personal experience with the events detailed in the vignette.

Demographics. Demographic information (e.g., age, gender) was also collected from participants.

Results

Preliminary analyses

Table 2 shows the correlations between the measured variables and the concerns manipulation.

Table 2. Correlations between all measured variables and the concerns manipulation.

Variable	1	2	3	4	5
Work-focused vignette (V1)					
1. Concerns	-				
2. Embarrassment	.02	-			
3. Contact quality	-.10	-.46***	-		
4. Approach intentions	-.02	-.37***	.33***	-	
Mean (SD)	4.49 (2.49)	5.18 (2.33)	6.15 (1.68)	5.19 (1.66)	
Social-focused vignette (V2)					
1. Concerns	-				
2. Embarrassment	.03	-			
3. Contact quality	-.06	-.47***	-		
4. Approach intentions	-.07	-.49***	.50***	-	
Mean (SD)	3.96 (2.42)	5.33 (2.25)	5.08 (2.09)	4.44 (2.00)	
General					
1. Concerns (Vx)	-				
2. Contact quantity	-.02	-			
3. Embarrassability	.01	-.01	-		
4. Personal experience (V1)	-.01	.36***	-.01	-	
5. Personal experience (V2)	.01	.39***	.03	.53***	-
Mean (SD)	4.22 (2.34)	4.07 (2.31)	5.21 (2.01)	2.75 (2.18)	2.58 (2.27)

Note. Concerns was coded 1 = control, 2 = knowledge, 3 = no knowledge. $N = 379$, * = $p < .05$, ** $p < .01$, *** $p < .001$. Means and standard deviations of concerns are given for the appropriate scale manipulation checks.

Note that the correlations between embarrassability and embarrassment within the work-focused vignette, $r(379) = .44$, and the social-focused vignette, $r(379) = .41$ were only moderate in size, suggesting a distinction between situational and trait embarrassment.

Manipulation checks

Article content. Participants were excluded if they answered incorrectly to any one of the four dichotomous questions. As a consequence, 74 participants were excluded from further analyses, leaving 305 in total (No knowledge $N = 109$, knowledge $N = 92$, control $N = 104$).

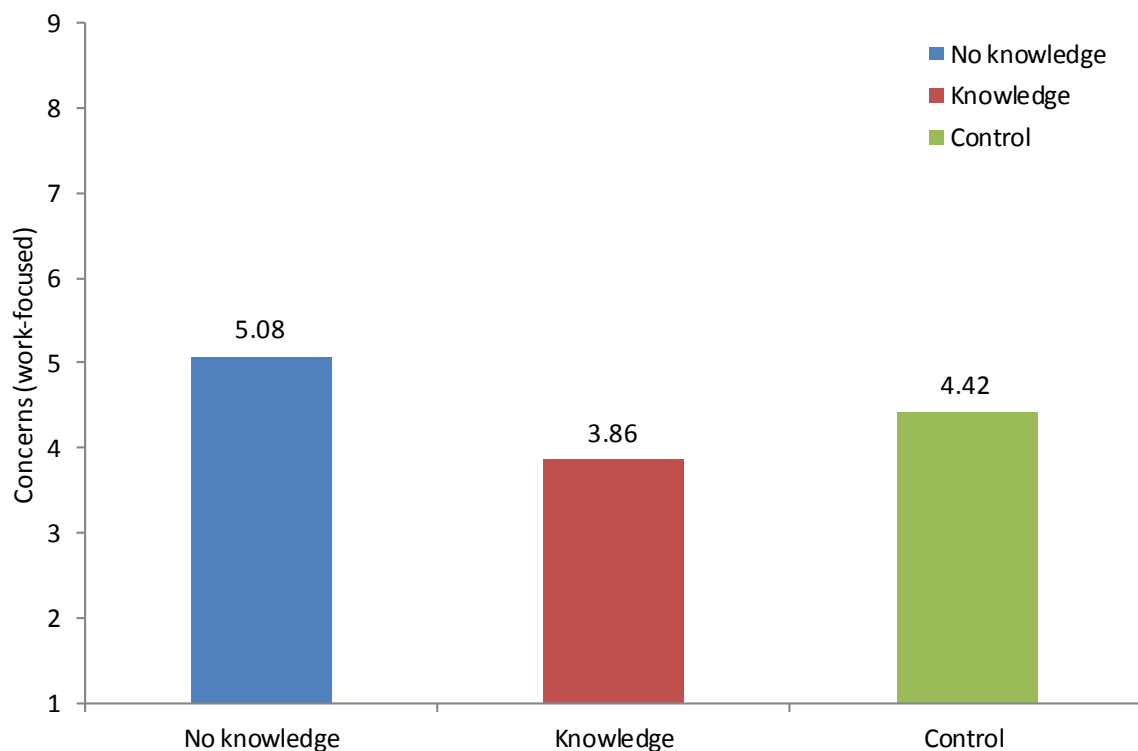
Agreement with articles. Mean level of agreement with the presented articles was above the mid-point of the scale ($M = 6.51$, $SD = 1.58$), suggesting participants believed the material that they were presented with. To lend further credence to this suggestion, an independent samples t -test was performed to compare mean levels of agreement between the no knowledge and knowledge conditions. No significant differences were found, $t(199) = -.795$, $p = .427$, $d = 0.11$, suggesting participants found both articles equally convincing, although it is interesting to note that there was slightly more agreement in the knowledge condition ($M = 6.61$, $SD = 1.72$) than the no knowledge condition ($M = 6.43$, $SD = 1.45$).

Concerns. Two one-way ANOVA's were conducted to investigate any difference in concerns within each vignette between the experimental conditions.

The analyses revealed that within the work-focused vignette concerns did vary according to condition, $F(2, 302) = 6.17$, $p = .002$, partial $\eta^2 = .039$.

Post-hoc Bonferroni comparisons suggested that participants in the no knowledge condition were significantly more concerned about interacting with their new physically disabled colleague ($M = 5.08$, $SD = 2.60$) than those in the knowledge condition ($M = 3.86$, $SD = 2.37$, $p = .002$), but not the control condition ($M = 4.42$, $SD = 2.35$, $p = .153$). No differences were observed between the control condition and the knowledge condition ($p = .344$).

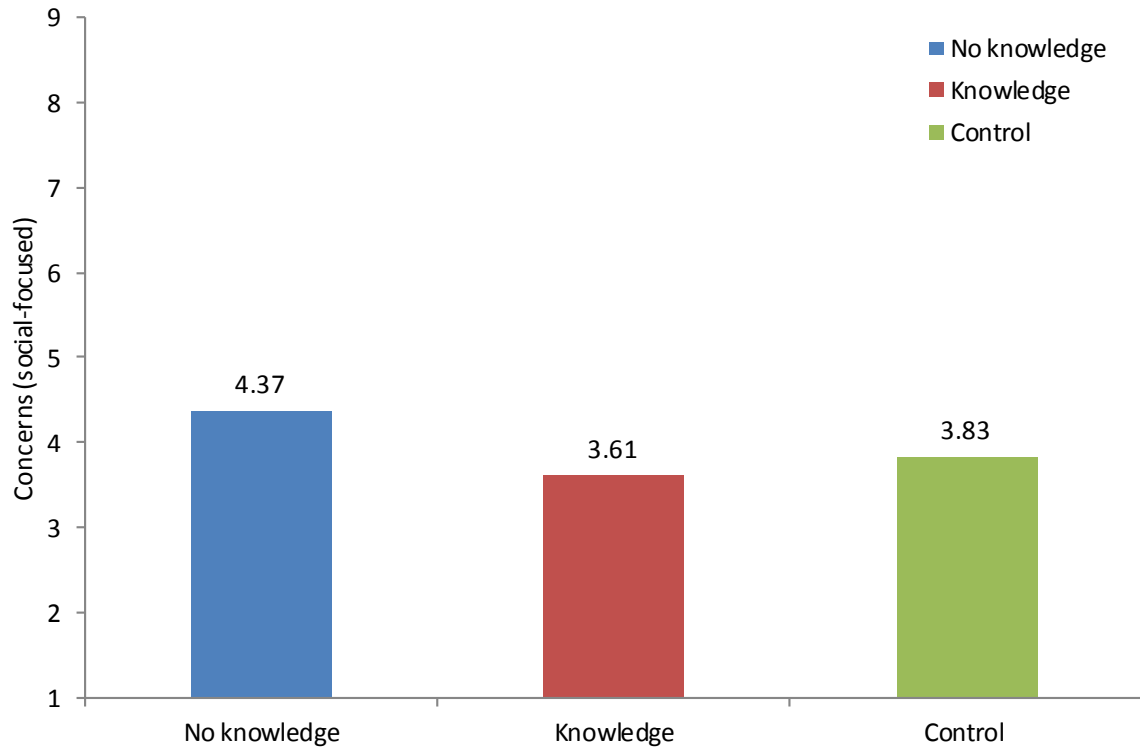
Figure 14. Difference in reported concerns within the work-focused vignette.



There was also a marginally significant difference in concerns within the social-focused vignette between the experimental conditions, $F(2, 302) = 2.75$, $p = .066$, partial $\eta^2 = .018$. Post-hoc Bonferroni comparisons suggested that participants in the concerns condition were marginally more worried about interacting with the physically disabled stranger ($M = 4.37$, $SD = 2.48$) than those in the knowledge condition ($M = 3.61$, $SD = 2.29$, $p = .076$) but not the control condition ($M = 3.83$, $SD = 2.45$). Like the work-

focused vignette, no differences were observed between the control condition and the knowledge condition ($p = 1.00$).

Figure 15. Difference in reported concerns within the social-focused vignette.



Taken together, these findings suggest that the experimental manipulation was partially successful, with participants in the no knowledge condition holding significantly more concerns than those in knowledge condition within the work-focused vignette. This same effect was present in the social-focused vignette at marginal significance.

However, no differences were found between the no knowledge and the control conditions within both vignettes. In light of this, it is unclear whether the observed effect is due to the no knowledge condition inducing concerns or the knowledge condition reducing them in the sample. Given that the mean concern ratings for the control condition fall between the no knowledge and knowledge conditions within both vignettes it could be suggested that the observed effect is due to a weak effect of both conditions in the expected directions.

The effect of concerns within vignettes

In the next section, the effects of the experimental manipulation on embarrassment, contact quality and approach intentions are examined within both vignettes.

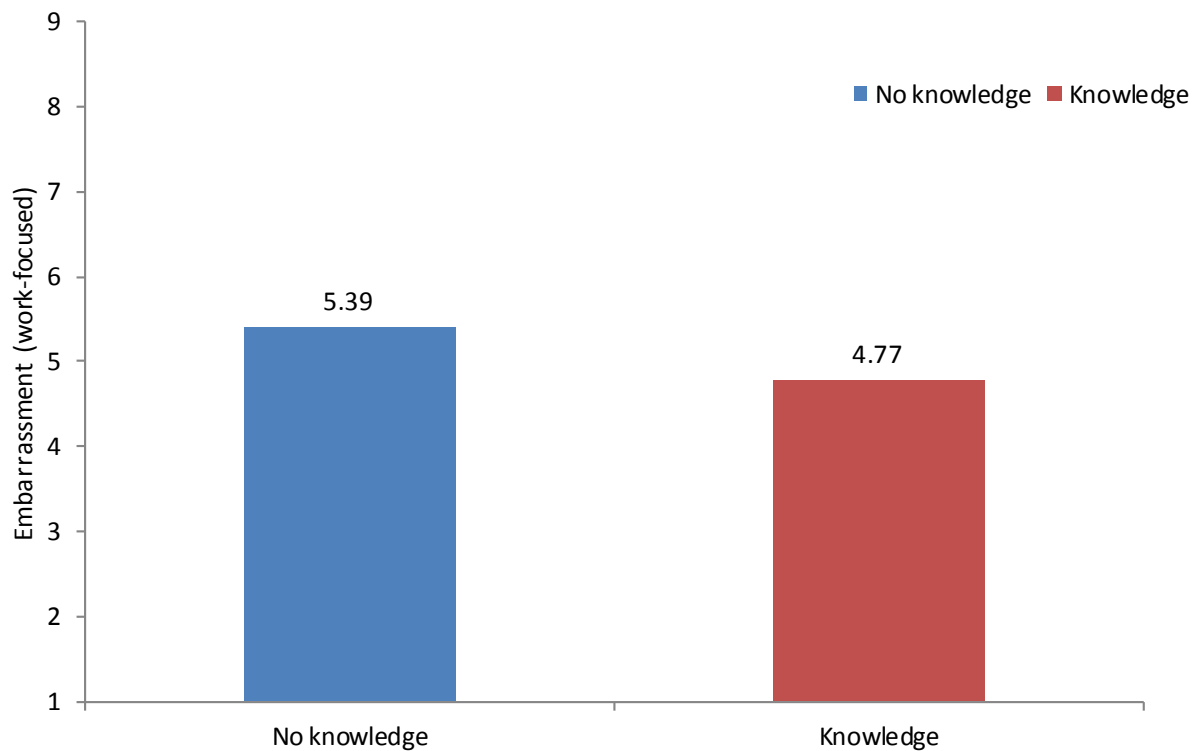
Analytic strategy. A series of MANCOVA's were conducted with matched pairs of each dependent variable (e.g., V1 embarrassment, V2 embarrassment) and experimental condition as the independent variable. Given that there were no observed differences between the priming and control conditions, the participants in the latter were dropped from these analyses.

As in the previous study, contact quantity and personal experience of each vignette were added as covariates to control for their influence within each model. Age, gender and embarrassability were also added as covariates (noted where significant).

Embarrassment. There was a significant multivariate difference in embarrassment ratings between the experimental conditions, $F(2, 191) = 3.04$, Wilks' $\lambda = .969$, $p = .050$, partial $\eta^2 = .031$.

Specifically, within the work-focused vignette, participants in the no knowledge condition were significantly higher in embarrassment ($M = 5.39$, $SE = .198$) than those in the knowledge condition ($M = 4.77$, $SE = .215$), $F(1, 192) = 4.38$, $p = .038$, partial $\eta^2 = .022$.

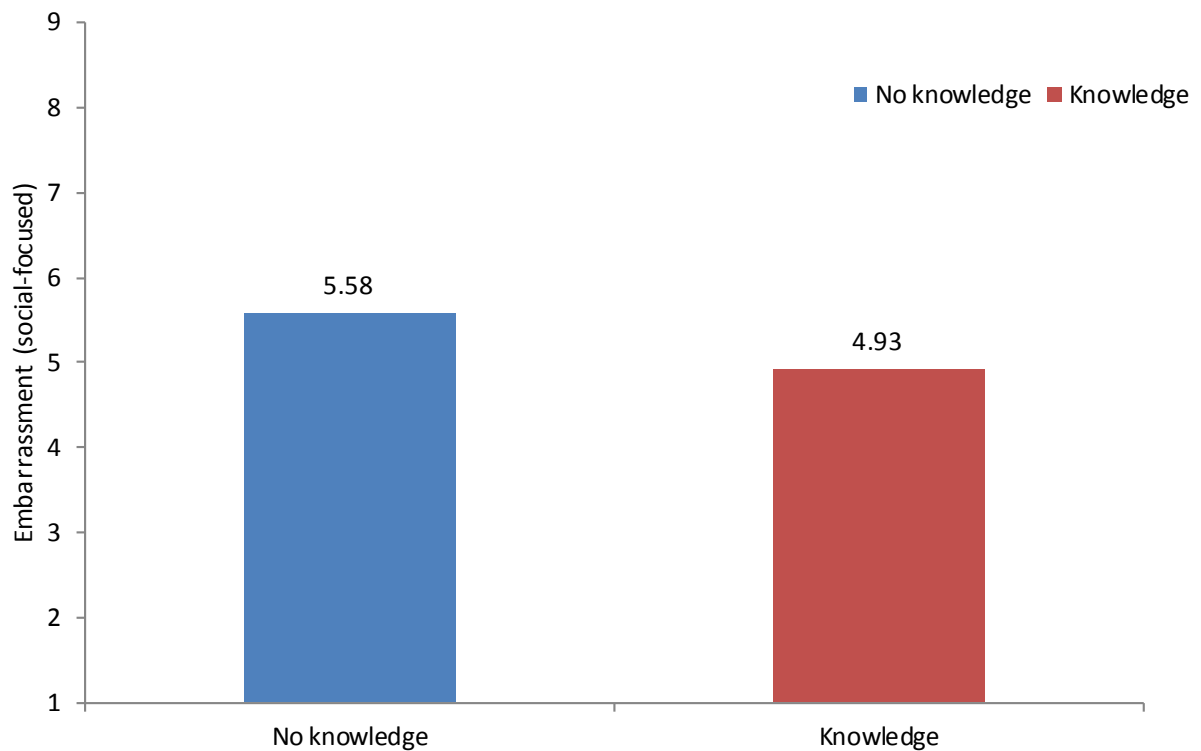
Figure 16. Difference in reported embarrassment within the work-focused vignette.



Differences in embarrassment within the social-focused vignette were significant in the same direction, meaning that participants in the no knowledge condition were also higher in embarrassment ($M = 5.58, SE = .196$) than those in the knowledge condition ($M = 4.93, SE = .212$), $F(1, 192) = 4.85, p = .029$, partial $\eta^2 = .025$.²⁶

²⁶ Both contact quantity, $F(2, 191) = 8.34, \text{Wilks}' \lambda = .920, p < .001$, partial $\eta^2 = .080$, and embarrassability, $F(2, 191) = 25.65, \text{Wilks}' \lambda = .788, p < .001$, partial $\eta^2 = .212$, exerted a significant multivariate effect on embarrassment. Further inspection revealed that contact quantity had a significant effect within both the work-focused vignette, $F(1, 192) = 13.20, p < .001$, partial $\eta^2 = .064$, and the social-focused vignette, $F(1, 192) = 12.18, p = .001$, partial $\eta^2 = .060$. Similarly, embarrassability also had a significant effect within both the work-focused vignette, $F(1, 192) = 35.77, p < .001$, partial $\eta^2 = .157$, and the social-focused vignette, $F(1, 192) = 42.05, p < .001$, partial $\eta^2 = .180$.

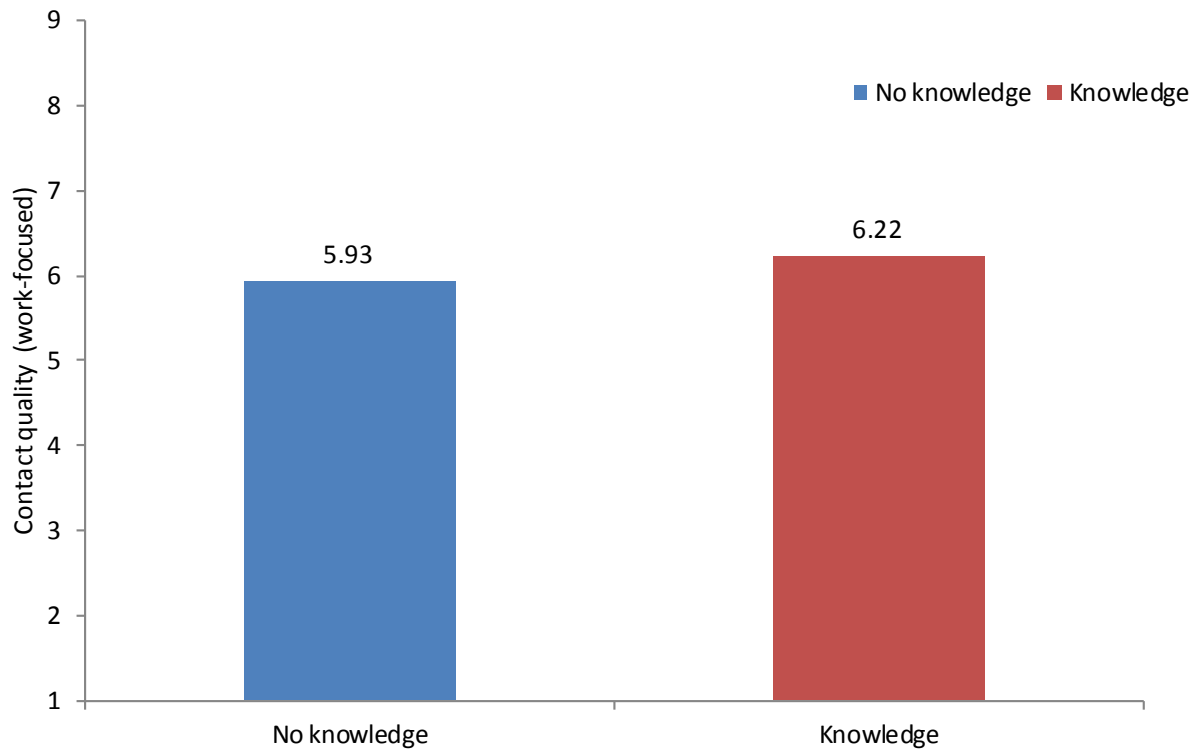
Figure 17. Difference in reported embarrassment within the social-focused vignette.



Contact quality. No significant multivariate differences in contact quality ratings were found between the experimental conditions, $F(2, 191) = .852$, Wilks' $\lambda = .991$, $p = .428$, partial $\eta^2 = .009$.

Within the work-focused vignette, reported contact quality in the no knowledge condition ($M = 5.93$, $SE = .154$) did not significantly differ from the knowledge condition ($M = 6.22$, $SE = .168$), $F(1, 192) = 1.64$, $p = .202$, partial $\eta^2 = .008$.

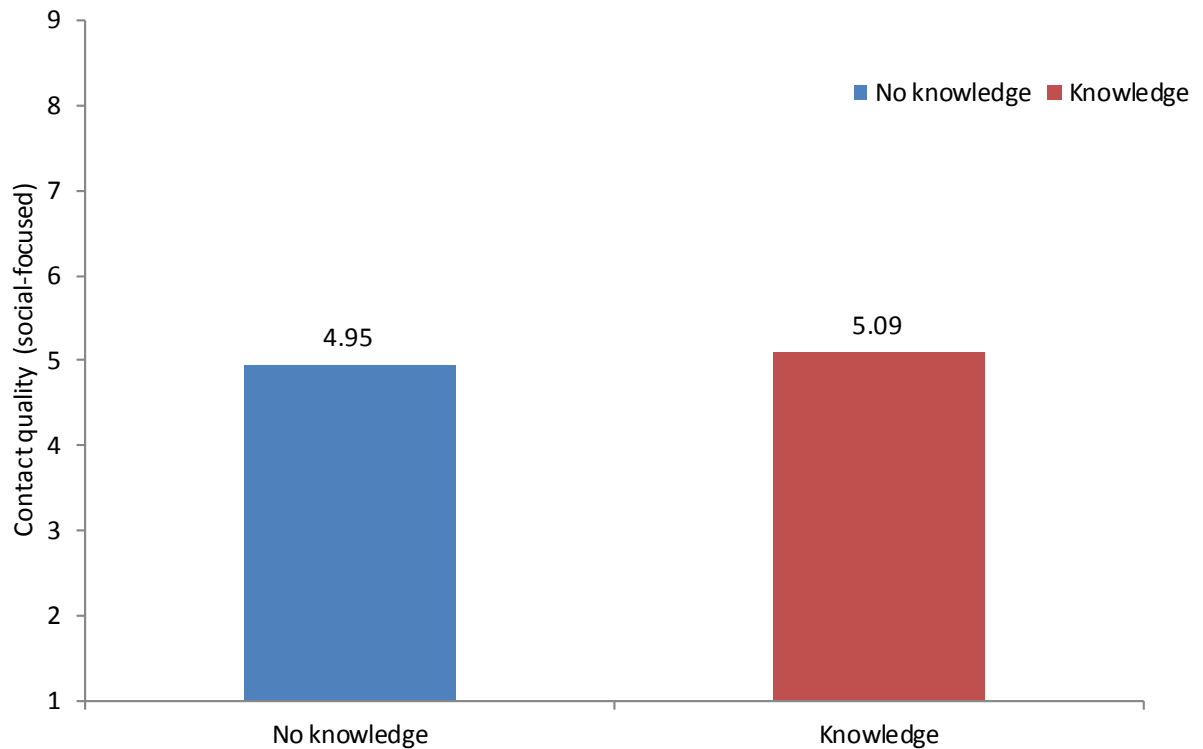
Figure 18. Difference in reported contact quality within the work-focused vignette.



Similarly, within the social-focused vignette, participants in the no knowledge condition ($M = 4.95$, $SE = .195$) did not report significantly different contact quality ratings from those in the knowledge condition ($M = 5.09$, $SE = .212$), $F(1, 192) = .254$, $p = .615$, partial $\eta^2 = .001$.²⁷

²⁷ Contact quantity, $F(2, 191) = 10.94$, Wilks' $\lambda = .897$, $p < .001$, partial $\eta^2 = .103$, embarrassability, $F(2, 191) = 5.47$, Wilks' $\lambda = .946$, $p = .005$, partial $\eta^2 = .054$, and personal experience of the social-focused vignette, $F(2, 191) = 5.47$, Wilks' $\lambda = .935$, $p = .002$, partial $\eta^2 = .065$, were found to have a significant multivariate effect on contact quality. Specifically, contact quantity was found to have a significant effect within both the work-focused vignette, $F(1, 192) = 21.78$, $p < .001$, partial $\eta^2 = .102$, and the social-focused vignette, $F(1, 192) = 9.09$, $p = .003$, partial $\eta^2 = .045$. Similarly, embarrassability also had a significant effect within both the work-focused vignette, $F(1, 192) = 9.32$, $p = .003$, partial $\eta^2 = .046$, and the social-focused vignette, $F(1, 192) = 7.78$, $p = .006$, partial $\eta^2 = .039$. Personal experience was found to have no significant univariate effects.

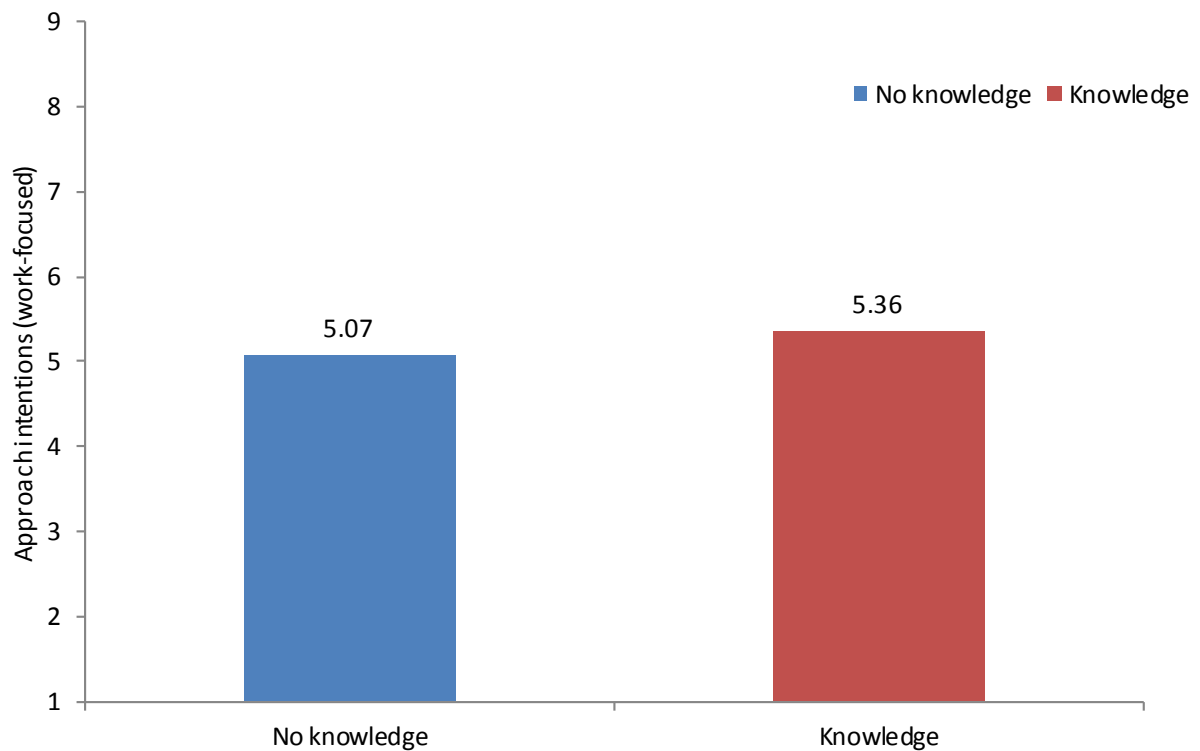
Figure 19. Difference in reported contact quality within the social-focused vignette.



Approach intentions. No significant multivariate difference in approach intentions was found between the experimental conditions, $F(2, 191) = .801$, Wilks' $\lambda = .992$, $p = .451$, partial $\eta^2 = .008$, while controlling for age, gender, contact quantity, embarrassability and personal experience.

Within the work-focused vignette, approach intentions in the no knowledge condition ($M = 5.07$, $SE = .160$) did not significantly differ from the knowledge condition ($M = 5.36$, $SE = .174$), $F(1, 192) = 1.47$, $p = .228$, partial $\eta^2 = .008$.

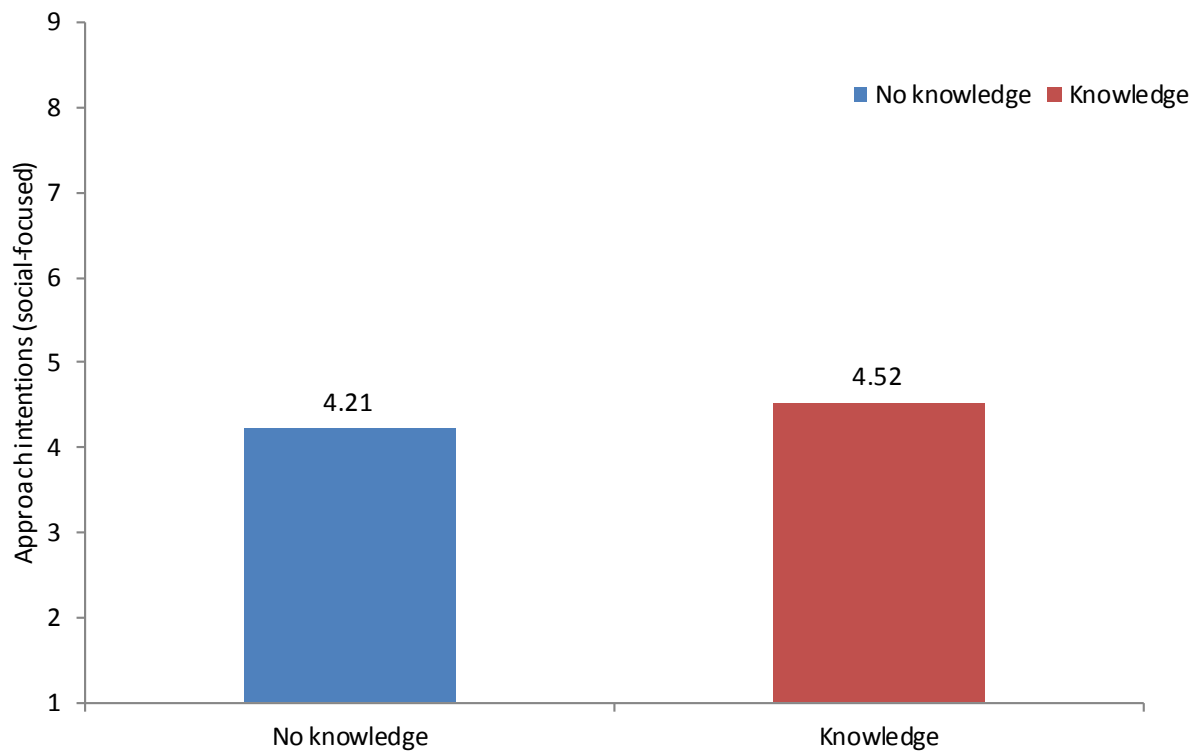
Figure 20. Difference in reported approach intentions within the work-focused vignette.



Likewise, within the social-focused vignette, approach intentions in the no knowledge condition ($M = 4.21$, $SE = .185$) were not significantly different from the knowledge condition ($M = 4.52$, $SE = .201$), $F(1, 195) = .958$, $p = .329$, partial $\eta^2 = .005$.²⁸

²⁸ Both contact quantity, $F(2, 191) = 8.03$, Wilks' $\lambda = .922$, $p < .001$, partial $\eta^2 = .078$, and embarrassability, $F(2, 191) = 3.17$, Wilks' $\lambda = .968$, $p = .044$, partial $\eta^2 = .032$, exerted a significant multivariate effect on approach intentions. Further inspection revealed that contact quantity had a significant effect within both the work-focused vignette, $F(1, 192) = 5.53$, $p = .020$, partial $\eta^2 = .028$, and the social-focused vignette, $F(1, 192) = 5.35$, $p = .022$, partial $\eta^2 = .027$. Similarly, embarrassability also had a significant effect within both the work-focused vignette, $F(1, 192) = 10.10$, $p = .002$, partial $\eta^2 = .050$, and the social-focused vignette, $F(1, 192) = 15.88$, $p < .001$, partial $\eta^2 = .076$.

Figure 21. Difference in reported approach intentions within the social-focused vignette.



In summary, effects of the experimental manipulation were observed on embarrassment, but not on reported contact quality or approach intentions. Specifically, participants in the no knowledge condition reported significantly higher levels of embarrassment than those in the knowledge condition for both vignettes.²⁹

Mediation analyses

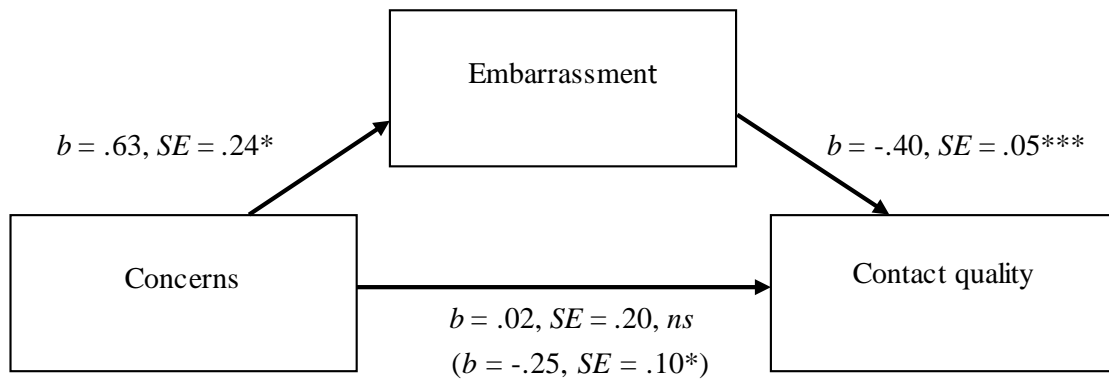
Analytic strategy. PROCESS (5000 resamples; Hayes, 2013) was used to test two models identical to Study 2. Given that the observed differences on the manipulation check were between the no knowledge and knowledge conditions, contrasts were specified with the knowledge condition as the reference point (and not the control) in each model. In Model 1, the following mediational sequence was tested using the average scores across both vignettes: a) that concerns might increase embarrassment

²⁹ The effect of the experimental manipulation was also tested across both vignettes (i.e. using the average scores). As might be expected, these findings supported those presented above.

and b) that embarrassment might lead to reduced contact quality. In this model, the experimental manipulation (no knowledge vs. knowledge) was the independent variable, while contact quality was the dependent variable. Embarrassment was the proposed mediator. Model 2 was identical to this but approach intentions replaced contact quality as the dependent variable. The contrast between the knowledge and control condition was added as a covariate (see Study 2; Shnabel et al., 2012). Like previous analyses, age gender (dummy coded, 0 = Male, 1 = Female), contact quantity, embarrassability and personal experience were included as covariates in the model.

Contact quality (Model 1). Concerns were found to positively predict embarrassment, while embarrassment negatively predicted contact quality. Like Study 2, the analysis revealed that embarrassment linked concerns to contact quality (95% CI [-0.47, -0.06]; see Figure 22). Similar to that experiment, a *total effect* of concerns on contact quality was absent, $b = -.23$, $SE = .22$, $p = .286$, suggesting that embarrassment exerts an *indirect effect* on the relationship.

Figure 22. Model 1 (concerns-embarrassment-contact quality).

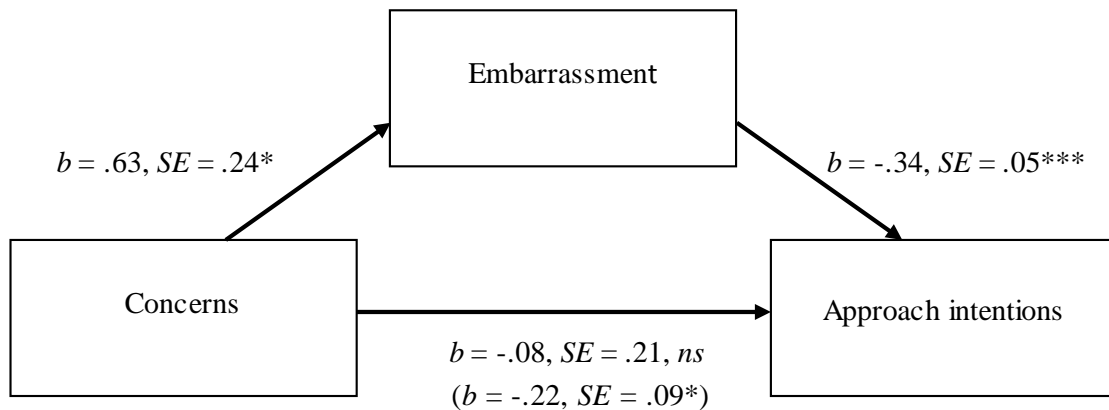


Note. The total effect of concerns on contact quality is non-significant, $b = -.23$, $SE = .22$, $p = .286$, indicating that this is an example of indirect mediation. The indirect effect (i.e. the effect of concerns on contact quality through embarrassment) is given in parentheses. $N = 305$, due to one missing value for age, $*p < .05$, $**p < .01$, $***p < .001$.³⁰

Approach intentions (Model 2). The model showed embarrassment to negatively predict approach intentions. Like Study 2, embarrassment was also found to play a role between concerns and approach intentions (95% CI [-0.42, -0.05]; see Figure 23). However, contra to Study 2, a *total effect* of concerns on approach intentions was not observed, $b = -.29$, $SE = .23$, $p = .198$, suggesting that embarrassment exerts an *indirect effect* on the relationship.

³⁰ Of the covariates, the contrast between the knowledge and control conditions, $b = .57$, $SE = .25$, $p = .021$, contact quantity, $b = -.26$, $SE = .05$, $p < .001$, and embarrassability, $b = .50$, $SE = .05$, $p < .001$ significantly influenced path a (concerns-embarrassment). Age, $b = .01$, $SE = .01$, $p = .048$, contact quantity, $b = .10$, $SE = .04$, $p = .013$, and personal experience (V1), $b = .09$, $SE = .04$, $p = .028$, significantly influenced path b (embarrassment-contact quality).

Figure 23. Model 2 (concerns-embarrassment-approach intentions).



Note. The total effect of concerns on approach intentions is non-significant, $b = -.29$, $SE = .23$, $p = .198$, indicating that this is an example of indirect mediation. The indirect effect (i.e. the effect of concerns on approach intentions through embarrassment) is given in parentheses. $N = 305$, due to one missing value for age, $*p < .05$, $**p < .01$, $***p < .001$.

Discussion

The objective of the present study was to investigate the impact of psychological concerns held by non-disabled people on embarrassment, contact quality and approach intentions towards physically disabled people. This builds directly on Study 2, which investigated the same processes among a physically disabled sample.

The experimental manipulation was partially successful. Specifically, in the work-focused vignette, participants in the no knowledge condition reported significantly more concerns than those in the knowledge condition. This same effect was present in the social-focused vignette to marginal significance ($p = .076$). No differences were present between the no-knowledge/knowledge conditions and the control condition.

Thus, it is not as clear as in Study 2 what the results of the experimental manipulation can be attributed to. Given that the mean level of concerns in the control condition sits

between the no knowledge/knowledge conditions within both vignettes, it could be possible that the no knowledge condition weakly induced concerns, while the knowledge condition weakly reduced them.

It should be noted that each experiment taps a distinct population, each holding a set of psychologically distinct concerns (see Study 1). One possibility for the differing strengths of the manipulations is that these concerns are less relevant to the non-disabled in general, in comparison to physically disabled people. This may be due to the fact that non-disabled people tend to have far less contact with physically disabled people than the other way around (Hebl et al., 2000). A further ramification is that the non-disabled sample might have found it difficult to imagine experiencing interactions with physically disabled people because of this, especially given the low prevalence of existing personal experience with the events depicted in each vignette.

However, given that this experiment did use a different population, it is also particularly encouraging that findings were mostly replicated from Study 2. Specifically, an experimental effect was observed on embarrassment, with participants who were high in concerns (the no knowledge condition) reporting increased levels of embarrassment when compared to participants who were low in concerns (the knowledge condition). These effects were consistent within each vignette. However, no experimental effects were observed on reported contact quality or approach intentions. Thus, the findings can be said to support H_1 but not H_2 . Like Study 2, embarrassment was also found to link concerns to contact quality (Model 1) and approach intentions (Model 2) in the hypothesised directions. This provided support for the causal directions predicted by H_3 and H_4 .

However, in this study, concerns lacked a direct relationship with *both* contact quality and approach intentions. This contrasts Study 2, in which physically disabled people's psychological concerns had the direct effect of reducing their approach intentions towards the out-group. The absence of a comparable effect in a non-disabled sample may be to do with the 'freezing hypothesis' put forward by some authors. Specifically, Greenland et al. (2012) note that members of majority groups who hold concerns may be caught between the desire to conform to social norms and the desire to avoid potentially threatening encounters (see also Trawalter et al., 2009). In this case, concerned non-disabled participants were likely aware of the societal norm to be kind to physically disabled people. However, countervailing pressure may have come from the belief that they would do the wrong thing, leading to an overall null effect. In contrast, the physically disabled participants in Study 2 may have been subject to less "moral" pressure to engage with non-disabled people and thus, the desire to avoid won out. However, it should also be noted that, in the non-disabled sample, concerns still reduced approach intentions indirectly through embarrassment.

To my knowledge, the findings presented in Study 2 and 3 are the first to provide support for a causal link between specific interaction-related concerns and embarrassment. Moreover, findings show that concerns are indirectly related to contact quality within both groups (through the mechanism of embarrassment).

Given that Studies 2 and 3 provided encouraging results for path *a*) of the proposed models (concerns – embarrassment), Study 4 investigated path *b*) experimentally (embarrassment – contact quality).

The effect of non-disabled people's embarrassment on contact quality, approach intentions and prejudiced attributions within an imagined interaction (Study 4)

Findings from the previous studies suggest that the concerns non-disabled people and physically disabled people hold about mixed encounters may lead indirectly to reduced contact quality. That is, while no direct relationship was found between these two variables, concerns were observed to negatively influence contact quality *through* embarrassment. Evidence gleaned from the experiments also suggested that embarrassment accounts for the relationship between concerns and reduced approach intentions either directly (i.e. full mediation; Study 2) or indirectly (i.e. indirect effects; Study 3). A possible explanation is that the negative affect generated by embarrassment may have transferred to participant perceptions of the both current and future encounters.

While Studies 2 and 3 focused on the impact that concerns had on embarrassment, this study extended this focus by directly examining the effect of embarrassment on contact quality and approach intentions (this corresponds to path *b* in the proposed models; see Chapter 3, Figure 1).

Study 4 also builds on the previous work by investigating prejudice as an additional consequence of experiencing embarrassment when interacting with physically disabled people. So far, the dependent measures have all pertained to the immediate contact situation and out-group members who participants imagined or experienced an interaction with. It was also of interest to test whether experiencing embarrassment would shift attitudes towards the entire out-group.

While the previous experiments have shown that embarrassment can have deleterious consequences for contact quality and approach intentions, the consequences of this emotion at the intergroup level are in general poorly understood (but see Eller et al.,

2011). The inclusion of prejudice as a possible consequence of embarrassment is merited due to the well-established link between affect and prejudice within the traditional contact literature (see R. Brown & Hewstone, 2005). Specifically, (intergroup) anxiety has been observed to increase prejudice towards out-groups, while empathy has been shown to attenuate it (R. Brown & Hewstone, 2005; Pettigrew & Tropp, 2006, 2008). In a similar vein, it is reasonable to expect the negative affect generated by embarrassment to increase prejudiced attributions towards out-groups.

The previous studies utilised vignettes to help contextualise awkward situations for participants to respond to. However, as embarrassment is primarily an affective reaction to perceived transgressions committed by the *self* (R. S. Miller, 1996) it was imperative that participants engage with the experience of offending or otherwise wronging a physically disabled person. Vignettes may not have been strong enough to allow for this. Therefore, Study 4 manipulated embarrassment by instructing participants to imagine an interaction with a physically disabled person, in which the participant behaved awkwardly.

This procedure was adapted from a body of work conducted by Crisp, Turner and colleagues on imagined contact (e.g., Crisp & Turner, 2009, 2012; Miles & Crisp, 2014; Turner, Crisp & Lambert, 2007; K. West et al., 2011). Imagined contact is the “mental simulation of a social interaction with a member or members of an outgroup category” (Crisp & Turner, 2009, p. 234). Like actual and extended contact its proponents argue that imagined contact of a positive nature may serve to reduce prejudice towards outgroups, often through the same mechanisms (e.g., attenuating intergroup anxiety; Crisp & Turner, 2012). However, as with the wider body of contact research, these researchers have generally not paid attention to what imagined contact could reveal about awkward interactions between groups. Conversely, the present study uses the

imagined contact paradigm to investigate whether embarrassment could shift non-disabled people's perceptions of contact quality with a physically disabled person. Potentially, this represents an important extension of the function of the imagined contact paradigm.

While the imagined contact task used in this study was adapted primarily from K. West et al. (2011), the specific content of this depicted interaction (i.e. to manipulate embarrassment) was derived from an earlier pilot study (see below).

As an additional aim, this study explored the distinction between concerns and embarrassment and the unique contribution that they make to contact quality.

The following hypotheses were tested:

H₁ Participants in whom embarrassment is induced will report experiencing reduced contact quality in the imagined interaction compared to those in whom embarrassment is not induced. It is proposed that the negative affect generated by embarrassment may transfer to participants' perceptions of the interaction (see R. Brown & Hewstone, 2005).

H₂ Participants in whom embarrassment is induced will also report reduced approach intentions towards the person they imagined interacting with and greater prejudice towards the out-group as a whole, compared to those in whom embarrassment is not induced. Again, negative affect transfer is proposed as the reason why this might occur

Method

Participants

Two-hundred and thirty three people took part in the study using the Amazon M-Turk (M-Turk) website, 145 of whom were female and 85 of whom were male, while three

did not state their gender. The sample age ranged from 18 to 74 ($M = 37.78$, $SD = 13.85$) and approximately 96% reported their nationality as American.

Thirteen participants reported having a physical disability (e.g., multiple sclerosis, below knee amputation) and were subsequently removed from the dataset. An additional three were removed because they did not complete any of the dependent measures. Of the remaining 217 participants, 85 (40%) reported having a close relationship with someone who is physical disabled. The most commonly listed relationship was 'Friend' appearing in 24 cases.³¹

Design

The study comprised of three between-subjects experimental conditions designed to vary the amount of embarrassment that participants experienced when imagining an interaction with a physically disabled person (negative affect x positive affect x control). This was achieved by instructing the participant to imagine a short interaction with a physically disabled person. The negative affect condition was designed to induce embarrassment ($N = 75$) and was compared to both a positive affect condition ($N = 70$) (designed to reduce embarrassment) and a control condition ($N = 72$).

Procedure

Participants were recruited from the M-Turk website to participate in an online survey and received \$0.50 for taking part. They were told that the study was interested in how non-disabled and physically disabled people interact and that they would have to take part in a short imagination exercise where they would have to think about interacting with a physically disabled stranger. As previously, participants were given a definition

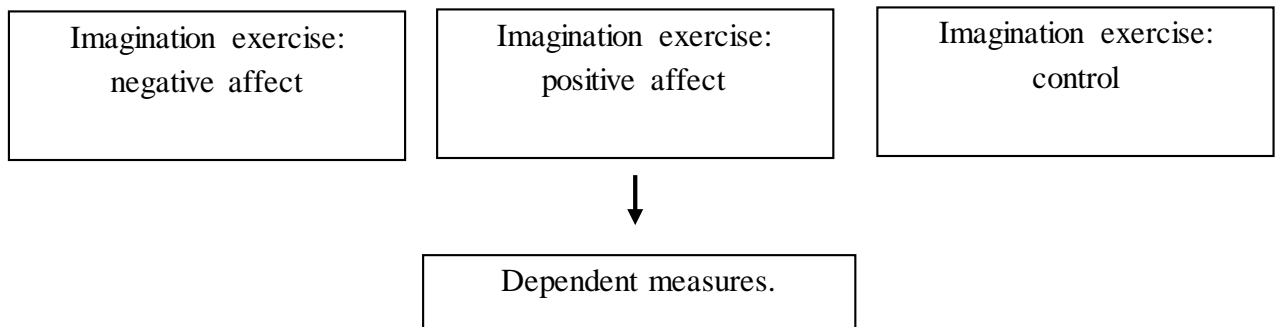
³¹ Independent samples *t*-tests were conducted to compare the *close relationship* group with the *no close relationship* group on the measures of interest. No significant differences were found.

of “physical disability” (UK Equality Act, 2010) and told to avoid thinking about people over 65 and those who possessed an intellectual or learning impairment.

Upon beginning the survey, participants were randomly presented with one of the three imagination exercises (negative affect x positive affect x control). The content of this exercise was derived from a previously conducted pilot study (see below). Participants were told that this aspect of the study was crucial and that they should spend at least five minutes imagining the encounter and writing down their thoughts during that time. Participants could not proceed with the survey until five minutes had elapsed and were given a timer to help keep track of the time taken.

Participants then responded to a range of dependent measures, first regarding the interaction they imagined and secondly regarding their views about physically disabled people in general. Some demographic information was also collected (e.g., age, gender). Participants received a full written debriefing after completing the survey. Figure 32 summarizes the procedure used in this study.

Figure 24. Diagram to show the experimental procedure for Study 4.



Materials

Pilot study. Prior to this study, a pilot study had been run with 222 non-disabled university students. Each participant was asked to “imagine spending the whole day with someone who was physically disabled”, but three different sets of instructions were given. In the *negative affect* condition, participants had to note down all the “especially awkward” things that could happen, while in the *positive affect* condition participants had to think of “especially interesting” events instead. A third *control* condition described the pair finding money (£20) on the ground and asked the participant to think how to spend it (see Appendix C for the full text of these conditions). These data were collected at the end of a lecture and conditions were randomly allocated using different versions of a pen and paper questionnaire. The experimental manipulation was partially successful in that participants in the negative affect condition reported more embarrassment than the control; however, there were no differences between the positive affect and the other two conditions. Inspection of qualitative data collected during the pilot revealed a number of insights. Firstly, participants generally listed similar events that could occur between the negative affect and positive affect conditions. This is perhaps because participants interpreted the term “interesting” in the

positive affect condition to mean “novel” (vs. the intended “positive”), and drew on negative stereotypes of physically disabled people when completing the task (e.g., “[The] disabled person being annoyed...angry, not accepting help” [Pilot participant 23]). Secondly, participants were often thinking of behaviours from the physically disabled person or onlookers that could make the encounter “especially awkward” or “especially interesting” (e.g., “Having someone stare at them and you...people bullying them” [Pilot participant 105], “He or she drops something and is trying to pick it up” [Pilot participant 22]). However, embarrassment is primarily considered a reaction to a behaviour committed by the *self* (see R. S. Miller, 1996). Additionally, post-hoc feedback revealed that some participants thought the instructions were vague and consequently found the task difficult to complete. Thus, this pilot provided vital information regarding how to structure the subsequent embarrassment manipulation(s; see below & Study 6).

Imagination task. Participants were randomly presented with one of three imagination exercises designed to vary the amount of embarrassment they experienced while completing the task. This exercise was adapted from K. West et al. (2011).

Specifically, participants were asked to:

“Take 5 minutes to imagine the following scenario: You are waiting to catch a train at the train station. While you are waiting, a physically disabled person arrives on the platform and sits down next to you. Imagine yourself having a conversation with this physically disabled person”.

Participants in the *negative affect* condition were asked to imagine that the interaction was “difficult, strained and awkward” while those in the *positive affect* condition were

told to imagine an interaction that was “easy, relaxed and comfortable”. Those in the *control* condition were given no instructions about what type of interaction to imagine.

All participants were told to:

“Spend the time thinking about the things you talk about, do or say to this person that might cause the interaction to have the qualities described above. Please write down, from time to time, the things that you imagine. Feel free to write whatever springs to mind”.

These latter set of instructions were given to ensure that participants would link the features of the interaction they imagined to their own behaviour rather than the behaviour of the physically disabled person (see Pilot study, above). This instruction was important because embarrassment is an affective reaction to a perceived transgression arising from a person’s *own* behaviour (see R. S. Miller, 1996).

Participants were able to write as much as they liked in response to the imagination exercise.

Manipulation checks

Task content. Two questions were asked about the content of the imagination exercise to ensure that participants had read and engaged with the task. Participants were asked if the person they were instructed to imagine interacting with in the exercise was non-disabled or physically disabled. Additionally, participants in both the negative affect and positive affect conditions were asked if the interaction they imagined was “difficult,

strained and awkward” or “easy, relaxed and comfortable”.³² Any participant who gave the incorrect response to either of these two questions was removed from the dataset.

Embarrassment. Participants were asked to rate how “embarrassed”, “uncomfortable”, “foolish”, “awkward” and “incompetent” they felt while imagining the interaction (see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Scores from these five items were averaged to form a single index measuring embarrassment, in which high scores indicated greater levels of embarrassment ($\alpha = .96$).

Dependent measures

Participants responded to each item using a nine-point Likert scale (1 = *Not at all*, 9 = *Very much so*) for all measures.

Contact quality. Participants were asked to rate the overall contact quality of the imagined interaction. Given that the vignette used in this study was less context-driven than previous, more general adjectives were used in place of detailed sentences.³³ Specifically, they were asked how “close”, “positive”, “personal”, “worthwhile”, “genuine” and “enjoyable” the imagined interaction was. These six items were averaged into a single scale measuring contact quality, in which high scores indicated greater levels of contact quality ($\alpha = .94$).

Approach intentions. Participants were asked about what they would do if they had the opportunity to meet the physically disabled stranger again. Specifically, they were asked to what extent they would, “keep...distance from them [reverse-coded]”, “try to avoid

³² This second question was not asked to participants in the control condition in order to avoid influencing their responses to the dependent measures.

³³ It was likely that when asked to imagine a difficult (or a relaxed) interaction, participants would imagine different things. As such, the items used in the previous studies may have been too rigid. For instance, some participants may have imagined openly discussing the limitations of the physically disabled person as a difficult interaction. However, in the previous studies this was used to indicate high contact quality (see also Chapter 4).

them [reverse-coded]”, “try to approach them”, “actively try to engage them in conversation” (see Mackie et al., 2000). Items from the previous studies measuring confrontational tendencies (e.g., “confront them”) were replaced by the latter two items in order to focus specifically on whether participants were willing to engage in future interactions with the out-group. Scores were averaged into a single scale to measure approach intentions, in which high scores indicated greater intentions of approaching ($\alpha = .87$).

Prejudice. To assess prejudice, participants rated how they felt generally towards people with physical disabilities on a series of bipolar adjective pairs (“positive-negative”, “friendly-hostile”, “trusting-suspicious”, “contempt-respectful”, “unpleasant-pleasant”). These items were adapted from the General Evaluation Scale (S. C. Wright et al., 1997; see also Lolliot et al., 2014) and were averaged into a single index to measure prejudice, with higher scores indicating greater prejudiced attributions ($\alpha = .93$).

Concerns. Participants rated the level of concerns that they generally had about interacting with physically disabled people. As in Study 3, concerns were measured using the same four generated items that were averaged to form a single index. High scores on this measure indicated greater levels of concerns ($\alpha = .94$).

Contact quantity. The same three items were used to measure contact quantity as previously. Participants were asked to what extent they mixed with physically disabled people “...in the area you live in”, “...when socialising”, and “...when engaging with leisure activities”. Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact ($\alpha = .90$).

Embarrassibility. Participant embarrassability was again measured using three items, adapted from Kelly and Jones (1997). Specifically, participants were asked whether they often felt “easily embarrassed regardless of where I am and what I do”, “anxious to make a positive impression on others” and “mortified over making minor embarrassing mistakes”. Answers were given in response to the prompt “Thinking about my personality, I would say...”. Scores were averaged into a single index to measure embarrassability, with high scores indicating greater levels of embarrassability ($\alpha = .84$)

Social desirability. To control for possible response bias, tendency towards social desirable reporting was evaluated through the inclusion of five items adapted from the seventeen item Social Desirability Scale (SDS-17), developed by Stöber (2001). Participants were asked to think of the things that they often say or do and respond to the statements by selecting *True* or *False*. Specifically, participants were asked whether they “always eat a healthy diet”, “never take advantage of others”, “[are] always polite to others”, “sometimes litter [reverse-coded]” and “when making a promise...keep it--no ifs, ands or buts”. Scores were summed to create a single index of social desirability bias, with high scores indicating more truthful responses ($\alpha = .58$)

Demographics. Demographic information (e.g., age, gender) was also collected from participants.

Results

Preliminary analyses

Table 3 shows the correlations between the measured variables and the embarrassment manipulation.

Table 3. Correlations between all measured variables and the embarrassment manipulation.

Variable	1	2	3	4	5	6	7	8
1. Embarrassment	-							
2. Contact quality	-.44***	-						
3. Approach intentions	-.33***	.67***	-					
4. Prejudice	.05	-.43***	-.47***	-				
5. Concerns	.21**	-.29***	-.29***	.18**	-			
6. Contact quantity	-.01	.17*	.15*	-.24***	-.18**	-		
7. Embarrassability	.14*	-.31***	-.31***	.15*	.51***	-.02	-	
8. Social desirability	-.10	.28***	.26***	-.15*	-.09	.04	-.22**	-
Mean (SD)	3.35 (2.44)	5.94 (2.27)	6.61 (2.12)	2.86 (1.60)	5.25 (2.35)	4.27 (2.23)	4.67 (2.35)	3.25 (1.39)

Note. Embarrassment was coded 1 = Positive affect, 2 = Control, 3 = Negative affect, $N = 233$, * $p < .05$, ** $p < .01$, *** $p < .001$. The mean and standard deviation of embarrassment is given for the scale manipulation check.

Like Study 2, concerns and embarrassment display only a weak, positive relationship.

The distinction between these constructs is explored further below.

Manipulation check

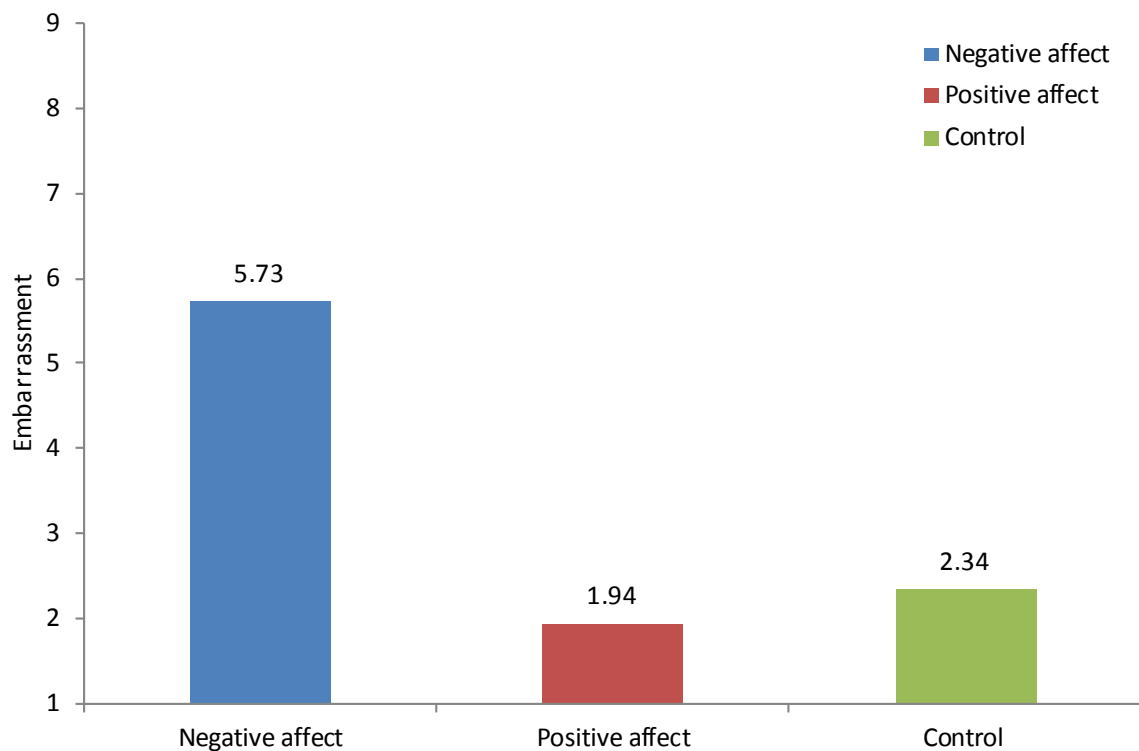
Task content. Participants were excluded if they answered incorrectly to either of the two questions about task content. As a consequence, nine participants were removed from further analyses, leaving 208 in total (negative affect $N = 71$, positive affect $N = 66$, control $N = 71$).

Embarrassment. A one-way ANOVA was used to investigate differences in embarrassment levels according to experimental condition. As the assumption of homogeneity of variance was violated, Welch's F correction is reported.

The analysis revealed that embarrassment levels did differ between the experimental conditions, Welch's $F(2, 129.18) = 84.92, p < .001, \text{partial } \eta^2 = .47$.

Specifically, those in the negative affect condition ($M = 5.64, SD = 2.19$) reported feeling significantly more embarrassed by the imagined interaction than did those in both the positive affect condition ($M = 1.83, SD = 1.10, p < .001$) and the control condition ($M = 2.27, SD = 1.72, p < .001$). There was no significant difference between the positive affect and the control conditions ($p = .575$).

Figure 25. Difference in embarrassment levels across experimental conditions.



These findings suggest that the experimental manipulation was somewhat effective, with participants in the negative affect condition reporting significantly more embarrassment than those in both the positive affect and the control conditions. Given that there are no significant differences between the latter two conditions, the observed effects are likely due to the negative affect condition inducing embarrassment, rather

than the success of the positive affect condition in preventing or reducing embarrassment.

The effect of embarrassment on contact quality, approach intentions and prejudice

Analytic strategy. An ANCOVA was conducted with each dependent variable and experimental condition as the independent variable (negative affect x positive affect x control). Planned contrasts were used to compare the negative affect condition to the positive affect and the control condition to test hypotheses formulated a priori (see Field, 2009). Planned contrasts were not carried out between the control and positive affect conditions as there were no observed differences between them on the manipulation check. Age, gender (dummy-coded, 0 = male, 1 = female), contact quantity and embarrassability were added as covariates.³⁴

Contact quality. There was a significant difference in reported contact quality between the experimental conditions, $F(2, 202) = 51.48, p < .001, \text{partial } \eta^2 = .34.$ ³⁵

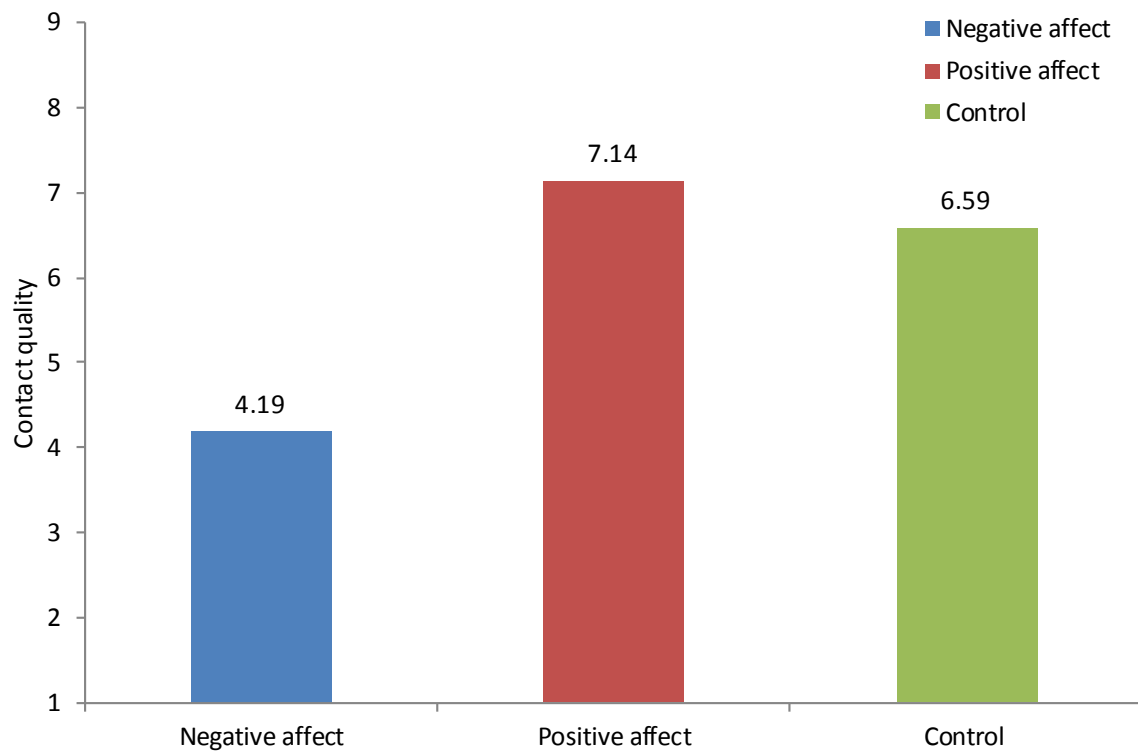
Planned contrasts revealed that those in the negative affect condition ($M = 4.19, SE = .22$) reported significantly lower contact quality than those in both the positive affect ($M = 7.14, SE = .23, p < .001$) and the control condition ($M = 6.59, SE = .22, p < .001$).³⁶

³⁴ The experimental manipulation was found to increase the general level of concerns around interacting with physically disabled people, embarrassability, and levels of socially desirable responding. Thus, these were not added as covariates. This is because, in statistical terms, including these variables as covariates would obscure the experimental effect due to the fact they explain some of its variance (Field, 2009).

³⁵ The assumption of homogeneity of error variance (Levene's) was violated for this variable, but with roughly equal condition sizes, ANOVA is thought to be robust to this deviation (Field, 2009).

³⁶ Both contact quantity, $F(1, 208) = 8.98, p = .003, \text{partial } \eta^2 = .04,$ and age, $F(1, 208) = 5.77, p = .017, \text{partial } \eta^2 = .03$ were found to be significant covariates in the model. When the analysis was re-run without these covariates, the model remained significant.

Figure 26. Difference in reported contact quality according to experimental condition.



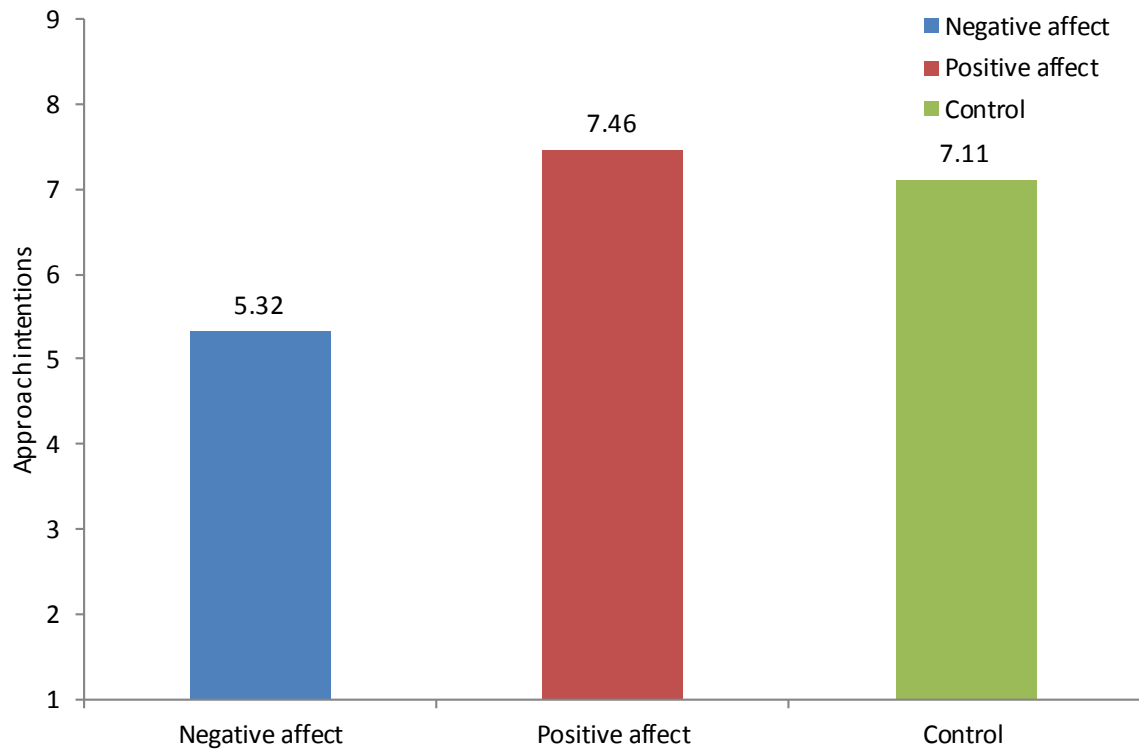
Approach intentions. There was a significant difference in reported approach intentions $F(2, 202) = 27.54, p < .001, \text{partial } \eta^2 = .21.$ ³⁷

Planned contrasts revealed that those in the negative affect condition ($M = 5.32, SE = .22$) reported significantly less contact quality than those in both the positive affect ($M = 7.46, SE = .23, p < .001$) and the control condition ($M = 7.11, SE = .22, p < .001$).³⁸

³⁷ Levene's test was violated for this variable (See footnote 35, above).

³⁸ Both contact quantity, $F(2, 208) = 7.92, p = .005, \text{partial } \eta^2 = .04$, and embarrassability, $F(2, 208) = 7.71, p = .006, \text{partial } \eta^2 = .04$ exerted a significant influence in the model.

Figure 27. Difference in reported approach intentions according to experimental condition.

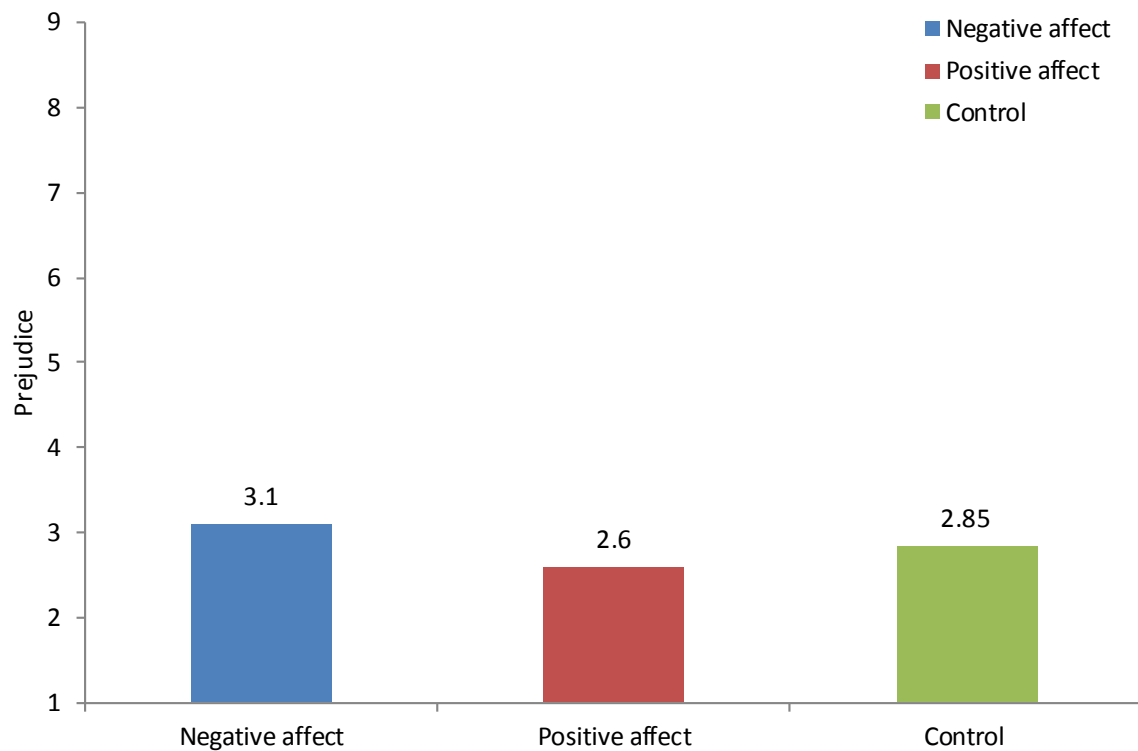


Prejudice. There was no significant experimental effect of embarrassment on reported prejudice $F(2, 202) = 1.87, p = .156, \text{partial } \eta^2 = .018$.

However, planned contrasts did reveal a marginally significant difference between the negative affect ($M = 3.10, SD = .18$) and the positive affect condition ($M = 2.60, SE = .19, p = .055$) but not the control condition ($M = 2.85, SE = .179$).³⁹

³⁹ Both contact quantity, $F(1, 202) = 14.41, p < .001, \text{partial } \eta^2 = .07$ and age, $F(1, 202) = 5.70, p = .018, \text{partial } \eta^2 = .03$, were found to exert influence in the model. Additionally, there was a significant effect of gender, $F(1, 202) = 5.26, p = .023, \text{partial } \eta^2 = .03$.

Figure 28. Difference in reported prejudice according to experimental condition.



In summary, main effects of the experimental manipulation were observed on contact quality and approach intentions but not on prejudice. Planned contrasts revealed that, participants who were higher in embarrassment experienced reduced contact quality and approach intentions within the imagined interaction. A marginally significant effect of embarrassment on prejudice was also identified between those high in embarrassment and the control group, in which the former reported higher levels of prejudice towards physically disabled people.

Testing the independent predictive power of embarrassment

The previous experiments (i.e. Study 2 & 3) all measured concerns prior to instigating the cross-group interaction where embarrassment occurred. In this study, concerns were measured *after* the embarrassing interaction. Moreover, the experimental manipulation was found to significantly shift participant concerns about interacting with physically

disabled people, so that more embarrassed individuals also experienced more psychological concerns (see footnote 34). In light of this, I wished to rule out two possibilities: firstly that concerns was the same construct as embarrassment, and secondly, that the concerns generated by awkward interactions would explain the observed changes instead of embarrassment. This first point was addressed by factor analysis and the second by regression. In the latter, to avoid violating statistical assumptions (see Field, 2009), the analyses looked at the predictive power of embarrassment across conditions (i.e. cross-sectionally, using the observed, scale measure), while controlling for the influence of other variables.

Analytic strategy. Firstly, a principal components factor analysis was carried out with a direct oblimin rotation to test the factor structure of concerns and embarrassment.

Then, a series of two-step hierarchal regression models were conducted to test the unique contribution of embarrassment to contact quality, approach intentions, and prejudice. The covariates, age, gender, contact quantity, embarrassability and tendency towards socially desirable responding were included in Step 1, while concerns and embarrassment were added to Step 2. All predictors were centred around the mean. The results reported below are from the final stage (Step 2) of each model.

Concerns and embarrassment. An initial analysis was run to obtain eigenvalues for each component in the data. Two components had eigenvalues over Kaiser's criterion of 1 and in combination explained 77.78% of the variance. Inspection of the rotated component matrix showed that the concerns and embarrassment items loaded strongly onto separate factors, with no cross-loadings. All item loadings were above .77. This provides further support for a distinction between psychological concerns and embarrassment.

Contact quality. The regression model was significant, $F_{change}(2, 200) = 63.46$, $p < .001$, explaining 50% of the variance in contact quality ratings. Table 4 shows the predictors added in Step 2 of the model. Embarrassment contributed to 30% of the variance, while concerns accounted for just 0.3% and was not a significant predictor.⁴⁰

Table 4. Regression analysis of embarrassment and concerns on contact quality.

Variable	B	SE	β
Constant	5.05	.70	
Embarrassment	-.61	.06	-.66***
Concerns	.07	.06	.07

Note. $N = 208$, $\Delta R^2 = .32$ for Step 2, * $p < .05$, ** $p < .01$, *** $p < .001$.

Approach intentions. The model was significant, $F_{change}(2, 200) = 30.73$, $p < .001$, explaining 38% of the variance in approach intentions. Table 5 shows the predictors added in Step 2 of the model. Embarrassment contributed to 16% of the variance, while concerns accounted for almost none (< 0.01) and was not a significant predictor.⁴¹

Table 5. Regression analysis of embarrassment and concerns on approach intentions.

Variable	B	SE	β
Constant	5.53	.59	
Embarrassment	-.43	.06	-.49***
Concerns	.01	.06	.01

Note. $N = 208$, $\Delta R^2 = .19$ for Step 2, * $p < .05$, ** $p < .01$, *** $p < .001$.

Prejudice. The model was significant, $F_{change}(2, 200) = 5.17$, $p = .004$, explaining 16% of the variance in prejudice ratings. Table 6 shows the predictors added in Step 2 of the

⁴⁰ In addition to embarrassment, existing contact quantity, $\beta = .14$, $p = .007$, and social desirability, $\beta = .14$, $p = .011$, were significant predictors in the model.

⁴¹ In addition to embarrassment, contact quantity, $\beta = .15$, $p = .013$, and gender, $\beta = .12$, $p = .035$, were significant predictors in the model.

model. Embarrassment contributed to 3% of the variance, while concerns accounted for 0.02% and was not a significant predictor.⁴²

Table 6. Regression analysis of embarrassment and concerns on prejudice.

Variable	B	SE	β
Constant	4.09	.51	
Embarrassment	.15	.05	.22**
Concerns	.01	.06	.02

Note. $N = 208$, $\Delta R^2 = .04$ for Step 3, * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion

The objective of the present study was to investigate the impact of embarrassment experienced by a non-disabled sample on contact quality, approach intentions and prejudice towards physically disabled people.

The experimental manipulation could be considered somewhat effective. Participants in the negative affect condition reported increased levels of embarrassment when compared to those in the positive affect and control conditions. Given that there were no significant differences between the latter two conditions, it can be assumed that this is a result of the negative affect condition inducing embarrassment rather than the positive affect condition preventing it.

The observed findings support the hypotheses and are consistent with those in Studies 2 and 3; specifically that experiencing embarrassment may negatively impact both contact quality and approach intentions. Study 4 provides further support for this conclusion by observing these effects as the result of an experimental manipulation of embarrassment.

⁴² In Step 3 of this model, contact quantity, $\beta = -.24$, $p < .001$, and gender, $\beta = -.17$, $p = .012$, were significant predictors in the model.

The current study also builds on the work presented in the previous chapter by investigating prejudice as a consequence of embarrassment. In the traditional contact literature focus has been on how forms of positive contact (particularly cross-group friendships) contribute to prejudice reduction (R. Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). Generally, extant research has emphasised the role that affective processes, such as (intergroup) anxiety and empathy, have in contributing to and attenuating prejudice respectively (see Pettigrew & Tropp, 2008). Given the deleterious consequences of embarrassment observed in the previous experiments, it was plausible that the emotion might similarly impact prejudice. However, contrary to H₂, no effect of embarrassment on prejudice was observed, though planned contrasts revealed a marginally significant difference between the negative and positive affect conditions. In the cross-sectional data, embarrassment also positively predicted prejudice, meaning that there was some evidence for a relationship between the two variables.

One problem that researchers who investigate the impact of embarrassment may face is separating the effects of this emotion from other forms of affect, like anxiety. While this study did not focus on this issue primarily, embarrassment was found to predict contact quality, approach intentions and prejudice independently of participants' post-interaction concerns. However, note that the concerns measure used in this thesis has a strong cognitive element (see also Greenland et al., 2012). It may be that participants' were responding to that, rather than the affective experience of anxiety.

One limitation of this study is that participants reported the contact quality of an imagined interaction with a physically disabled person, rather than an actual interaction. Thus, it must be borne in mind that the relationships between variables identified here are approximations of psychological processes that occur within real-life interactions between non-disabled people and physically disabled people.

Chapter summary

Comprising three experimental studies, the work presented in this chapter (Studies 2, 3 & 4) has provided evidence for path *a*) and path *b*) of my primary model (concerns – embarrassment - contact quality; see Chapter 3, Figure 1). Specifically, psychological concerns have been shown to positively affect embarrassment (path *a*, Studies 2 & 3), while embarrassment was shown to negatively affect contact quality (path *b*, Study 4). Moreover, these findings suggest that concerns exert a negative indirect effect on the quality of interactions between non-disabled and physically disabled people through causing embarrassment (Studies 2 & 3).

There is also some evidence (Studies 2 & 3) to suggest that these concerns cause avoidance of the out-group. In the physically disabled sample (Study 2), this relationship was mediated by embarrassment in the traditional sense. Conversely, in the non-disabled sample (Study 3), concerns exerted a negative indirect effect through embarrassment (i.e. there was no bivariate relationship between concerns and avoidance).

These studies contribute to the literature by identifying two social psychological antecedents of contact quality within an under-researched context (mixed physical ability interactions). Moreover, through mediational analyses, these studies shed light on how these constructs may impact contact quality.

The experiments covered in this chapter have experimentally manipulated concerns (Studies 2 & 3) and embarrassment (Study 4) within the context of vignette-based interactions. The next thesis chapter will build on this by testing a novel method of manipulating concerns within the context of an actual mixed physical ability interaction.

Testing a novel manipulation of psychological concerns on embarrassment, contact quality and willingness to help the physically disabled within an actual interaction (Study 5)

The objective of the next study was to test a novel method of manipulating psychological concerns within actual mixed physical ability interactions. Specifically, the effect of non-disabled people's concerns was tested on embarrassment, contact quality and willingness to help the physically disabled. Importantly, this study builds on the previous work by using an actual interaction in place of contextualised vignettes (see Studies 2, 3 & 4).

Findings from both a physically disabled sample (Study 2) and non-disabled sample (Study 3), suggest a positive relationship between psychological concerns and embarrassment, but not one between concerns and contact quality. However, concerns seem to exert a negative indirect effect on contact quality through embarrassment (i.e. concerns cause embarrassment which causes reduced contact quality). In Study 2, embarrassment also mediated the relationship between concerns and approach intentions in the traditional sense (i.e. embarrassment accounts for the relationship between these two variables), while in Study 3 this mediation was indirect (see above).

A limitation of the previous studies was the use of vignettes in place of actual contact experiences. Thus, though the experimental manipulations of concerns in Studies 2 & 3 were successful, it is questionable how easy it would be to manipulate (and thus, ameliorate) concerns prior to a real-life interaction. Secondly, it was unclear whether the observed findings in these studies would generalise to real-life encounters between non-disabled people and physically disabled people. For instance, as participants in Study 2 and 3 were not anticipating actual upcoming contact with an out-group member, the concerns manipulation could have been of limited relevance to determining their contact

quality. This study aimed to address both these issues by testing a novel method of manipulating concerns within the mixed physical ability context.

Although experimental manipulations of psychological concerns have been tested before, this has mainly been in the interracial context. For instance, Shelton (2003) induced concerns about appearing racially prejudiced among White participants by telling them that, given prior research into racial bias towards Blacks, they should explicitly try *not* to be prejudiced within interracial encounters (vs. omitting this information). On the other hand, Plant et al. (2008) induced the same concerns by telling White participants that their Black partner expected them to be biased. I diverged from this paradigm for two reasons. Firstly, I wanted participant concerns to reflect anxiety about their own behaviour *in general* (see Chapter 3), including both concerns over appearing prejudiced towards the physically disabled and concerns regarding lack of knowledge how to behave.⁴³ Secondly, I thought it important that these concerns be as personally relevant to participants as possible, given that their hypothesised consequence, embarrassment, is associated with the *self* (R. S. Miller, 1996). Hence, I used an interactive task (see below) where concerns were induced in participants due to their own poor performance (i.e. as opposed to learning how their group in general behaves or being told about negative partner expectations; see Plant et al., 2008; Shelton, 2003).

Additionally, laboratory experiments like Study 5, which utilise self-report measures, are often especially susceptible to socially desirable responding (SDR), especially

⁴³ This is in part due to research like Shelton's (2003) which suggests that concerned White participants are actually liked better by their interaction partner, perhaps because they are actively trying not to be prejudiced. However, in the mixed physical ability context it is often especially difficult for non-disabled people to know how to behave towards those with impairments. As a result, these interactions often do not go smoothly, even when compensatory effort is made.

where the desired evaluations are sensitive in nature. SDR has also been noted as an issue in contact studies previously, where researchers have recently begun to augment self-report measures with observer ratings to counteract it (Hewstone et al., 2011; see also Christ et al., 2013). However, such an approach was not advisable for the present study, where the experience of being observed might have caused non-interaction related anxiety and embarrassment. Instead, Study 5 added a well-established method of controlling for social desirability, known as the Bogus Pipeline (BPL, Imhoff & Banse, 2009), as a second experimental manipulation.

Lastly, conducting the experiment in a laboratory setting also provided an opportunity to test whether holding concerns could impact actual behaviour (measured through willingness to help the physically disabled person).

The following hypotheses were tested:

H₁ Participants in whom high concerns are induced will experience higher levels of embarrassment compared to those in whom low concerns are induced. As stated previously, concerned participants may be more likely to perceive their own behaviour within an interaction as offensive. Embarrassment may then arise due to the perception that the participant is the target of negative out-group evaluations, has failed to maintain a smooth public performance and/or has violated a situational or personal standard (see Study 1; R. S. Miller, 1996).

H₂ Consistent with the previous studies, the link between concerns and reduced contact quality (either an indirect effect or 'pure' mediation) will be accounted for by an increase in embarrassment.

No further specific hypotheses were made. The reasons for this are listed below:

No specific hypotheses were made about the impact of concerns on contact quality or willingness to help. The previous studies (i.e. Study 2 & 3) did not observe a direct link between concerns and contact quality or between non-disabled people's concerns and another measure of contact avoidance (approach intentions). However, as participants will experience an actual cross-group interaction, the concerns manipulation may be more relevant for determining their perceptions and it is conceivable that direct effects could emerge.

No specific hypothesis was made regarding the mediation (or, alternatively indirect effect) on the relationship between concerns and willingness to help by embarrassment. While it is plausible that more highly embarrassed participants will attempt to offer aid to the physically disabled confederate as a way of regaining their social standing (R. S. Miller, 1996, 2004, 2007; Semin & Manstead, 1982), their underlying feelings towards further interaction may in fact be negative (which the BPL should uncover if present; see below), leading them to want to avoid further interaction (Katz et al., 1978; Synder et al., 1979). Like Study 3, these countervailing pressures may lead to a freezing response (i.e. a null effect). However, it is worth noting that as this study involves an actual interaction, the demand to be kind to the physically disabled may be stronger than in the previous two studies.

No specific hypothesis was made about the bogus pipeline experimental manipulation. If indeed participant responses are obscured by social desirability bias, the BPL manipulation could conceivably elicit more truthful responses, which past literature suggests would be negative in tone (e.g., Katz et al., 1978). However, given that participants will still respond to measures independently and anonymously, the laboratory setting may not in fact deter them from expressing truthful attitudes about the confederate.

Method

Participants

Participants were 95 non-disabled undergraduate students from a university in the south-east of England. Seventy-one of these were female, while 23 were male (one participant did not state their gender). The age range was between 18 and 51 years of age ($M = 20.75$, $SD = 5.05$). The majority of participants were British or Irish (80%) in origin.

Five participants were removed from the dataset because they reported suspicions about the confederate or the study design. An additional three cases were removed, one as they did not complete the term-sorting task properly and two because they did not complete any dependent measures. This left a total of 87 cases. Six participants also reported having a physical disability. None had a visible physical disability but they also did not provide further information as to what their disability was. Therefore, it is unclear whether, if at all, these participants identified as “a physically disabled person” rather than “a non-disabled person”. As such, analyses were run with and without these cases. As they did not make a difference to the findings, they were retained.

Design

The current experiment utilised a 2 x 2 between-subjects design, in which concerns (high vs. low) and presence of a bogus pipeline (BPL vs. control) were the independent variables manipulated. All conditions had above 20 cases in each cell, except for the low concerns x BPL condition which had 18 (as a consequence of the removed cases).

Procedure

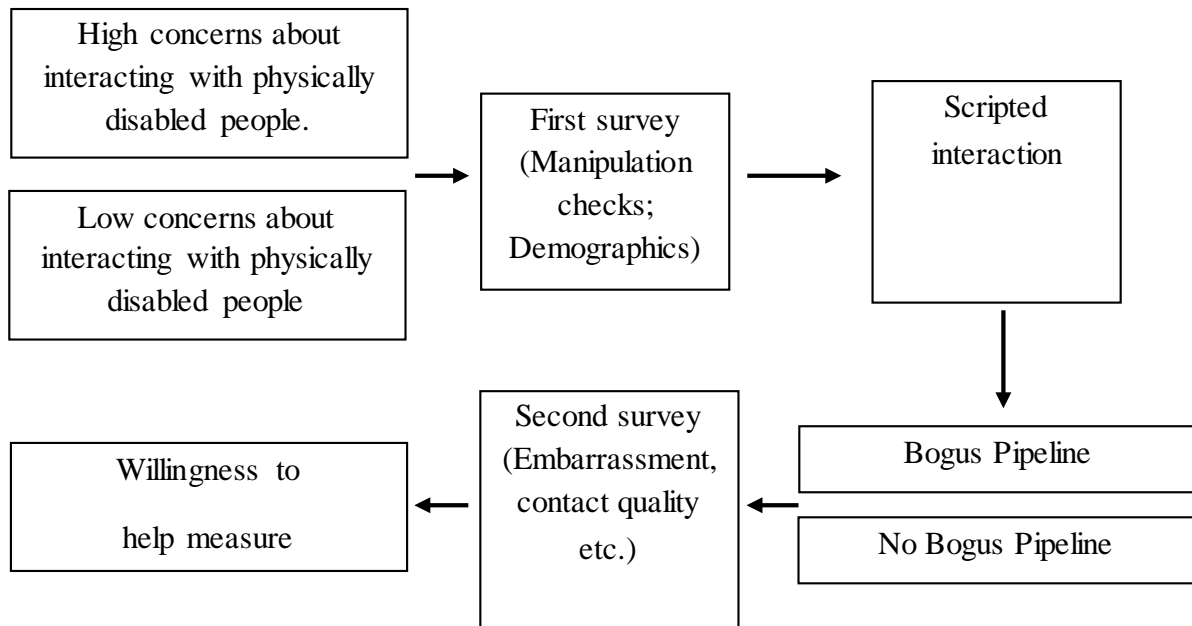
Participants signed up for the study in exchange for subject credit (psychology students only) and a nominal fee of £3 (all participants). Upon arrival, they were greeted by an

experimenter and informed that they were taking part in a study designed to investigate attitudes towards minority groups. Once informed consent had been given, participants were instructed to complete a short computerised term-sorting task containing the independent variable manipulation (high concerns vs. low concerns, see Figure 36). The words used in this task were derived from a previously conducted pilot study (see below). Subsequent to the manipulation, participants were required to fill in a short survey that included the manipulation checks and demographic information.

A scripted interaction then took place, where participants discussed three likes and dislikes with a physically disabled confederate. Participants were then randomly assigned to one of two further experimental conditions (BPL vs. control, see Figure 29) and completed a survey containing the dependent measures. Additionally, after a bogus debriefing, the experimenter asked the participant if they would be willing to walk the confederate to a central location in town. Participants' yes or no responses constituted the behavioural contact avoidance measure (i.e. willingness to help). All participants then received a full written and verbal debriefing.⁴⁴

⁴⁴ A second behavioural measure was also included where participants were given the option to donate some or their entire £3 fee to a disability charity. Neither the concerns nor the BPL manipulation had a significant effect on the amount donated. Embarrassment was also tested as a mediator between concerns and donation amount. No effects were observed.

Figure 29. Diagram to show the experimental procedure for Study 5.



Materials

Pilot study. Sixteen non-disabled people generated three “appropriate” and three “inappropriate” terms that could be used to refer to physically disabled people in an online pilot survey. Each choice was also rated as appropriate or inappropriate on a nine-point Likert scale (1 = *Inappropriate*, 9 = *Appropriate*). They were then asked to assign appropriateness ratings to 32 disability-related terms generated by the researcher. The terms generated by the participants generally corresponded with those of the researcher, though some participant choices had additional connotations and were therefore excluded on that basis (e.g., “scroungers”). Mean appropriateness ratings for each of the words provided by the participants and those of the researcher were calculated and the ten terms with the highest “inappropriateness” and “appropriateness” ratings were selected for use in the study, as well as the ten items whose appropriateness ratings were closest to the mid-point of the scale (see Appendix C for the full word list).

Task. Participants completed a computerised term-sorting task using a buttonpad, which was counterbalanced to avoid handiness effects. The task was described as being developed by a national disability charity for the purpose of raising awareness of stigma and prejudice. Participants had to categorise terms pertaining to physically disabled people (e.g., “person with an impairment”, “handicapped”) as either “*Appropriate*” or “*Not Appropriate*” terminology to use when referring to the group/group members. Words appeared one at a time in a random order on the center of the screen for up to three seconds and each was preceded by a fixation cross. Participants were instructed to respond as quickly and accurately as possible to each term. They were required to choose the green button to indicate appropriate words and the red button to indicate words thought to be not appropriate. Thirty words were chosen based on suggestions made by an unrelated sample of non-disabled participants during a pilot study (see above).

Scripted interaction. Participants were informed that they would be interacting with another participant, who was physically disabled, shortly after completing the term-sorting task (this was described as part of the study aim of investigating attitudes towards minority groups). This information was provided in order to make the concerns manipulation more relevant. The interaction took place after participants had responded to the first survey. A physically disabled confederate was led into the room and both the participant and the confederate were instructed to discuss three likes and three dislikes each. The confederate always began the interaction but the order of discussion (e.g., likes or dislikes first) was counterbalanced. The pair was instructed to spend up to 30 seconds on each like or dislike and the interaction was terminated either after each

person had mentioned three of each, or once 5 minutes had elapsed.⁴⁵ The physically disabled confederate was male, in his early twenties and purported to be a second-year student of English literature. His impairment was very visible to participants (cerebral palsy, affecting left-side ambulatory movement).⁴⁶

Manipulations

Concerns manipulation. Concerns about interacting with physically disabled people (high vs. low) were manipulated by the provision of randomly allocated feedback at the end of the term-sorting task. Specifically, participants were either told that they had achieved a “SLOW” time with “VERY BAD” accuracy (high concerns), or a “FAST” time with “VERY GOOD” accuracy (low concerns). These descriptions were accompanied by bogus mean reaction times (in seconds) and accuracy percentages to enhance believability. Critically, the implications of the bogus results were also clearly explained to ensure participants fully engaged with the manipulation. In the *high concerns* condition participants were told:

“These results suggest that you do not have a clear understanding of issues important to physically disabled people. Lack of awareness of appropriate words

⁴⁵ The scripted likes and dislikes discussed by the confederate were as follows:

LIKE 1: “I guess a big ‘like’ of mine would be reading a good book. In general, I like crime fiction and science fiction”.

LIKE2: “I like computers, messing around with them and adding things to them to make them work faster”.

LIKE3: “My third like is pizza. Very simple. I don’t think you can go wrong with a good pizza”.

DISLIKE1: “I dislike it when my flatmate takes long showers in the morning! It always seems to be timed just as I am getting ready to go in”.

DISLIKE2: “Typical, but I don’t like the weather at the moment. It’s so cold and rainy. I keep forgetting my coat and getting drenched”.

DISLIKE3: “My washing machine is playing up at the moment. It keeps breaking down which is annoying”.

⁴⁶ Specifically, the confederate walks with their left leg rotated roughly 90° inwards. The confederate emphasised this gait when entering and exiting the lab in order to ensure that the participant was aware of the impairment. Note that the role of the confederate was played by the main researcher and author of this thesis. The implications of this are discussed in Chapter 9.

to use when referring to disabled people increases the chance you will cause them offence and that you will be considered prejudiced”.

Conversely, in the *low concerns* condition participants were told:

“These results suggest that you have a clear understanding of issues important to physically disabled people. Awareness of appropriate words to use when referring to disabled people decreases the chance you will cause them offence and that you will be considered prejudiced”.

Bogus pipeline manipulation. Following Imhoff and Banse’s (2009) procedure, a psychophysiological apparatus was attached to half of the participants prior to the administration of the dependent measures to act as a bogus pipeline. Specifically, the index and middle finger of participants’ non-dominant hand was placed onto a small instrument with two sensing plates and secured with a strap. This was attached to a dial, ostensibly to measure pulse rate, which was then hidden in a small briefcase so as not to distract participants. They were informed that the device was “a reliable index of truthfulness...that essentially works like a lie detector” and reminded to be as honest as possible when giving feedback. Participants in the control condition completed the survey as normal, without being given mention of the bogus pipeline device.

Manipulation checks

Perceptions of task performance. A single item measuring perceptions of task performance was included. Specifically, participants were asked how well they thought they did on the term-sorting task (1 = *Not at all well*, 9 = *Very well*).

Concerns. Concerns with interacting with physically disabled people were measured using seven items (1 = *Not at all*, 9 = *Very much so*), which participants answered in

response to the statement “When interacting with physically disabled people, I often...”. These statements were primarily adapted from the previous experiments (Studies 2 & 3; e.g., “[I] worry about unintentionally appearing prejudiced towards physically disabled people”; “[I] worry about reminding physically disabled people of their disability”). Three items were also added to the scale, informed by the previous qualitative work (Study 1; e.g., “worry about being unfamiliar with the things physically disabled people find important”). Scores were averaged to form a single measure of concerns over interacting with physically disabled people, with high scores indicating a greater degree of concerns.

Dependent measures

All responses were given via a 9 point Likert scale (1 = *Not at all*, 9 = *Very much so*).

Embarrassment. Participants were asked about the emotions they felt during the interaction with the confederate. Five items were used to measure embarrassment, again derived from commonly used descriptions of the emotion and its corollaries (e.g., “embarrassed”, “uncomfortable”, “foolish”, “awkward” and “incompetent”; see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Ratings for each item were averaged into a single index to measure embarrassment, with high scores indicating greater reported embarrassment ($\alpha = .83$).

Contact quality. Quality of contact was measured on a five item scale, where participants were asked to indicate how “positive”, “personal”, “enjoyable”, “worthwhile” and “superficial [reverse coded]” their contact with the other participant was. Scores were averaged to form a single scale measuring quality of contact, with high scores indicating greater quality of contact ($\alpha = .80$).

Contact quantity. Existing quantity of contact with physically disabled people was measured using the same three items as in previous studies. Participants were asked to what extent they mixed with physically disabled people "...in the area you live in", "...when socialising", and "...when engaging with leisure activities". Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact ($\alpha=.81$). This measure was presented in the first survey with the manipulation checks to ensure the interaction did not bias quantity ratings in any way.

Embarrassibility. The same three-item scale was included to measure embarrassability as in previous studies. Specifically, participants were asked whether they often felt "easily embarrassed regardless of where I am and what I do", "anxious to make a positive impression on others" and "mortified over making minor embarrassing mistakes" (Kelly & Jones, 1997). Items were averaged to form a single scale, with high scores indicating greater levels of embarrassability ($\alpha = .73$).

Interpersonal attraction. To control for the possibility that contact quality would be influenced by how attractive the participants found the confederate, interpersonal attraction was measured with two items adapted from Stürmer, Snyder and Omoto, (2005). Specifically, participants were asked to what extent they thought the confederate was "physically attractive" and "likable". Scores were averaged to give a single measure of interpersonal attraction ($r(87) = .49$).

Willingness to help. After a bogus debriefing, the experimenter told participants that the confederate (who was not present) needed to be taken to a central location away from campus after the study and had requested their assistance. It was stressed that this was optional and participants were invited to accept or refuse this request. A *yes* or *no*

response was recorded. The experimenter also checked that the participants were familiar with the local area prior to asking. Nine responses were recoded as missing data as these participants did not know the area very well.

Demographics. Demographic information (e.g., age, gender) was also collected from participants.

Results

Preliminary analyses

Table 7 shows the correlations between the measured variables and the concerns and bogus pipeline manipulations.

Table 7. Correlations between all measured variables and the concerns and bogus pipeline manipulations.

Variable	1	2	3	4	5	6	7
1. Concerns	-						
2. Bogus pipeline	.05	-					
3. Embarrassment	-.03	.09	-				
4. Contact quality	-.04	.06	-.38***	-			
5. Contact quantity	.11	.01	.12	.12	-		
6. Embarrassability	.00	-.15	.21	-.03	.14	-	
7. Interpersonal attraction	.01	-.01	.00	.51***	.19	.15	-
Mean (SD)	4.98 (1.68)	N/A N/A	3.33 (1.61)	6.10 (1.27)	3.50 (1.66)	5.33 (1.82)	5.61 (1.42)

Note. Concerns was coded 1 = Low, 2 = High, Bogus pipeline was coded 0 = Absent, 1 = Present. $N = 87$, * $p < .05$, ** $p < .01$, *** $p < .001$. The mean and standard deviation of concerns is given for the scale manipulation check.

Manipulation checks

Task performance. An independent samples *t*-test was conducted to compare performance ratings of participants in the high concerns condition (i.e. those that received negative feedback about their performance) with those in the low concerns condition (i.e. those that received positive feedback about their performance). As expected, significant differences in performance ratings were observed, $t(85) = -8.94$, $p < .001$, $d = 0.69$, with those in the high concerns group rating their performance as significantly worse ($M = 2.94$, $SD = 1.94$) than those in the low concerns group ($M = 6.39$, $SD = 1.57$).

Concerns. An independent samples *t*-test was also conducted to compare participants' concerns over interacting with physically disabled people between the high and low conditions. Contrary to expectations, no significant differences in overall concern levels were observed, $t(85) = 1.05$, $p = .297$, $d = 0.11$, with the high concerns group reporting similar levels of concerns ($M = 5.14$, $SD = 1.72$) to those in the low group ($M = 4.76$, $SD = 1.65$). Due to this, mean scores on individual items were inspected. A significant difference was found for the item "[I] worry about not knowing how to behave towards physically disabled people", $t(85) = 2.14$, $p = .035$, $d = 0.22$. Specifically, participants in the high concerns condition ($M = 4.65$, $SD = 2.31$) reported higher levels of concerns than those in the low concerns condition ($M = 3.63$, $SD = 2.06$).

Taken together, these findings suggest that the experimental manipulation was successful, albeit only on a specific item, perhaps reflecting a subset of concerns. Specifically, the manipulation seemed to make participants worried about their lack of knowledge of how to behave towards physically disabled people, rather than related concerns, for example, about causing offence or appearing prejudiced.

The effect of concerns and BPL on embarrassment, contact quality and willingness to help

Analytic strategy. A series of univariate ANCOVA's were conducted with concerns (high x low) and bogus pipeline (BPL x No BPL) as the independent variables and embarrassment and contact quality as the dependent variables. As in Study 3, gender (dummy coded, 0 = male, 1 = female), age, existing contact quantity with physically disabled people and embarrassability were included as covariates in each model. Interpersonal attraction towards the confederate was also added as a final covariate.⁴⁷

Embarrassment. There was no significant main effect of concerns, $F(1, 78) = .028$, $p = .868$, partial $\eta^2 = .000$, or BPL, $F(1, 78) = 1.11$, $p = .295$, partial $\eta^2 = .014$, on embarrassment. Specifically, participants in the high concerns condition ($M = 3.05$, $SE = .233$) were not significantly more embarrassed than the low concerns condition ($M = 3.00$, $SE = .262$). Similarly, no differences were found between the BPL ($M = 3.21$, $SE = .260$) and no BPL conditions ($M = 3.21$, $SE = .237$). Additionally, there was no interaction effect between the two manipulations, $F(1, 78) = .272$, $p = .603$, partial $\eta^2 = .003$.

Contact quality. There was no significant main effect of concerns, $F(1, 78) = .526$, $p = .470$, partial $\eta^2 = .007$, or BPL, $F(1, 78) = .452$, $p = .503$, partial $\eta^2 = .006$, on contact quality. Specifically, participants in the high concerns condition ($M = 6.19$, $SE = .161$) did not report significantly lower or higher contact quality with the confederate than those in the low condition ($M = 6.02$, $SE = .164$). No difference was found between the

⁴⁷ As stated in Chapter 4, the following analyses have only the power to detect medium to large effects and thus conclusions should be drawn with requisite caution.

BPL ($M = 6.19, SE = .181$) and no BPL conditions ($M = 6.02, SE = .165$). Additionally, there was no significant interaction effect, $F(1, 78) = .142, p = .708, \text{partial } \eta^2 = .002$.⁴⁸

Willingness to help. As this was a dichotomous measure, a two-step logistic regression was used to test the effect of the manipulations on willingness to help the physically disabled confederate. The covariates were included in Step 1, while the experimental manipulations and their interaction term were added to Step 2.

The overall model was not significant, $\chi^2(2, N = 78) = .297, p = .888$, and no significant predictors were found. Table 8 shows the results of the model for the main variables of interest.

Table 8. Regression analysis of the concerns and bogus pipeline manipulations on willingness to help.

Variable ($N = 78$)	B (SE)	Wald	Odds ratio
Constant	-0.89 (1.95)	0.21	0.41
Feedback	0.01 (0.70)	0.00	1.01
Device	-0.37 (0.70)	0.28	0.69
Feedback x Device	0.57 (0.95)	0.36	1.77

To summarize, the experimental manipulations failed to exert any measurable effects on embarrassment, contact quality or willingness to help the confederate. In the case of the bogus pipeline manipulation, this could indicate that participants were willing to report socially undesirable attitudes regardless of the presence of a BPL. However, caution must be taken in this interpretation as the effectiveness of BPL manipulations

⁴⁸ Interpersonal attraction was the only significant covariate within this model, $F(1, 78) = 30.66, p < .001$. No significant interactions were observed with the independent variable manipulations.

can only be inferred (Imhoff & Rainer, 2009). Further possible reasons for obtaining the null effects above will be discussed shortly.

Given that concerns manipulation did not appear to affect the variables of interest, subsequent analyses were conducted using the scale measure of concerns to harvest insights from the cross-sectional data.

Mediation analysis

Analytic strategy. PROCESS (5000 resamples; Hayes, 2013) was used to test two sequences. Model 1 investigated the relationships between concerns, embarrassment and contact quality. As in Study 3, it was expected: a) that concerns might increase embarrassment, and b) that embarrassment would lead to reduced contact quality. In this model, concerns (i.e. the scale measure, not the experimental manipulation), was the independent variable, while contact quality was the dependent variable. Embarrassment was the proposed mediator.

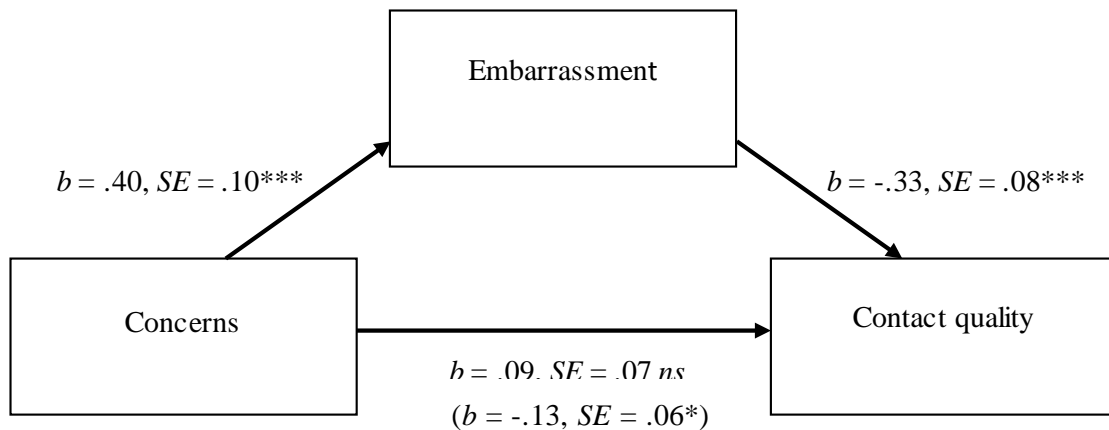
Model 2 similarly investigated the relationship between concerns, embarrassment and willingness to help. The hypothesised pathways were identical to Model 1, except that willingness to help replaced contact quality as the (dichotomous) dependent variable.

Like previous analyses, age, gender (dummy coded, 0 = Male, 1 = Female), contact quantity, embarrassability and interpersonal attraction were used as covariates in both models. Additionally, the BPL manipulation (dummy coded, 0 = absent, 1 = present) was added to control for the possibility that participants were giving artificial answers.

Contact quality (Model 1). As in the previous studies, concerns positively predicted embarrassment while embarrassment negatively predicted contact quality. Furthermore, the analysis revealed that embarrassment linked concerns to reduced contact quality

(95% CI [-0.28, -0.40]; see Figure 30). As previously, there was no significant total effect of concerns on contact quality, $b = -.05$, $SE = .07$, $p = .547$, meaning this is an example of *indirect effects* (see Hayes, 2009; Mathieu & Tayler, 2006).

Figure 30. Model 1 (concerns-embarrassment-contact quality).

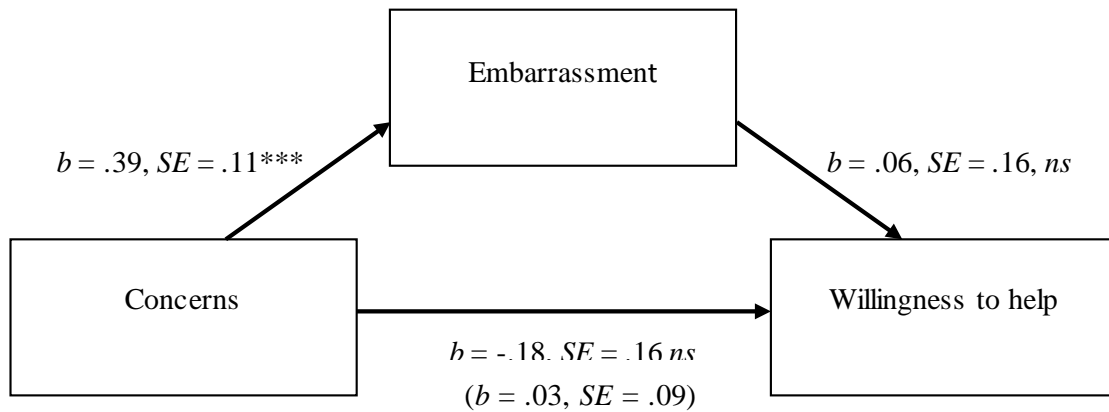


Note. The total effect of concerns on contact quality is non-significant, $b = -.05$, $SE = .07$, $p = .547$, indicating that this is an example of indirect mediation. The indirect effect (i.e. the effect of concerns on contact quality through embarrassment) is given in parentheses. $N = 87$, $*p < .05$, $**p < .01$, $***p < .001$.⁴⁹

Willingness to help (Model 2). Embarrassment was not found to mediate between concerns and willingness to help the physically disabled confederate (95% CI [-0.13, 0.24]; see Figure 31). In addition to non-significant direct and indirect effects, no total effect of concerns on willingness to help was present, $b = -.15$, $SE = .15$, $p = .296$. The proposed mediator (embarrassment) did not influence this outcome variable.

⁴⁹ Of the covariates, only gender, $b = .87$, $SE = .40$, $p = .034$, significantly influenced path *a* (concerns-embarrassment) while interpersonal attraction, $b = .45$, $SE = .08$, $p < .001$, significantly influenced path *b* (embarrassment-contact quality).

Figure 31. Model 2 (concerns- embarrassment- willingness to help).



*Note. The total effect of concerns on willingness to help is non-significant, $b = -.15$, $SE = .15$, $p = .296$, indicating that this is an example of indirect mediation. The indirect effect (i.e. the effect of concerns on willingness to help through embarrassment) is given in parentheses. $N = 78$, due to nine missing values for willingness to help, $*p < .05$, $**p < .01$, $***p < .001$.*

Discussion

The present study builds directly on Studies 2-4 by testing a novel method of manipulating psychological concerns within actual mixed physical ability interactions. Specifically, the impact of non-disabled people's concerns on embarrassment, contact quality and willingness to help the physically disabled was investigated.

The effectiveness of the experimental manipulation was questionable, given that no overall effect was observed on the manipulation check. However, inspection of the individual items revealed some success in that participants within the "high concerns" condition held a specific worry about not knowing how to behave towards physically disabled people. This could reflect the nature of the manipulation, in light of the fact that participants were given bogus feedback on their ability to identify appropriate or inappropriate disability terms. A major implication arising from this is that concerns may be a challenging feature of mixed physical ability interactions to manipulate.

Future studies could alter the intensity of the manipulation to ensure all facets of non-disabled people's psychological concerns are affected (e.g., perhaps by ostensibly giving the task results to the physically disabled interactant). Still, given the partial success, the technique does provide some guidance for other researchers, especially those that wish to induce non-disabled concerns about not knowing how to behave towards physically disabled people.

Contrary to Study 3, an experimental effect of concerns was not observed on embarrassment, meaning that H_1 was not supported. The explanation for this unexpected finding could be that in this experiment only a subset of psychological concerns appear to have been induced in the sample and perhaps this subset was not enough to affect embarrassment levels. Alternatively, perhaps the interaction was too neutral in content and this prevented embarrassment from occurring. The previous studies utilised a vignette-based method that offered a high degree of contextualisation for participants. Perhaps a certain level of potential for a situation to "turn awkward" is necessary for participants to experience embarrassment and the requisite amount was not present here.

No experimental effect of concerns was observed on contact quality. This is consistent with the findings of Study 3, but could also be due to the questionable effectiveness of the manipulation described above. Importantly however, mediational analyses do provide (cross-sectional) evidence in support of this earlier study. Specifically, concerns were found to exert an indirect negative effect on contact quality through embarrassment, supporting H_2 .

Additionally, no experimental effect of concerns was observed on willingness to help the physically disabled confederate. While this was consistent with predictions made in light of literature that has observed a freezing response (see Greenland et al., 2012), it

was expected that embarrassment would again be identified as the mechanism that drives the relationship between concerns and avoidance of cross-group encounters. It is worth noting that the measures employed in the previous studies examined *intentions*, while the one included in the present experiment advanced this to look at *actual behaviour*. Failure to replicate the earlier findings may thus be representative of the wider gulf between intentions and behaviour (see Azjen, 2002).

Lastly, no main effects or interactions of the bogus pipeline manipulation were observed on the dependent variables of interest. This could indicate that participants were responding relatively truthfully. Unfortunately, as the validity of the BPL procedure can only be inferred, another possibility is that the manipulation was not effective, though there was nothing in the data gathered from participants to suggest this (e.g., in post-hoc debriefings).

A final limitation of note is that the study only had the power to detect medium to large effects (i.e. .50 to .80). Therefore, another possible explanation for the null findings is that any effects were smaller than medium in size.

Despite the above shortcomings, it should be highlighted that Study 5 built upon the previous work by examining a novel method of manipulating concerns prior to an actual interaction between a non-disabled participant and a physically disabled confederate. Furthermore, the study employed a dynamic, interactive approach that is rare within the contact literature, especially in the mixed physical ability context (see Hebl & Dovidio, 2005). Although the earlier experimental findings were not replicated, it is also encouraging that the cross-sectional data showed that concerns exerted an indirect negative effect on contact quality through embarrassment, mirroring the previous work.

Chapter summary

Comprising a single experimental study, Study 5 built on the previous work by testing a novel method of manipulating non-disabled people's psychological concerns within the context of an actual interaction. Specifically, the effect of these concerns on embarrassment, contact quality and willingness to help the physically disabled was investigated.

The effectiveness of the manipulation was questionable. Specifically, change was observed only on specific items pertaining to concern about not knowing how to behave towards the physically disabled. This highlights the difficulty in manipulating concerns prior to real-life mixed physical ability interactions. However, given the partial success of the paradigm used here, the study does provide some guidance for researchers wishing to manipulate concerns in the mixed physical ability context.

Although Study 5 failed to find the same (negative) experimental effect of concerns on embarrassment, it is encouraging that, like Studies 2 & 3, findings indicated that concerns exerted an indirect negative effect on contact quality through embarrassment. However, it should be noted that the study only garnered cross-sectional support in this case.

Additionally, Study 5 did not identify any direct or indirect influence of concerns on a behavioural measure of avoidance. Although the earlier studies (i.e. Studies 2 & 3) provided some evidence to indicate that concerns were negatively linked to avoidance intentions, the present result suggests this may not extend to actual behaviour.

Study 5 contributes to the existing literature by testing a novel manipulation of concerns within an actual mixed physical ability interaction. Investigating both actual

contact and the negative features of mixed encounters is an important direction within contact literature (e.g., Pettigrew & Tropp, 2011). Though not without its flaws, the paradigm tested here presents a new option for researchers wishing to manipulate concerns in the mixed physical ability context.

CHAPTER 8

The extent that feedback from physically disabled people can restore positive perceptions of contact quality for non-disabled people (Study 6)

The previous chapters have focused on the extent that psychological concerns and embarrassment can predict contact quality among non-disabled people and physically disabled people. Findings suggest that the concerns members hold about mixed encounters may lead (indirectly) to reduced contact quality. Specifically, concerns were observed to lead to embarrassment which in turn predicted decreased contact quality. The experience of embarrassment has also been further linked to detrimental consequences for both groups, notably reduced approach intentions and, in the case of non-disabled people, greater prejudiced attributions towards physically disabled people.

In sum, the previous chapters have identified embarrassment as the link between concerns and the impoverishment of contact quality within the mixed physical ability context. This chapter will build on the preceding work by testing potential strategies that may attenuate embarrassment and thus improve the quality of interactions between these groups. To achieve this, a further three empirical studies are presented.

As stated previously, embarrassment is an affective response to a perceived social transgression (R. S. Miller, 1996). As such, the emotion may be a common occurrence within intergroup contexts where misinterpretations and misperceptions are likely to occur (see Vorauer, 2006, 2013). In light of this, it is plausible that explicit social feedback could reduce embarrassment in awkward encounters by acting as a corrective for erroneous interaction beliefs. Therefore, in the first study presented as part of this chapter, the extent that feedback delivered by a physically disabled person can attenuate embarrassment and improve non-disabled perceptions of contact quality is investigated.

Although explicit feedback within intergroup contexts has not been extensively investigated (cf. Hornsey & Imani, 2005), research suggests that out-group members are often seen as a useful source of information in mixed encounters (Vorauer, 2013). Specifically, majority group members are seen as indicators of social competence while minority groups are seen as good judges of what is appropriate in such encounters (Crosby et al., 2008). While explicit feedback is generally non-normative in social interactions (Blumberg, 1972), studies note that some physically disabled people use direct strategies to lessen the awkwardness of encounters with non-disabled people, such as acknowledgement of their impairment or soliciting help with a menial task (Hebl & Kleck, 2000). Moreover, receiving positive feedback from members of another group has been highlighted as beneficial for intergroup relations previously (e.g., Osgood, 1962).

Specifically, such a strategy could be especially beneficial for attenuating embarrassment and restoring good quality contact between non-disabled people and physically disabled people after an awkward interaction. Such interactions can often be “self-hampering” for both parties (see Studies 2 & 3; see also Reeve, 2012); for example, non-disabled people may feel painfully embarrassed about behaviour that, in actuality, is perceived as innocuous by their interaction partner (e.g., inquiring about an impairment). Importantly, messages from the disabled person after an awkward interaction have the ability to pass on social information that could change the way non-disabled people appraise earlier actions (or perceive others to appraise their actions) and correct misperceptions and misinterpretations (see Vorauer, 2006, 2013).

One study that has examined the extent feedback can engender more fruitful interactions between members of conflicting groups provides insight on how this process might work (Shnabel & Nadler, 2008). In one experiment, participants were categorised as

victims or perpetrators by manipulating their perspective of a vignette that depicted a mild conflict situation (e.g., about an employee that was demoted unfairly by a superior). Specifically, the protagonist perspective given in the vignette was either that of the victim (employee) or the perpetrator (superior). After the conflict had occurred, participants read that feedback was given by the vignette antagonist, containing a message of either empowerment or acceptance (vs. no feedback at all). In the conditions where the feedback was relevant to participants' impaired emotional resource due to their induced perpetrator/victim status (i.e. sense of acceptance for perpetrators, sense of being empowered for victims), feedback increased willingness for reconciliation with the depicted antagonist.

Importantly, Shnabel and Nadler's (2008) work suggests that messages from interaction partners must contain unique, relevant content to be most effective. Specifically the feedback must allow the receiver to regain equilibrium after a conflict by offering them access to needed emotional resources (e.g., acceptance, empowerment). Secondly, the authors showed that this type of feedback has restorative qualities, in that willingness for reconciliation improved after relevant messages were received, compared to levels beforehand. In a similar vein, it is reasonable to suggest that the right feedback, given by a physically disabled person, could offer needed emotional resources to non-disabled people who assume they have committed a transgression.

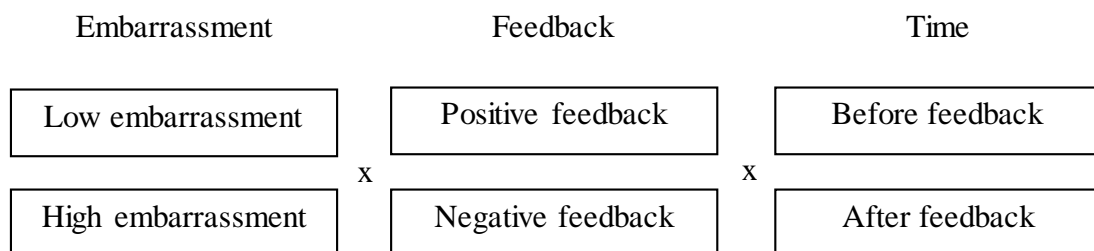
Specifically, given that the embarrassment non-disabled people experience may be shaped largely by the perception that they have acted in a socially unacceptable manner (R. S. Miller, 1996), feedback that the physically disabled person enjoyed the interaction may restore perceptions of positive contact quality and produce positive attitudes. Conversely, feedback that the physically disabled person was offended by the interaction may worsen non-disabled people's attitudes, as it may confirm the beliefs

that are causing embarrassment. As the study is interested in the extent that specific feedback could operate as an intervention after an embarrassing interaction, it is of interest to look at perceptions of the interaction before and after feedback (see Shnabel & Nadler, 2008).

For the present study, the paradigm used in Study 1 of Shnabel and Nadler (2008) was adapted for use within mixed physical ability interactions (described below), for the purposes of inducing either *low* or *high* embarrassment. Like Study 5 of the present thesis, a confederate with an authentic physical disability played the role of the other participant in the procedure, in order to make the interaction as close to real-life examples as possible. Such an approach builds on the methods used in previous studies (i.e. vignette-based interactions, imagined interactions) and offers a rare dynamic investigation into interactions between non-disabled and physically disabled people (see Hebl & Dovidio, 2005).

The experiment utilised a 2 x 2 x 2 design, where embarrassment (high, low) and feedback (positive, negative) were the manipulated variables and time (before feedback, after feedback) was a within-subjects variable (see Figure 32).

Figure 32. Diagram to show the experimental design of Study 6.



Specifically, the following hypotheses were tested:

H₁ Participants in whom high embarrassment is induced will report more negative contact quality with the physically disabled confederate, decreased desire for future

contact and increased prejudice compared with those in whom low embarrassment is induced. As previously stated, higher levels of embarrassment should result in more negative affect which should account for the proposed changes.

H₂ Participants who receive positive feedback about the interaction will report more positive contact quality with the physically disabled confederate, increased desire for future contact and decreased prejudice compared with those who receive negative feedback about the interaction. It is reasonable to expect positive feedback to disconfirm participant belief that offence was caused to the physically disabled person. This may lessen their embarrassment resulting in positive attitudinal outcomes. Conversely, negative feedback may confirm participant belief about causing offence to their interaction partner, leading to corresponding negative outcomes (R. S. Miller, 1996). These effects should also be observable over time (i.e. a time x feedback interaction), in that receiving feedback should cause attitudinal *change*.

No specific hypotheses were made regarding a two-way interaction between embarrassment and feedback or a three-way interaction between embarrassment, feedback and time. Specifically, positive feedback could be more effective and negative feedback more detrimental at high levels of embarrassment. In other words, perhaps a crossover interaction might occur. Alternatively, feedback might be equally effective regardless of the degree of embarrassment induced in participants. Simply put, there is not enough extant empirical evidence into embarrassment and feedback in group contexts to make a prediction in a single direction. Therefore no directional hypothesis is proposed.

Method

Participants

Participants were 95 non-disabled students from a university in the south-east of England. Sixty-six were female and 24 were male, while 5 did not state their gender. Age ranged from 17 to 44 ($M = 20.31$, $SD = 2.72$). Approximately 78% were British in origin.

Nine of these were removed from the dataset because they reported suspicions about the confederate or the study design. This left a total of 86 cases. An additional three cases reported having a physical disability, but the disabilities listed were non-visible (e.g., asthma, hearing impairment, diabetes). It is possible that these participants might feel “non-disabled” in comparison to the confederate, who had an obvious physical disability (see Deal, 2003). Consequently, analyses were run with and without these cases. As the results were unaffected, they were retained.

Design

The experiment utilised a 2 x 2 x 2 mixed design. Participant embarrassment levels (low vs. high) and feedback (positive vs. negative) were the between subjects variables manipulated, while time (before feedback vs. after feedback) was the within-subjects variable. All condition sizes exceeded 20, bar the low embarrassment x negative feedback condition which contained 18 participants. The experimenter was blind to both conditions, while the confederate was blind to the feedback condition when interacting with the participant (i.e. feedback condition was allocated by the confederate only after all contact with the participant had ceased).

Procedure

The procedure for this experiment was adapted from Study 1 of Shnabel and Nadler (2008).

Prior to the beginning of the lab-based component, a link to an online survey was distributed to psychology students at a local university. Participants answered questions about their personality, and attitudes towards various social issues and groups, including physically disabled people, in exchange for course credit. After a suitable amount of time had elapsed (< 2 weeks), these students were contacted to participate in an ostensibly unrelated lab-based study to test student creativity run by the (fictional) UK Advertising Agency (UKAA). As participants were waiting in the foyer, a physically disabled confederate would then arrive, giving the participant a clear opportunity to see their impairment (cerebral palsy, affecting left-side ambulatory movement⁵⁰). Both participant and the confederate were then called into the room. The confederate would always enter first, giving the participant another clear opportunity to see their physical disability.

After the pair was seated, the researcher proceeded to explain that the study consisted of a shared and an individual creativity task. Once both parties had given consent, they were invited to have a short interaction (see below) to get to know each other (length: < 3 minutes). This established a baseline amount of contact quality between the participant and the confederate.

Subsequently, the research assistant explained the creativity task to the pair. This involved generating slogans to advertise ten products and scoring the other person's

⁵⁰ Note that the role of the confederate was played by the main researcher and a author of this thesis. The implications of this are discussed in Chapter 9.

work fairly. It was emphasised to the participant that the submitted work would be judged by a panel of UKAA judges and that successful entrants would win the opportunity to design a logo for a leading UK business. This was done to make the task meaningful for participants (see Shnabel & Nadler, 2008). The embarrassment manipulation was delivered by the confederate during the creativity task.

After completion of this task, the experimenter instructed the confederate to wait in a different room and asked the participant to complete a short online survey regarding how they found the task and their first impressions of the confederate. This was described as part of a standardised procedure for the university ethics committee. At the end of the survey, participants were invited to leave feedback for their partner using an envelope and sheet of paper. They then completed a Stroop Task, purported to be a test of their individual creativity, while the confederate was ostensibly completing the same measures. This acted as a filler task and an integral part of the cover story of the experiment (i.e. the individual test of creativity).⁵¹

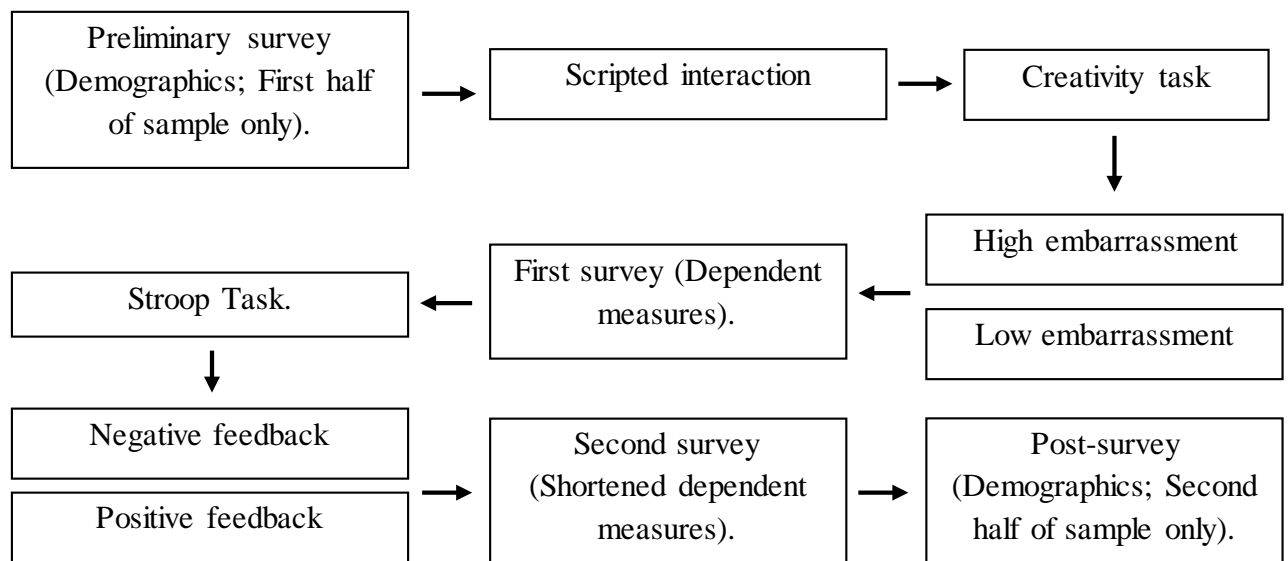
The experimenter then returned with bogus positive or negative feedback from the confederate, which acted as the second experimental manipulation. Participants had to confirm on a brief form that they had received this feedback, ostensibly for the records of the university ethics committee. Concurrently, the research assistant checked whether the data had downloaded correctly. A macro was set up that triggered a rigged error message that the participant's data was corrupted. The research assistant then asked the

⁵¹ A standard Stroop task was used, following procedures outlined by Balota et al. (2010). Specifically, participants were asked to respond quickly and accurately to strings of congruent and incongruent colour words, as well as neutral coloured stimuli (i.e. strings of XXXX's; Richeson & Trawalter, 2005). Extant research (e.g., Richeson & Shelton, 2003; Richeson & Trawalter, 2005) has found that participants who experience an awkward intergroup interaction subsequently perform more poorly on a Stroop task because they have less available cognitive resources, compared to those who experience a comfortable interaction. This effect was checked in the current experiment by comparing Stroop task performance between the two embarrassment conditions. Specifically, a measure of Stroop performance was created by subtracting responses to control trials from responses to incongruent trials (Richeson & Trawalter, 2005). No significant difference was found between the conditions ($p > .05$).

participant to complete a shortened paper version of the first survey in exchange for further course credit. The participants had the right to refuse this aspect of the experiment, but all opted to take part. Afterwards, the participant was asked what they thought the study was about and then received a full written and verbal debriefing.

Due to difficulties with initial participant retention, for the latter half of the sample the preliminary survey was moved to the end of the lab-based procedure (see Figure 33 below).

Figure 33. Diagram to show the experimental procedure for Study 6.



Preliminary survey. Psychology students were contacted to take part in an online survey containing a battery of psychological measures. Of relevance to this study, both concerns and existing contact quantity with the physically disabled were measured, in addition to demographic information. Participants were contacted after two weeks had elapsed for participation in the main component of the study.

Due to difficulties in retaining participants from this survey to the main laboratory procedure, the preliminary survey was moved to the end of the lab-based procedure.

This survey measured participants' demographic information, after participants had been asked what they thought the study was about, to avoid raising any suspicions about the study design.

Scripted interaction. Once both the participant and the confederate had been given full instructions about the experimental procedure, they were invited to have a short interaction in order to “get to know each other”. This was conducted in order to establish a baseline level of contact quality between the participant and the confederate. Specifically, the pair were instructed to talk about “your favourite holiday, the best number of people to have in a student household and what you did over Halloween”, spending 30 seconds maximum on each item. These questions were derived from Aron, Melinat, Aron, Vallon and Bator (1997) and designed to maintain neutrality within interpersonal interactions. The interaction was terminated once both parties had answered each question or when five minutes had elapsed. The confederate always began the interaction first.

Creativity task. After the scripted interaction, the participant and confederate were invited to work together on a timed computerised task, ostensibly to measure creativity. They were given two scoring sheets each and a folder to place them in once completed. Each sheet allowed the participant and the confederate to generate and score five slogans. Slogan sheets were swapped mid-way through the task for scoring. The creativity task was adapted from Shnabel and Nadler (2008).

Once the task had begun, the pair was presented with pictures of ten products (e.g., children's watch, sandwich maker) and a short description (e.g., “Product is aimed at children”, “Product can make the traditional sandwich more tasty”). The participant and the confederate each had 60 seconds to think of a slogan to advertise the pictured

product before the task would move on. It was emphasised that slogan generation be carried out individually and in complete silence. For each participant, the confederate wrote down the same slogans for each product.

After the first five products had been shown, the pair was asked to swap sheets and score the other person's work. Marks were allocated out of ten (1 = *Not at all creative*, 10 = *Very creative*) and sheets were placed in a folder located directly in front of each person. The instructions for this part included a reminder not to talk about the scoring process or share any of the grades given.

The scoring procedure was replicated after the next five products had been shown and the pair was instructed to call the research assistant back into the room once scores had been allocated.

The embarrassment manipulation took place during the creativity task (see below).

Embarrassment manipulation. In the *low embarrassment* condition, at the first instance where the participant and the confederate were asked to swap slogans sheets, the confederate included a written comment which read:

“I know we are not meant to communicate, but please try not to let the scores you give me be influenced by the fact I have a physical disability”.

In the *high embarrassment* condition, the confederate delivered the same written comment, but after the second round of scoring made an additional verbal comment:

“Something tells me that you were thinking about my physical disability when giving me all those scores. It happens a lot that non-disabled people just focus on my disability but not on what I can do. It's a real shame. Anyway, we better call the researcher”.

Note that the manipulation suggests that the participant has committed a disability-relevant transgression rather than a general faux-pax (e.g., singing a song, spilling coffee), as has been the case in previous research where embarrassment has been manipulated (Apsler, 1975, Gonzales, Pederson, Manning & Wetter, 1990). The *low* condition introduces the possibility that the participant might offend the confederate through the score-giving procedure (e.g., a failure to perform; R. S. Miller, 1996). Similarly, the *high* condition emphasizes this aspect to a greater degree via an extra verbal communication and also suggests to the participant that they face a negative social evaluation (Edelmann, 1987). The conditions of the task (e.g., silence, calling the researcher) left little time for the participant to manage the situation and engage in reconciliation behaviour.

Feedback manipulation. The feedback manipulation was delivered after the participant had completed the first survey and the Stroop task. At the end of the first survey, they had been given the option of leaving written qualitative feedback to the confederate regarding how they found the interaction. Ostensibly, the confederate was also doing the same thing. After the Stroop task, the research assistant informed the participant that confederate had left some written feedback for them. They were presented with a sealed envelope containing either *positive* or *negative* bogus feedback.

The *positive* feedback read:

“Overall, I enjoyed working with the other participant. I found s/he was easy to get along and to swap slogans with. I felt comfortable around them actually, which does not happen often when I meet new people. I felt I could be quite direct and frank with them because of this. In summary, my overall impression was a good one”.

Conversely, the *negative feedback* read:

“Overall, I did not enjoy working with the other participant. I found s/he was difficult to get along and to swap slogans with. I felt uncomfortable around them actually, which does not happen often when I meet new people. I felt I needed to be quite direct and frank with them because of this. In summary, my overall impression was not a good one”.

As can be seen, feedback is almost identical between the two conditions (e.g., the same adjectives are used). However, critically, the content alterations give the participant the impression that the confederate either did or did not enjoy the interaction.

Manipulation checks

Embarrassment. Participants were asked how they felt during the creativity task. Five items were used to measure embarrassment, derived from commonly occurring epiphenomena of the emotion (see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). These were “uncomfortable”, “foolish”, “awkward”, “embarrassed” and “incompetent”. Ratings for each item were averaged into a single index to measure embarrassment (1 = *Not at all*, 9 = *Very much so*), with high scores indicating greater levels of embarrassment ($\alpha = .88$).

Feedback. After receiving written feedback from the physically disabled confederate, participants were given a brief form to complete. They were asked to confirm they received feedback, indicate whether this was written or electronic and crucially, whether it was “positive or negative overall” measured on a nine point Likert Scale (1 = *Negative*, 9 = *Positive*).

Dependent measures

All responses were given via a 9 point Likert scale (1 = *Not at all*, 9 = *Very much so*).

Contact quality. Contact quality was measured on a five item scale, where participants were asked to indicate how “positive”, “personal”, “enjoyable”, “worthwhile”, “enjoyable” and “genuine” their interactions with the participant had been. Scores were averaged to form a single scale measuring quality of contact, with high scores indicating greater quality of contact ($\alpha = .85$). A short form was included in the second survey, containing the items “personal”, “enjoyable” and “worthwhile” ($\alpha = .92$).

Desire for future contact. To measure desire for future contact, participants were asked how eager they would be to work with the same participant again (1 = *Not at all*, 9 = *Very much so*). In the current context (i.e. a co-operative creativity task), this was deemed the most natural way of tapping approach/avoidance intentions (vs. framing items in terms of avoidance).

Prejudice. To assess prejudice, participants rated how they felt when thinking of the other participant on a series of bipolar adjective pairs (“positive-negative”, “friendly-hostile”, “trusting-suspicious”, “contempt-respectful”, “unpleasant-pleasant”). These items were adapted from the General Evaluation Scale (S. C. Wright et al., 1997) and were averaged into a single index to measure prejudice, with higher scores indicating more reported prejudice ($\alpha = .88$). The same five items were subsequently included in the second survey ($\alpha = .50$). A single item (“contempt-respectful”) was subsequently removed from the second scale, generating acceptable reliability ($\alpha = .90$).

Interpersonal liking. Interpersonal liking was measured with four items. Specifically, participants were asked to what extent they thought their partner was “physically attractive”, “likable”, “had an attractive personality” or “is boring [reverse coded]”, $\alpha =$

.60). These items were adapted from Stürmer et al. (2005). A single item (“likable”) was retained in the second survey.

Concerns. Four items were used to measure general psychological concerns over interacting with non-disabled people, derived from the previous studies (e.g., “I worry about unintentionally treating someone differently because of their physical disability”). These were measured either in the preliminary survey or at the end of the lab-based procedure. Items were averaged into a single index to measure concerns, with high scores indicating greater concern ($\alpha = .84$).

Contact quantity. As in the previous studies, three items were used to examine to what extent participants generally interacted with physically disabled people (e.g., “...in the area you live in”, “...when socialising”, and “...when engaging with leisure activities”). These were measured either in the preliminary survey or at the end of the lab-based procedure. Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact ($\alpha = .87$).

Competitiveness. To control for the possibility of competitiveness affecting participant ratings of the interaction, competitiveness was measured using a single item (1 = *Not competitive*, 9 = *Very competitive*).

Demographics. Demographic information (e.g., age, gender) was also collected from participants.

Results

Preliminary analyses

Table 9 shows the correlations between the measured variables and the embarrassment and feedback manipulations.

Table 9. Correlations between measured variables and the embarrassment and feedback manipulations.

Variable	Contact quality		Approach intentions		Prejudice	
	T1	T2	T1	T2	T1	T2
Embarrassment	-.21*	-.09	-.14	-.15	.19*	.15
Feedback	.07	.48***	.09	.47***	.02	.30**
Mean	5.27	6.26	6.00	5.74	2.91	3.58
(SD)	(1.52)	(1.69)	(1.70)	(2.26)	(1.17)	(1.77)

Note: $N = 86$, *** $p < .001$, ** $p < .01$, * $p < .05$, $\cdot p < .10$. Embarrassment was coded 1 = Low embarrassment, 2 = High embarrassment.

Additionally, the general mean for embarrassment was 2.73 ($SD = 1.64$), while for feedback it was 5.36 ($SD = 3.66$).

Independent t -tests were conducted to compare concerns and reported contact quantity between those who answered these measures in the preliminary survey ($N = 33$) and for those who this measure was given to after the lab procedure ($N = 50$, three values missing).

These results indicate that the time of measurement affected participants' psychological concerns and reported contact quantity with the physically disabled.⁵² This is likely due to the fact that the second group had just experienced an actual interaction with a disabled person when they responded. These differences indicate that these variables cannot be used as covariates in the main analysis (Field, 2009).

⁵² Those who answered the preliminary survey reported significantly higher concerns ($M = 5.58$, $SD = 1.82$) than those who completed the concerns measure at the end of the lab procedure ($M = 4.15$, $SD = 2.03$), $F(1, 81) = 10.82$, $p = .001$, partial $\eta^2 = .118$. Similarly, those who were given the preliminary survey ($M = 3.30$, $SD = 2.14$) reporting lower frequency of contact than those who completed the measure after the lab-based procedure ($M = 4.53$, $SD = 2.30$). The direction of these differences appears to support the interpretation given above.

Manipulation checks

Embarrassment. An independent samples *t*-test was carried out to compare participant embarrassment levels in the “low” and “high” conditions. Differences between conditions were non-significant, $t(84) = -1.57$, $p = .121$, $d = 0.33$, with those in high condition ($M = 2.96$, $SD = 1.71$) reporting similar levels of embarrassment to those in the low condition ($M = 2.40$, $SD = 1.62$).

Due to this, mean scores on individual items were inspected. A significant difference was found for the item “embarrassed”, $t(82.30) = -2.63$, $p = .010$, $d = 0.56$. Specifically, participants in the high embarrassment condition ($M = 2.73$, $SD = 1.88$) reported feeling more embarrassed than those in the low embarrassment condition ($M = 1.78$, $SD = 1.48$).

This suggests that the manipulation may therefore have induced embarrassment, without some of the commonly associated epiphenomena (e.g., feelings of foolishness or incompetence).

Feedback. An independent samples *t*-test was carried out to compare participant perceptions of the feedback they received in the “positive” and “negative” feedback conditions. As expected, differences between the conditions were significant, $t(81) = -14.10$, $p < .001$, $d = 3.01$, with those in the positive condition rating the feedback they received as more positive ($M = 8.26$, $SD = 1.97$) than those in the negative condition ($M = 2.10$, $SD = 2.01$).

The effect of feedback as an intervention

Analytic strategy. To assess whether feedback operated as an intervention to improve perceptions of the confederate a series of three-way mixed ANCOVA’s were conducted.

Specifically, embarrassment (low x high), feedback (negative x positive) and time (before feedback x after feedback) were the independent variables. Contact quality, desire for future contact and prejudice were used as dependent variables. A two-way mixed ANCOVA was also conducted to assess the effects of feedback and time on embarrassment. In all models, age, gender (dummy-coded, 0 = Male, 1 = Female) interpersonal liking and competitiveness were added as covariates.⁵³

For all interaction effects involving feedback x time, the simple main effect (SME) of feedback at Time 1 is not reported because the manipulation was delivered after Time 1. As such, there were no expected differences. Indeed, no observed differences were found (i.e. all $p > .05$).

Contact quality. There was no significant main effect on embarrassment on contact quality, $F(1, 75) = .379, p = .540, \text{partial } \eta^2 = .005$. Those in the high embarrassment condition ($M = 5.62, SE = .190$) did not differ in perceptions of contact quality to those in the low condition ($M = 5.79, SE = .202$).

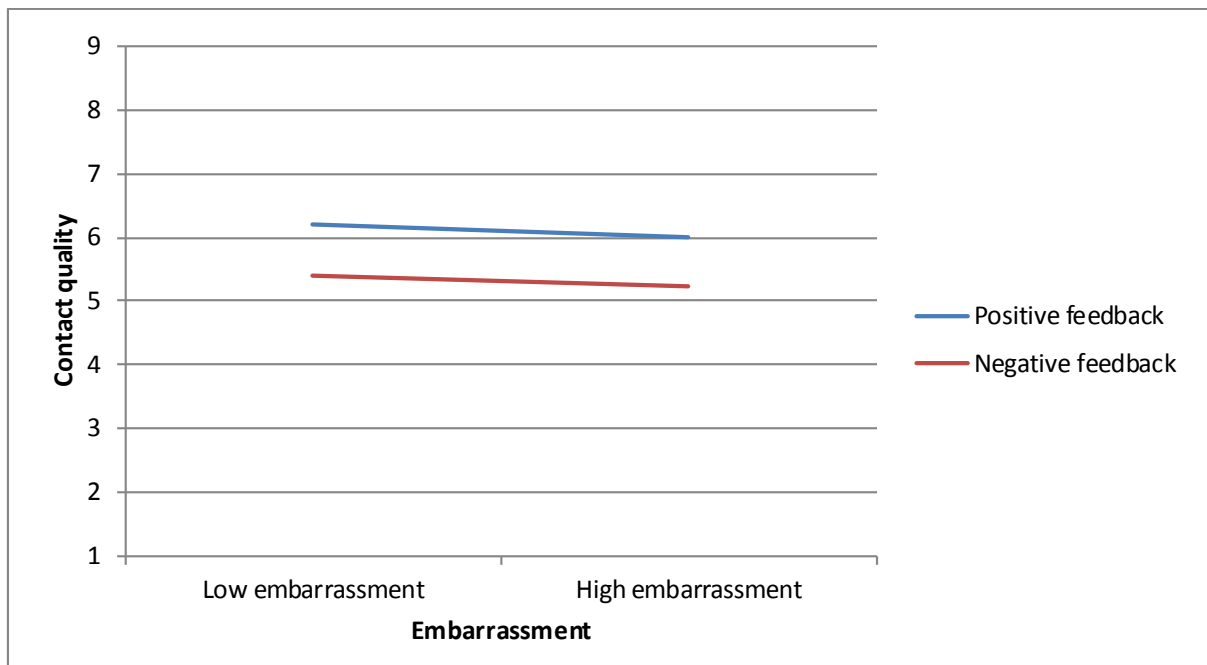
There was a main effect of feedback on contact quality, $F(1, 75) = 8.21, p = .005, \text{partial } \eta^2 = .099$, with those who received positive feedback ($M = 6.10, SE = .187$) allocating higher contact quality ratings than those who received negative feedback ($M = 5.31, SE = .198$).

Time also had a main effect on contact quality, $F(1, 75) = 4.56, p = .036, \text{partial } \eta^2 = .057$. Specifically, contact quality ratings were lower before feedback ($M = 5.23, SE = .145$) than they were after feedback ($M = 6.19, SE = .158$).

⁵³ As stated in Chapter 4, the following analyses have only the power to detect medium to large effects and thus conclusions should be drawn with the requisite caution.

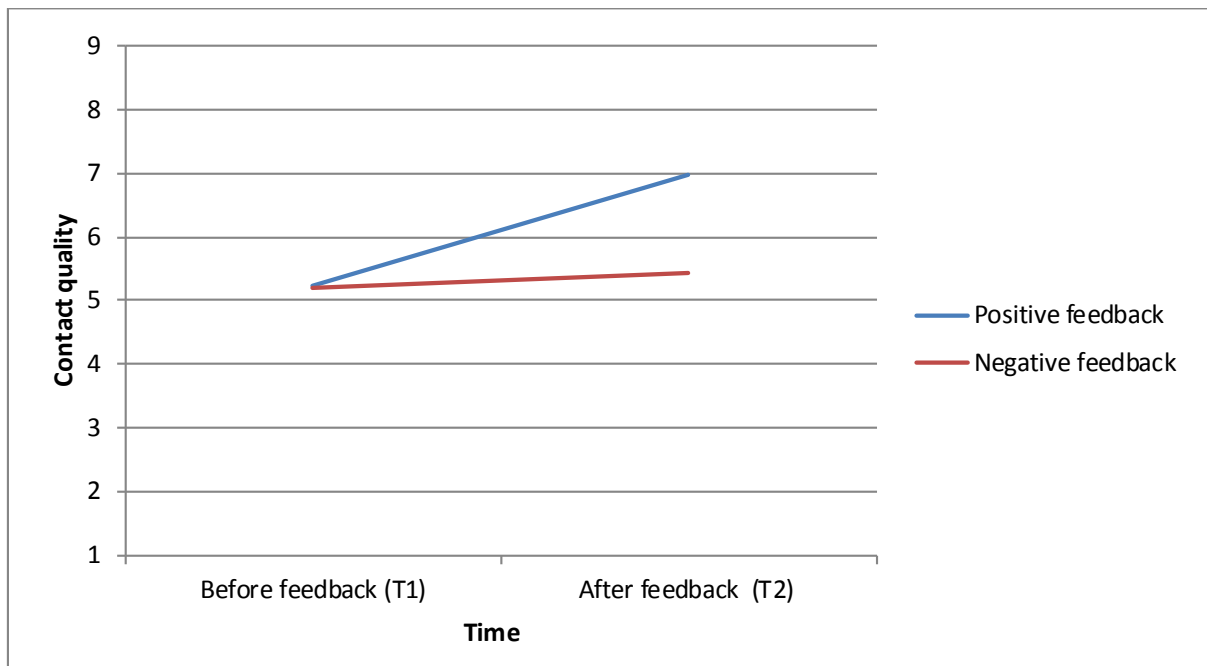
There was no interaction between embarrassment and feedback, $F(1, 75) = .000$, $p = .992$, partial $\eta^2 = .000$ (see Figure 34).

Figure 34. Main effects and interaction of embarrassment and feedback on contact quality.



There was however, an interaction between feedback and time, $F(1, 75) = 28.83$, $p = .001$, partial $\eta^2 = .001$ (see Figure 35).

Figure 35. Main effects and interaction of time and feedback on contact quality.



SME analyses revealed a significant difference of the feedback manipulation at Time 2, $F(1, 77) = 23.93, p < .001$, partial $\eta^2 = .237$, with those who received positive feedback ($M = 6.96, SE = .215$) reporting higher contact quality ratings than those who received negative feedback ($M = 5.42, SE = .228$).

There was no significant difference of time for those who received negative feedback, $F(1, 34) = .001, p = .970$, partial $\eta^2 = .000$, meaning that before feedback ($M = 5.08, SE = .214$) and after feedback ($M = 5.33, SE = .281$) contact quality ratings were similar.

There was a significant difference of time for those who received positive feedback, $F(1, 39) = 9.99, p = .003$, partial $\eta^2 = .204$. Specifically, compared to contact quality ratings before feedback ($M = 5.34, SE = .189$), ratings after feedback were significantly

higher ($M = 7.04, SE = .147$). There were no other significant interactions between the independent variables (all $p > .05$).⁵⁴

In summary, while the embarrassment manipulation did not appear to impact contact quality, the feedback manipulation did. Specifically, positive feedback produced more positive perceptions of contact quality, while negative feedback had no significant effect.

Desire for future contact. There was no significant main effect of embarrassment on desire for future contact, $F(1, 75) = .318, p = .575$, partial $\eta^2 = .004$. Ratings in the high embarrassment condition ($M = 5.71, SE = .216$) did not differ from those in the low condition ($M = 5.89, SE = .230$).

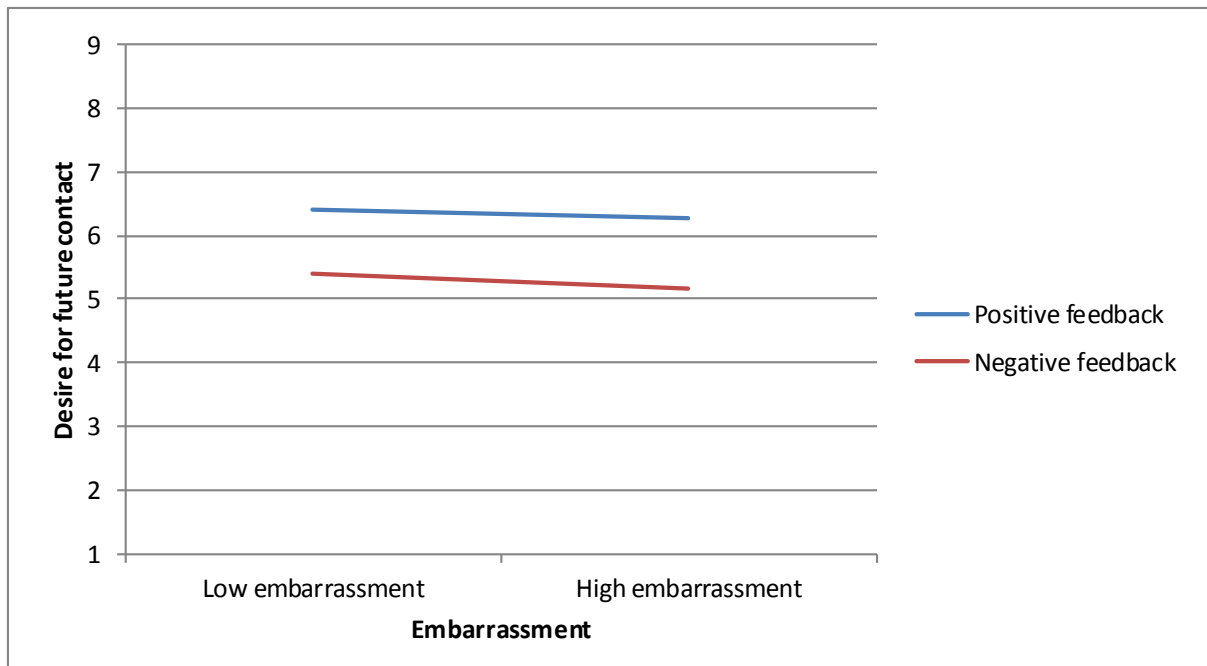
There was a main effect of feedback on desire for future contact, $F(1, 75) = 11.30, p = .001$, partial $\eta^2 = .131$, with those who received positive feedback ($M = 6.33, SE = .212$) indicating greater desire for future contact with the confederate than those who received negative feedback ($M = 5.27, SE = .226$).

Further, there was no main effect of time on desire for future contact, $F(1, 75) = .711, p = .402$, partial $\eta^2 = .009$. The difference between desire before feedback ($M = 5.93, SE = .171$) compared to after feedback ($M = 5.66, SE = .198$) was non-significant.

There was no interaction between embarrassment and feedback on desire for future contact, $F(1, 75) = .018, p = .893$, partial $\eta^2 = .000$ (see Figure 36).

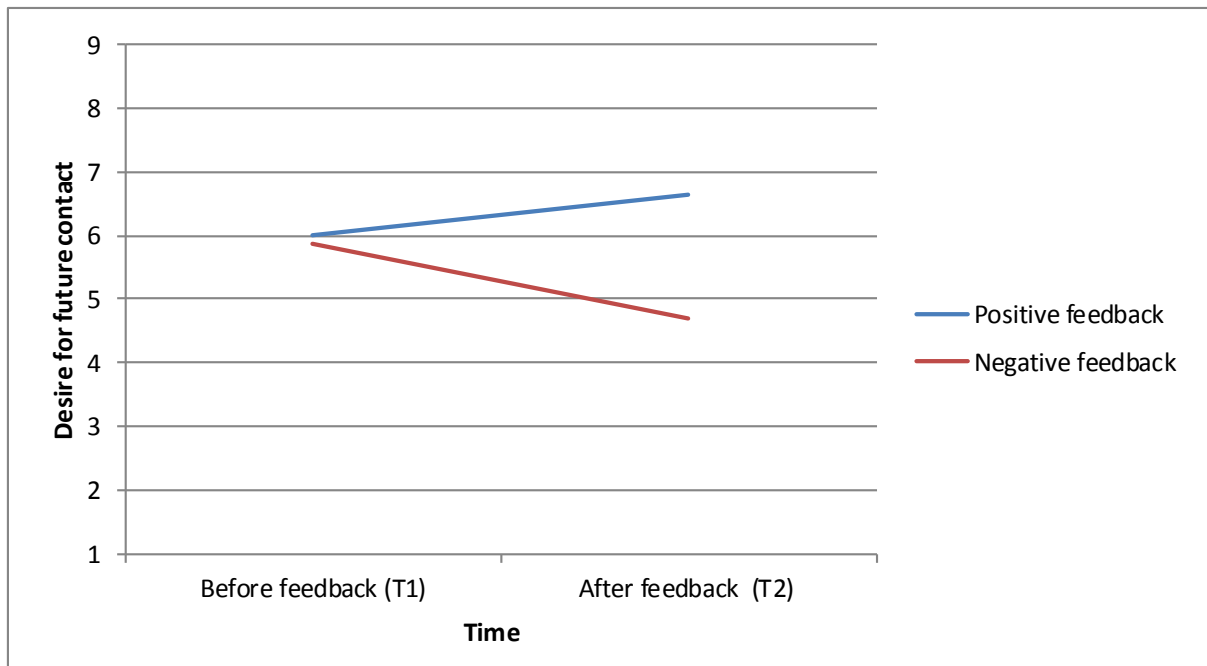
⁵⁴ Both interpersonal liking, $F(1, 75) = 15.56, p < .001$, partial $\eta^2 = .074$, and competitiveness, $F(1, 75) = 5.96, p = .017$, exerted a significant influence in the model. There was a significant interaction between time and competitiveness $F(1, 75) = 5.20, p = .025$, partial $\eta^2 = .065$. When the model was run without these covariates, the findings did not differ.

Figure 36. Main effects and interaction of embarrassment and feedback on desire for future contact.



There was a significant interaction between time and feedback, $F(1, 75) = 17.97, p < .001$, partial $\eta^2 = .193$ (see Figure 37).

Figure 37. Main effects and interaction of time and feedback on desire for future contact.



SME's analyses revealed a significant difference of the feedback manipulation at Time 2, $F(1, 77) = 23.82, p < .001, \text{partial } \eta^2 = .236$, with those who received positive feedback ($M = 6.63, SE = .271$) reporting greater desire for future contact than those who received negative feedback ($M = 4.68, SE = .288$).

There was a marginally significant difference of time for those who received negative feedback, $F(1, 34) = 3.43, p = .073, \text{partial } \eta^2 = .092$. Specifically, desire for future contact with the confederate was higher before feedback ($M = 5.74, SE = .260$) compared to after feedback ($M = 4.51, SE = .358$).

There was no significant difference of time for those who received positive feedback, $F(1, 39) = 1.96, p = .170, \text{partial } \eta^2 = .048$. Specifically, there was no difference in desire

ratings before feedback ($M = 6.11$, $SE = .200$), compared to ratings after feedback ($M = 6.77$, $SE = .175$).

There were no other significant interactions between the independent variable manipulations.

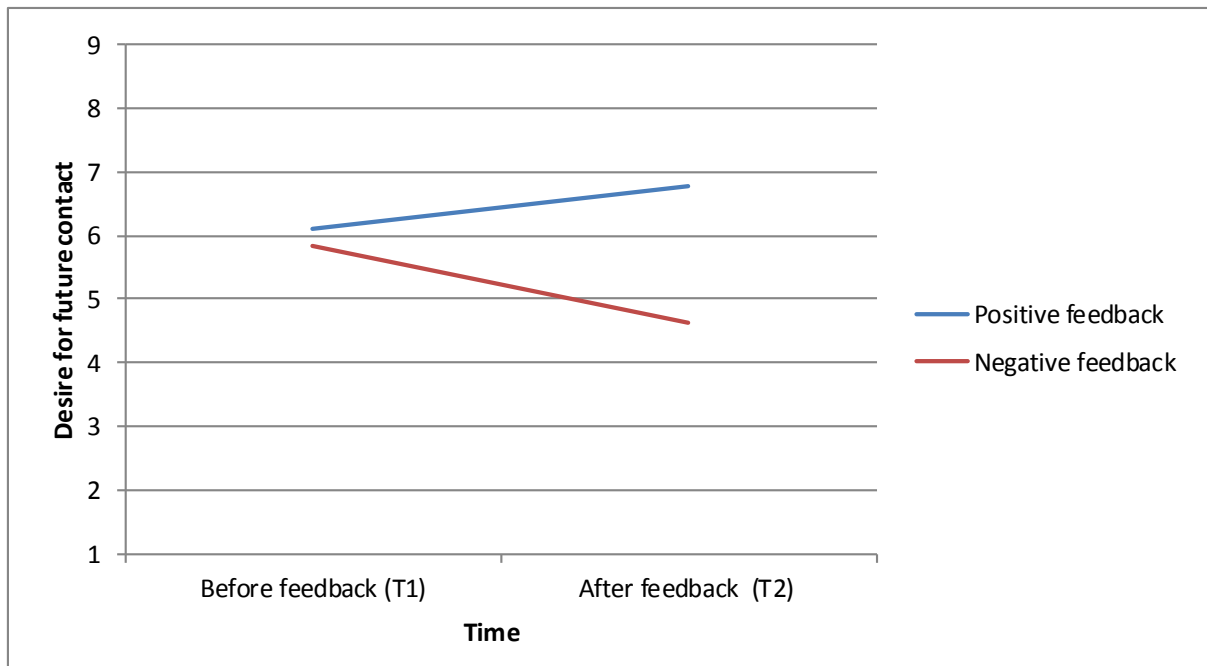
Gender, $F(1, 75) = 7.88$, $p = .006$, partial $\eta^2 = .095$, and interpersonal liking, $F(1, 75) = 20.28$, $p < .001$, partial $\eta^2 = .062$, were found to be significant covariates in the model.

When these covariates were removed, within the interaction between feedback and time, the SME of time for negative feedback became significant, $F(1, 39) = 10.29$, $p = .003$, partial $\eta^2 = .029$. That is, desire for future contact was stronger before feedback ($M = 5.83$, $SE = .288$), compared to after feedback ($M = 4.63$, $SE = .383$).

The SME of time for positive feedback also became significant, $F(1, 43) = 13.28$, $p = .001$, partial $\eta^2 = .236$. Specifically, desire for future contact was lower before feedback ($M = 6.11$, $SE = .234$) when compared to after the feedback was received ($M = 6.77$, $SE = .234$).

These SME's are shown in Figure 38.

Figure 38. Main effects and interaction of time and feedback on desire for future contact (without covariates).



In summary, the findings suggest that feedback, but not embarrassment, had an impact on desire for future contact. Specifically, positive feedback increased desire for future contact while negative feedback deteriorated it. This effect may partially be accounted for by the participant's gender and their levels of interpersonal liking for the confederate however.⁵⁵

Prejudice. There was no significant main effect of embarrassment on prejudice towards the confederate, $F(1, 75) = 2.34, p = .130, \text{partial } \eta^2 = .030$. Those in the high embarrassment condition ($M = 3.46, SE = .166$) did not differ in prejudiced attributions to those in the low embarrassment condition ($M = 3.08, SE = .176$).

There was a marginal main effect of feedback on prejudice, $F(1, 75) = 2.94, p = .091, \text{partial } \eta^2 = .038$. Those who received positive feedback ($M = 3.06, SE = .163$) displayed

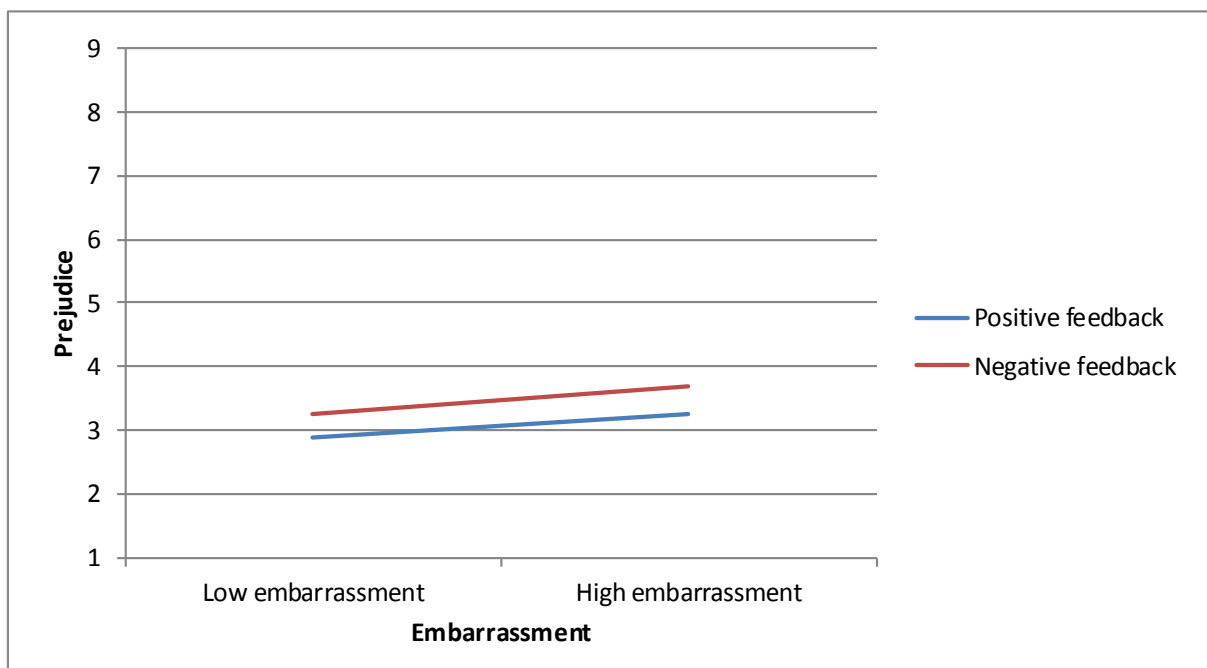
⁵⁵ Condition sizes were too small (< 15) to treat gender and interpersonal liking (via a three-way categorical split) as independent variables in the analysis (see also Chapter 9).

slightly less prejudice towards the confederate compared to those who received negative feedback ($M = 3.48$, $SE = .163$).

There was no main effect of time on prejudiced attributions, $F(1, 75) = .016$, $p = .899$, partial $\eta^2 = .000$. There was no difference in prejudice before feedback ($M = 2.93$, $SE = .115$) compared to after feedback had been received ($M = 3.61$, $SE = .185$).

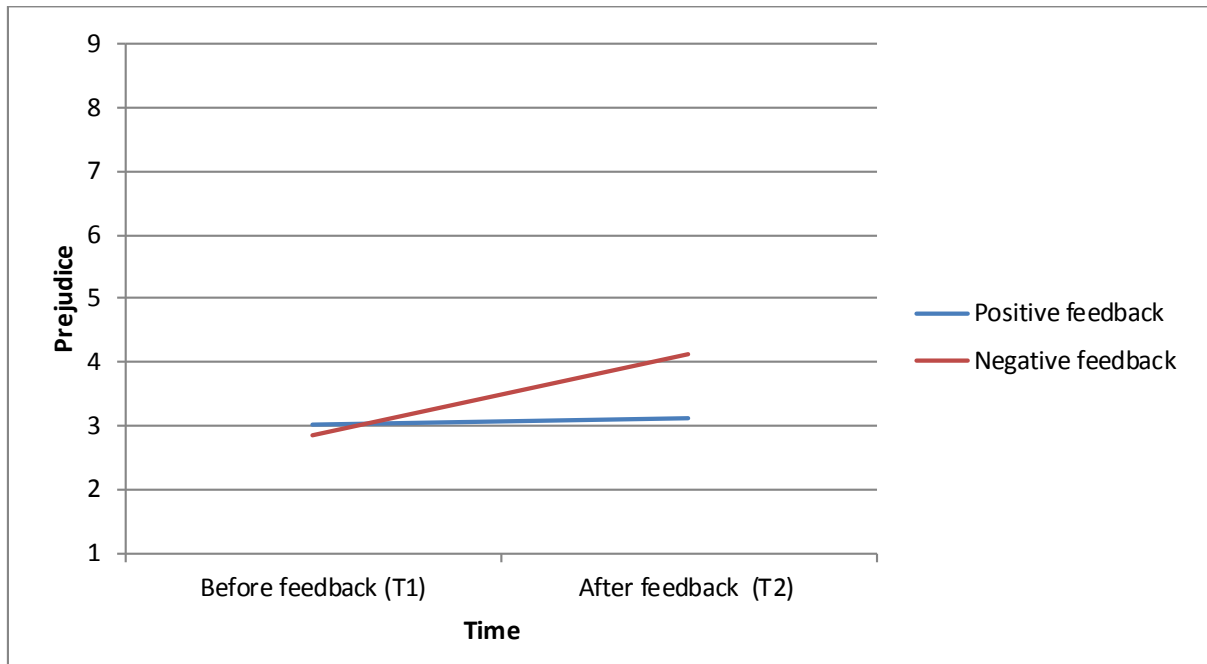
There was no interaction between embarrassment and feedback on prejudice, $F(1, 75) = .010$, $p = .919$, partial $\eta^2 = .000$ (see Figure 39).

Figure 39. Main effects and interaction of embarrassment and feedback on prejudice.



There was a significant interaction between time and feedback, $F(1, 75) = 8.21$, $p = .005$, partial $\eta^2 = .099$ (see Figure 40).

Figure 40. Main effects and interaction of time and feedback on prejudice.



SMEs analyses revealed a significant difference of the feedback manipulation at Time 2, $F(1, 77) = 6.64, p = .012$, partial $\eta^2 = .079$, with those who received positive feedback ($M = 3.14, SE = .255$) reporting less prejudice than those who received negative feedback ($M = 4.11, SE = .271$).

There was no difference of time for those who received negative feedback, $F(1, 34) = .208, p = .651$, partial $\eta^2 = .006$. Specifically, prejudice towards the confederate was not significantly higher before feedback ($M = 2.94, SE = .186$) compared to after feedback ($M = 4.17, SE = .278$).

Similarly, there was no significant difference of time for those who received positive feedback, $F(1, 39) = .384, p = .539$, partial $\eta^2 = .010$. There was no difference between prejudice ratings before feedback ($M = 2.94, SE = .140$), compared to ratings after feedback ($M = 3.09, SE = .237$).

There were no other significant interactions between the independent variable manipulations.

Only interpersonal liking, $F(1, 75) = 10.65$, $p = .002$, partial $\eta^2 = .124$, was found to be a significant covariate in the model, but this did not interact with the independent variable manipulations.

When the covariates were removed, the main effects of embarrassment, $F(1, 80) = 3.67$, $p = .059$, partial $\eta^2 = .044$, on prejudice became marginally significant.

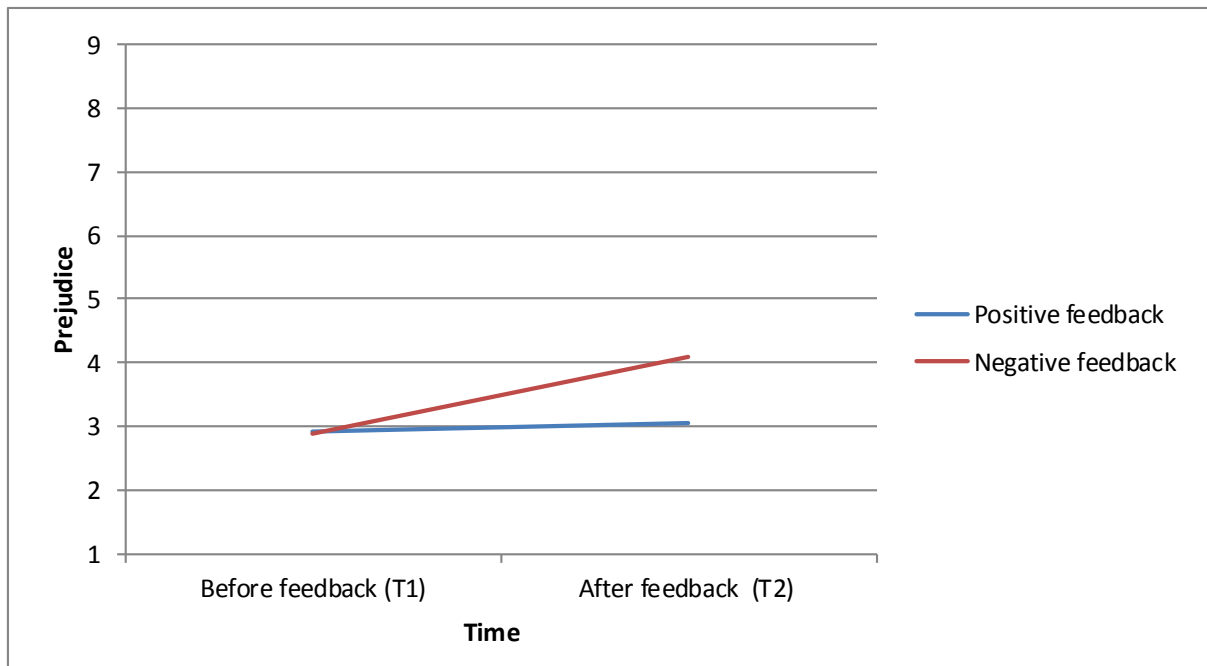
Specifically, those in the high embarrassment condition ($M = 3.48$, $SE = .174$) reported more prejudice than those in the low embarrassment condition ($M = 2.99$, $SE = .188$).

The main effect of time on prejudice became significant, $F(1, 80) = 12.10$, $p = .001$, partial $\eta^2 = .131$, with participants reporting less prejudice before feedback ($M = 2.90$, $SE = 3.58$) compared to after feedback ($M = 3.58$, $SE = .187$).

The SME of time for negative feedback also became significant, $F(1, 77) = 16.61$, $p < .001$, partial $\eta^2 = .229$. Specifically, prejudice ratings were lower before feedback ($M = 2.90$, $SE = .196$) than they were after feedback ($M = 4.09$, $SE = .272$).

These SME's are shown in Figure 41.

Figure 41. Main effects and interaction of time and feedback on prejudice (without covariates).



All other results were the same as when the covariates were controlled for.

In summary, the findings indicate that only feedback had a (marginal) impact on prejudice when controlling for interpersonal liking, competitiveness and demographic factors. Specifically, participants who received positive feedback held less prejudice at Time 2 than did those who received negative feedback. Without these, high embarrassment marginally increased prejudice towards the confederate and receiving negative feedback shifted prejudice over time, serving to increase it.⁵⁶

Discussion

The objective of this study was to establish the extent that feedback from a physically disabled person after an awkward interaction could improve non-disabled people's perceptions of the encounter.

⁵⁶ See footnote 55 above, for an explanation of why these are not explored further.

The success of the experimental manipulation was questionable. Although there was a non-significant effect of the manipulation on the scale overall, inspection of the individual items showed that scores on the item “embarrassed” were affected in the predicted direction. Therefore, though the manipulation may have induced embarrassment, commonly associated epiphenomena may not have followed (see R. S. Miller, 1996). This could potentially be due to the artificiality of the embarrassing situation used in the experiment.

Findings reveal that the different types of feedback (i.e. positive, negative) had differential outcomes on interaction perceptions. Specifically, positive feedback improved perceptions of the quality of the interaction, while negative feedback left them unaffected. However, only negative feedback had a (marginal) effect on the desire for future contact, causing a reduction. Additionally, neither feedback types caused prejudice levels to shift significantly across time.

In models run without the covariates, positive feedback was also shown to increase desire for future contact, while negative feedback increased prejudiced attributions. This highlights the importance of investigating interpersonal characteristics as potential moderators of feedback strategies.

Conversely, the embarrassment manipulation did not appear to affect perceptions of the interaction. Contact quality ratings, desire for future contact and levels of prejudice were not significantly different between the low and high conditions, though there was a marginal effect of embarrassment on prejudice in the expected direction. This contradicts previous work presented in this thesis (i.e. Study 3, Study 4), which has observed an effect of embarrassment on these outcomes. One explanation for the finding is that the effects of intra- differences in embarrassment are difficult to observe.

Study 4 compared an embarrassment condition to a control and a positive condition. In contrast, the present study, in keeping with the aim of investigating feedback as a potential intervention, looked at differences between high and low levels of embarrassment. Furthermore, the manipulation check observed a non-significant overall difference ($p = .121$) between the low and high conditions. This perhaps reflects that there was not a large enough difference on average between the two conditions to distinguish between high and low embarrassment. The mean embarrassment level was also comparatively low ($M = 2.70$, $SD = 1.68$) compared to the previous study manipulating the emotion (i.e. Study 4), where reported embarrassment was above the scale mid-point in the condition designed to induce embarrassment. This is surprising given that the present study examined an actual embarrassing interaction as opposed to an imagined one. However, perhaps the low mean score ultimately reflects limitations of the manipulation.

Additionally, to my knowledge, embarrassment has not been manipulated experimentally within a group context prior to this study. This presented some methodological challenges. These were similar to those faced by Shnabel and Nadler (2008, Study 1) which involved a laboratory-based victim/perpetrator categorization manipulation. Like that study, participants had to feel like they had transgressed against their interaction partner of their own volition. In contrast, however, the context of this offence had to be disability-related. Additionally, ethical standards also had to be adhered to. Perhaps the artificiality and competitive context that the manipulation was presented in here inhibited the relevance of the situation for participants, meaning that their social performance and interaction partner's evaluations were of limited importance to the participants' self-concept.

A final limitation of note is that the study only had the power to detect medium to large effects (i.e. .50 to .80). Therefore, another possible explanation for the null findings is that any effects were smaller than medium in size.

Despite the shortcomings of this study, the findings suggest that positive feedback from a physically disabled person could be useful in restoring non-disabled perceptions of good contact quality after an embarrassing interaction. A salient implication of this finding is that physically disabled people could give clarifying feedback about a positive interaction in situations where non-disabled people believe they have behaved offensively. This could attenuate any misinterpretations and restore impressions of positive contact quality.

As a physically disabled *confederate* was used in this study, the effect that giving feedback to a non-disabled person would have on the messenger's perceptions of the interaction still merits investigation. The next study, Study 7, seeks to address this question by investigating how using different response strategies after an embarrassing situation may affect physically disabled people's perceptions of contact quality.

The extent that using a feedback strategy after an embarrassing interaction can be beneficial for physically disabled people's contact quality (Study 7)

Findings from Study 6 indicate that receiving feedback from a physically disabled person after an embarrassing interaction may restore positive perceptions of contact quality for non-disabled people. Study 7 builds on this work by investigating the potential that a feedback (vs. an avoidance) response strategy may have on physically disabled people's own perceptions of contact quality subsequent to an embarrassing interaction.

While the work presented in this thesis has shown that physically disabled people may experience embarrassment in the absence of actual discrimination (e.g., by having to reveal a disability that is non-obvious; Study 2, vignette 2), embarrassment most often occurs because non-disabled people do behave in a discriminatory fashion (involuntarily or not) which can emphasise an impairment during mixed interactions (Study 1; see also Hebl & Kleck, 2000; Reeve, 2012). Being on the receiving end of such behaviour can be especially embarrassing for the disabled person (Study 1), as it may confirm the concern that their disability is the focus of the interaction (see also Goffman, 1963; Hebl & Kleck, 2000). This study will investigate whether using a feedback (vs. an avoidance) response strategy will improve physically disabled people's contact quality and approach intentions toward non-disabled people after an embarrassing interaction. Additionally, as encountering discrimination is a common, but pervasive and hurtful experience for many physically disabled people (Reeve, 2012; Shakespeare et al., 1996), the ability of feedback to engender more positive attitudes toward future discrimination was tested.

Recall that Shnabel and Nadler (2008) suggest that, in reaction to victimization episodes, both the victim and the perpetrator seek to recoup diminished emotional resources (i.e. sense of being accepted for perpetrators, sense of being empowered for victims). Specifically, victims can encourage the perpetrator to see their behaviour as unjust and illegitimate which could return power and a sense of the control to the victim (Shnabel & Nadler, 2008). Similarly, giving non-disabled people feedback that their behaviour was unacceptable may allow physically disabled people to overcome embarrassment. Study 1 suggested that this embarrassment stems from perceived out-group evaluations and a failure to maintain a smooth public performance (see also R. S. Miller, 1996). Giving feedback in response to discrimination may allow physically disabled people to assert that negative evaluations are unwarranted and shift responsibility for performance failures onto the non-disabled interactant. On the other hand, physically disabled people often try to ignore discrimination, especially if it seems well-intentioned (e.g., positive stereotyping, see Goffman, 1963). Unfortunately however, such avoidance may not allow adequate respite from the negative effects of embarrassment. Thus, Study 7 aimed to test whether using a feedback (vs. an avoidance) response strategy is more beneficial for physically disabled people after an encounter with a non-disabled person. Additionally, the study also looks at whether the effect of these strategies changed at different levels of embarrassment (i.e. low, medium & high).

As in Study 2, a vignette-based interaction was used in place of fabricating actual experiences of stigmatisation. Out of care and concern for participant well-being, the decision was taken not to expose participants to a real-life discriminatory encounter, given that the literature has consistently highlighted just how distressing these experiences can be (e.g., Goffman, 1963; Reeve, 2012; Shakespeare et al., 1996).

Obviously, this approach does have some methodological limitations. Specifically, it does mean that Study 7 measured participant intentions rather than actual behaviour within mixed encounters.

The following hypotheses were tested:

H₁ At higher levels of embarrassment, participants will report reduced contact quality, approach intentions and less positive attitudes toward future discrimination, when compared to those at lower levels of embarrassment. Consistent with the previous work in this thesis with physically disabled people (i.e. Study 2), higher levels of embarrassment should result in more negative affect which should account for the proposed changes. Although Study 6 did not observe similar effects, this was with a different sample (non-disabled people) and may reflect limitations of the experimental manipulation.

H₂ Participants will expect higher contact quality, hold more approach intentions and more positive attitudes towards discrimination when imagining using a feedback (vs. an avoidance) response strategy after an embarrassing interaction. Put simply, an explicit response clarifying that discrimination has occurred may allow physically disabled people to “shift” the source of their embarrassment onto non-disabled people. The absence of embarrassment would mean that participants experience less negative affect, leading to more positive contact quality with non-disabled people, increased approach intentions and more positive attitudes toward discrimination in the future.

No specific hypotheses were made regarding a two-way interaction between response strategy and embarrassment. Given that embarrassment is linked to avoidance (e.g., McCambridge & Consedine, 2014) participants may find it difficult to imagine the benefits of a feedback response strategy at higher levels of embarrassment, rendering

the avoidance strategy as more effective here (i.e. a cross-over interaction). Alternatively, feedback might be equally effective regardless of the degree of embarrassment induced in participants. As stated previously (see Study 6), there is not enough extant empirical evidence into embarrassment and feedback in group contexts to make a prediction in a single direction, therefore no directional hypothesis is proposed. Prediction is further complicated by the fact that the Study 7 measures intentions and not actual behaviour, meaning that there could be some disconnect between how participants respond here and how they would actually respond in real-life (see Ajzen, 2002).

Method

Participants

Participants were 122 physically disabled people who were recruited from websites (e.g., OuchToo) forums (e.g., Apparalyzed), and social media groups (e.g., Hemihelp-Facebook). The sample consisted of 104 females and 18 males. These participants ranged from 16 to 80 years old ($M = 39.08$, $SD = 14.02$) and approximately 59% were British or Irish in origin. An additional 20% of participants listed their nationality as American, Australian, Canadian or New Zealander.

The most common physical disabilities listed were connective tissue or immune tissue disorders such as Ehlers-Danlos Syndrome or Multiple Sclerosis ($N = 72$), Cerebral Palsy ($N = 20$) or impairments causing wastage or paralysis ($N = 11$), such as Muscular Dystrophy or Spina Bifida. Additionally, 37 participants reported a co-occurrence of two or more physical disabilities. The majority of these participants ($N = 20$) listed Ehlers-Danlos Syndrome as their first disability and the mean reported severity of disability was 6.22 ($SD = 1.66$).

Design

The study followed a mixed quasi- experimental design in which embarrassment (between-subjects, low vs. medium vs. high) and response strategy (within-subjects, feedback vs. avoidance) were the independent variables. Differences in contact quality, approach intentions and attitude to future discrimination were subsequently examined after each vignette. Presentation of the two response strategy conditions was counterbalanced to avoid order effects.

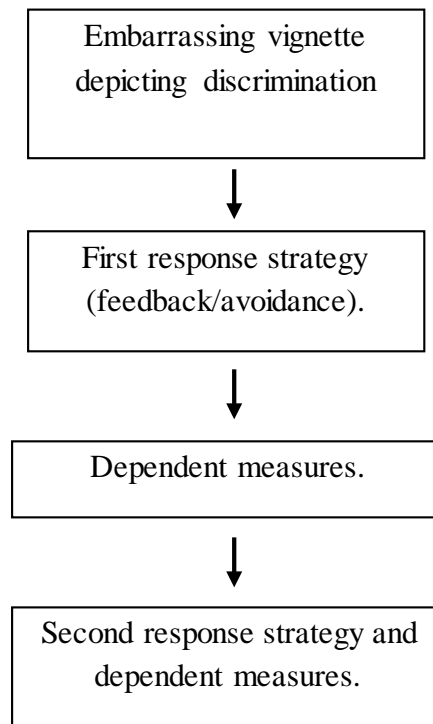
Procedure

Physically disabled people were recruited from several online disability websites, forums, and social media groups (e.g., Hemihelp- Facebook) to take part in a short online questionnaire. Participants were told that the study would investigate responses to ignorance and discrimination and that they would be presented with a hypothetical vignette depicting such behaviour from a non-disabled person.

Once beginning the survey, all participants were presented with an embarrassing vignette in which a non-disabled cashier is depicted displaying discriminatory behaviour. They were subsequently asked to indicate their level of embarrassment. One of two response strategy conditions was then randomly presented, each depicting a particular response to this discrimination (feedback vs. avoidance). Subsequently, participants were required to respond to the dependent measures. The second response strategy condition was then presented along with the same items and instructions.

Lastly, participants were asked to respond to some general items (e.g., concerns, existing contact quantity) and provide demographic information, before being given a full written debriefing. Figure 42 summarizes the procedure for this study.

Figure 42. Diagram to show the procedure for Study 7.



Materials

Vignette. An embarrassing vignette, depicting discriminatory behaviour from a non-disabled cashier was presented to all participants at the start of the study with the following text:

“You have popped into the supermarket to buy lunch with a non-disabled friend. You decide to pay for all the food that you get as a treat for your friend. When you get to the checkout you notice that the (non-disabled) cashier is mainly looking at and speaking to your friend, even though you are the one paying for the items. After receiving the money from you, the cashier then hands the change back to your friend. It is obvious from this behaviour that the cashier has assumed your non-disabled friend is your carer”.

Participants then rated their existing personal experience of the vignette and gauged what their levels of embarrassment would be. The embarrassing vignette was adapted from an example given by a participant in Study 1. Primarily, it invokes a concern over rejection from normal social interaction (Hebl & Kleck, 2000), though there is also an element of being on stage (Goffman, 1963), as attention is drawn to the impairment through exclusion.

Response strategy manipulation. Following the vignette participants were presented with one of two response strategy conditions (counterbalanced to avoid order effects). Each condition presented a possible response to the behaviour depicted in the vignette. In the avoidance condition, participants were told:

“Now please take a moment to imagine that you do not react in this situation. You decide not to highlight the cashier’s ignorance or discriminatory behaviour. You just pick up your items and leave the supermarket without doing anything about what just happened”.

Conversely, in the feedback condition, participants were asked to:

“...imagine that you react to this situation. In particular, you decide to highlight the cashier’s behaviour. You tell the cashier how offensive you found their behaviour and that more thought should be given in the future when they interact with physically disabled people to avoid discrimination. You then pick up your items and leave the supermarket without taking the incident any further”.

After each vignette, participants were presented with the dependent measures.

Manipulation check

Response type. After each condition, participants were asked to choose whether, in the response described, they “*ignored the behaviour of the non-disabled cashier and left without doing anything about what happened*” or “*...highlighted the behaviour of the non-disabled cashier and explained that their actions were offensive*”. This dichotomous question was included as a way of checking that participants read the information presented in each condition correctly.

Dependent measures

All variables in the study were assessed using a Likert scale of 1 to 9, where participants were asked to select the number closest to how they were feeling (1 = *Not at all* and 9 = *Very much so*), unless otherwise stated.

Embarrassment. Participants were asked how embarrassed they were by the presented vignette. Five items were used to measure embarrassment, derived from commonly used descriptions of the emotion and its corollaries (e.g., “embarrassed”, “uncomfortable”, “foolish”, “awkward”, “incompetent”; R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Ratings for each item were averaged into a single index to measure embarrassment, with high scores indicating greater reported embarrassment (Cronbach’s $\alpha = .87$). A quasi-experimental independent variable was subsequently created via a three-way categorical split at the upper ($M = 5.69$) and lower ($M = 3.40$) percentiles, to generate the *high* (> 5.69), *low* (< 3.40) and *medium* (all other scores) embarrassment conditions.⁵⁷

⁵⁷ This variable was computed after some unreliable cases had been removed. See under “Manipulation checks” below.

Personal experience. A single generated item to measure existing personal experience was presented after the embarrassing vignette (1 = *Not at all*, 9 = *Often*). Participants were asked “have you personally experienced a similar situation to the one described?”. High scores indicated more extensive personal experience with the events detailed in the vignette.

Contact quality. Contact quality was measured on a six item scale, where participants were asked to imagine how “agreeable”, “positive”, “personal”, “worthwhile”, “genuine” and “enjoyable” their contact with non-disabled cashiers would be in the future. Unlike the previous vignette studies (e.g., Studies 2 & 3), participants were asked to imagine what their future contact quality would be like, instead of rating the quality within the depicted situation. This is because, given the discrimination depicted in the vignette, it was likely that contact quality ratings would be uniformly poor, regardless of the response depicted in either vignette. Scores were averaged to form a single scale measuring quality of contact, with high scores indicating greater levels of contact (avoidance $\alpha = .97$, feedback $\alpha = .96$).

Approach intentions. Given the explicitly negative tone of the vignette, it made sense to phrase the questions in terms of avoidance as this would be easier for participants to visualise. After each vignette, participants were asked to what extent they would attempt to avoid similar situations in the future. The scale contained five generated items tapping avoidance behaviour (e.g., “[I would] avoid being served by that particular cashier in the future”, “[I would] avoid visiting supermarkets whenever possible”). All items were reverse coded and scores were averaged to form a single scale measuring future intentions to approach, with high scores indicating greater intentions to approach (avoidance $\alpha = .86$, feedback $\alpha = .84$).

Attitude to future discrimination. A novel four-item scale was included to measure the extent that each response would affect participant attitudes towards dealing with future discrimination (e.g., “[I] can handle disability discrimination from non-disabled people should it arise”, “[I] do not have to put up with disability discrimination from non-disabled people”). Ratings for each item were averaged into a single index to measure attitudes towards future discrimination, with high scores indicating more positive attitudes (avoidance $\alpha = .92$, feedback $\alpha = .90$).

Contact quantity. Existing quantity of contact with non-disabled people was measured using three items. Participants were asked to what extent they mixed with non-disabled people “...in the area you live in”, “...when socialising”, and “...when engaging with leisure activities”. Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact (Cronbach’s $\alpha = .88$).

Concerns. Psychological concerns over interacting with non-disabled people were measured using five items (e.g., “[I] worry that non-disabled people will not see past my physical disability”; “[I] worry that non-disabled people will make a big deal of my physical disability”), which participants answered in response to the statement “When interacting with non-disabled people, I often...”. Reported worries were aggregated to form a single measure of psychological concerns over interacting with non-disabled people, with high scores indicating a greater degree of concerns (Cronbach’s $\alpha = .95$).

Preferred response. After each response type, participants were asked “how likely would you be to behave this way in the described situation”. The preferred response score was created by subtracting the avoidance score from the feedback score, to create a total preference score.

Demographics. Demographic information was also collected, including age, gender, and severity of disability (1 = *Not at all severe*, 9 = *Very severe*).

Results

Preliminary analyses.

Table 10 shows the correlations between all measured variables.

Table 10. Correlations between all measured variables.

Variable	1	2	3	4	5
Avoidance strategy					
1. Embarrassment	-				
2. Contact quality	-.08	-			
3. Approach intentions	-.42***	.40***	-		
4. Attitude	-.17	.51***	.45***	-	
Mean (SD)	4.57 (2.27)	3.68 (2.15)	4.48 (2.25)	4.05 (2.38)	
Feedback strategy					
1. Embarrassment	-				
2. Contact quality	-.27*	-			
3. Approach intentions	.41***	.50***	-		
4. Attitude	.32**	.58***	.47***	-	
Mean (SD)	4.57 (2.27)	5.17 (1.99)	3.48 (2.01)	6.46 (1.88)	
General					
1. Embarrassment	-				
2. Preferred response	-.27*	-			
3. Personal experience	.11	.07	-		
4. Concerns	.39**	-.19	.30**	-	
5. Contact quantity	-.13	.23*	-.02	-.17	-
Mean (SD)	4.57 (2.27)	1.16 (4.69)	4.84 (2.63)	5.68 (2.48)	7.55 (1.95)

Note. "Attitude" refers to the variable attitude toward future discrimination, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note that high embarrassment scores are correlated negatively with the preferred response variable. In other words, physically disabled participants high in embarrassment were less likely to report using a feedback response in actual interactions.

Manipulation check

Vignette content. Forty-two participants did not answer one or both of the manipulation check questions correctly and so were removed from the dataset, leaving $N = 80$.⁵⁸

The effect of embarrassment and response strategy on contact quality, approach intentions and attitude towards future discrimination.

Analytic strategy. To assess whether a feedback (vs. an avoidance) response strategy could operate as an intervention to encourage physically disabled people to feel more positively about future contact with non-disabled people, a series of two-way mixed ANOVA's were conducted. Specifically, embarrassment (between subjects, low x medium x high) and response strategy (within subjects, feedback x avoidance) were the independent variables. Contact quality, approach intentions and attitude to future discrimination were the dependent variables.

Subsequently, a series of mixed ANCOVA's were also conducted to see if the observed effects persisted when controlling for demographic factors (i.e. age, gender [dummy coded, 0 = Male, 1 = Female], contact quantity, personal experience, severity of disability).⁵⁹

⁵⁸ Inspection of the survey completion times suggests that many of these participants completed the questionnaire very quickly. As such, they may not have properly engaged with the response strategy manipulation. However, in hindsight, the manipulation check could also have been worded in a clearer fashion (see Appendix C).

⁵⁹ In the preceding studies, all results were reported with covariates, as they did not make a difference to the key findings. However, in this study (and Study 8) inclusion of the covariates changed the results

Contact quality. There was a marginally significant main effect on embarrassment on contact quality, $F(2, 75) = 2.86, p = .063, \text{partial } \eta^2 = .071$. However, post-hoc Bonferroni comparisons revealed no significant differences in contact quality between those in the low ($M = 5.04, SE = .306$), medium ($M = 4.18, SE = .311$) and high conditions ($M = 4.05, SE = .359$; all p 's $> .119$).

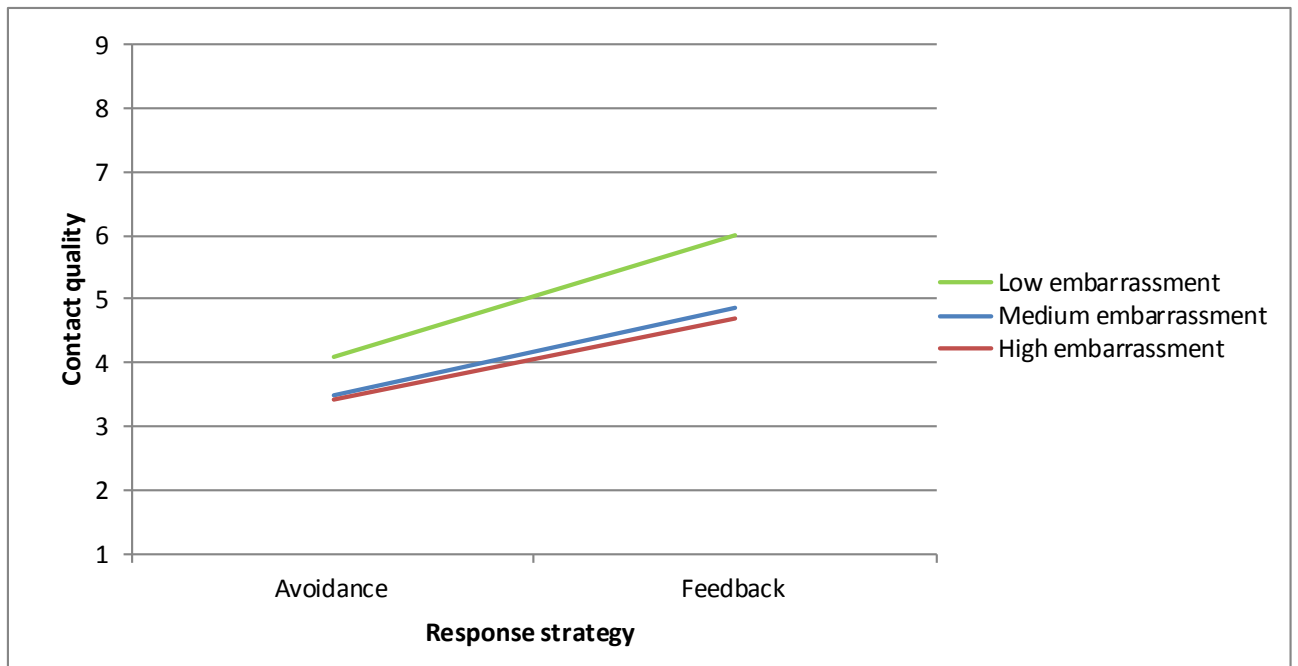
There was a significant main effect of response strategy on contact quality, $F(1, 75) = 31.12, p < .001, \text{partial } \eta^2 = .293$. Specifically, when imagining using a feedback response strategy, participants rated their contact quality as significantly higher ($M = 5.18, SE = .215$) compared to when they imagined using an avoidance response strategy ($M = 3.67, SE = .248$).

There was no interaction effect between embarrassment and response strategy on contact quality, $F(2, 75) = .587, p = .558, \text{partial } \eta^2 = .015$ (see Figure 43)⁶⁰.

substantially. As the focus of this thesis was not on testing these covariates and to prevent the possibility of making a Type II error, I present these in footnotes and the analyses without covariates in text. The implication, of course, is that the forthcoming findings may be generally less robust than those in the preceding work (see Chapter 9). In Study 7, note that concerns and preferred response were not used as covariates in the analyses as these variables were affected by the embarrassment level of participants.

⁶⁰ With the covariates added, the main effect of response strategy on contact quality became non-significant, $F(1, 67) = .002, p = .962, \text{partial } \eta^2 = .000$. While none exerted a significant influence on their own, there was a significant interaction between response strategy and personal experience of the vignette, $F(1, 67) = 4.03, p = .049, \text{partial } \eta^2 = .057$.

Figure 43. Main effects and interaction of embarrassment and response strategy on contact quality.

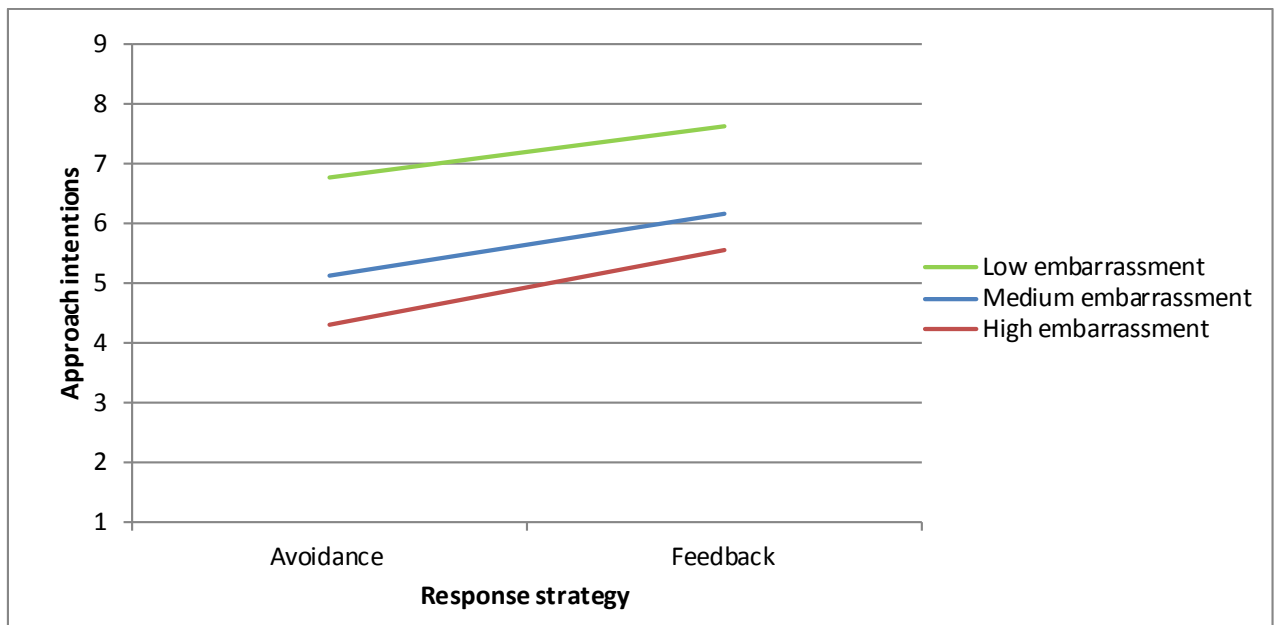


Approach intentions. There was a significant main effect of embarrassment on approach intentions, $F(2, 76) = 12.39, p < .001$, partial $\eta^2 = .246$. Specifically, those participants in the low embarrassment condition had significantly higher approach intentions ($M = 7.19, SE = .307$) than both those in the medium embarrassment ($M = 5.64, SE = .318, p = .002$) and high embarrassment conditions ($M = 4.93, SE = .367, p < .001$). There was no significant difference between the medium and high embarrassment conditions ($p = .447$).

There was a main effect of response strategy on approach intentions, $F(2, 76) = 24.20, p < .001$, partial $\eta^2 = .243$. Specifically, when participants imagined using a feedback response strategy they held greater approach intentions ($M = 6.45, SE = .208$) compared to when they imagined using an avoidance response strategy ($M = 5.38, SE = .230$).

There was no interaction effect between embarrassment and response strategy on contact quality, $F(2, 76) = .324, p = .724, \text{partial } \eta^2 = .008$ (see Figure 44).⁶¹

Figure 44. Main effects and interaction of embarrassment and response strategy on approach intentions.



Attitude to future discrimination. There was a significant main effect of embarrassment on attitude to future discrimination, $F(2, 76) = 4.93, p = .010, \text{partial } \eta^2 = .115$.

Specifically, those participants in the low embarrassment condition had significantly more positive attitudes toward future discrimination ($M = 5.93, SE = .292$) than those in the high embarrassment ($M = 4.52, SE = .350, p < .001$) but not the medium embarrassment condition ($M = 5.16, SE = .303, p = .211$). There was no difference between the medium and high embarrassment conditions ($p = .514$).

⁶¹ With the covariates added, although the main effect of embarrassment on approach intentions remained significant, $F(2, 68) = 5.14, p = .008, \text{partial } \eta^2 = .131$, the contrast between the low ($M = 6.82, SE = .338$) and medium ($M = 5.85, SE = .326$) conditions became non-significant. Additionally, the main effect of response strategy became non-significant, $F(1, 68) = 2.21, p = .142, \text{partial } \eta^2 = .031$. Only concerns had a significant influence on approach intentions, $F(1, 68) = 4.80, p = .032, \text{partial } \eta^2 = .066$. Additionally, there was a significant interaction between response strategy and three of the covariates: personal experience, $F(1, 68) = 4.29, p = .042, \text{partial } \eta^2 = .059$, age, $F(1, 68) = 4.29, p = .042, \text{partial } \eta^2 = .059$, and contact quantity, $F(1, 68) = 4.57, p = .036, \text{partial } \eta^2 = .063$.

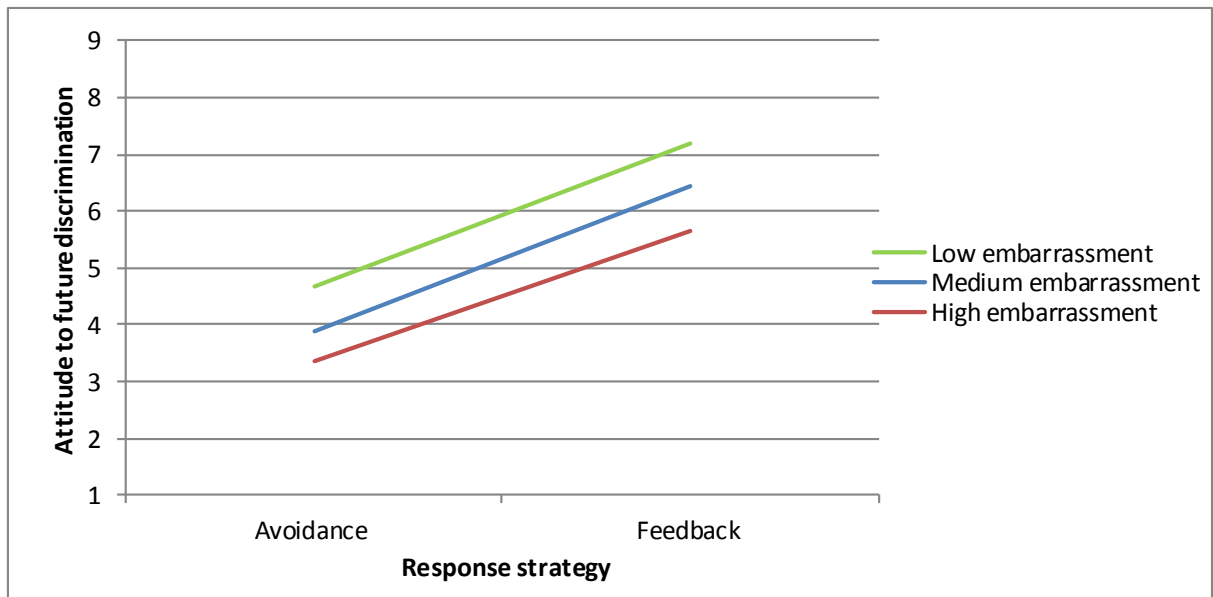
There was a main effect of response strategy on attitude to future discrimination, $F(2, 76) = 66.61, p < .001, \text{partial } \eta^2 = .467$. Specifically, when participants imagined using a feedback response strategy they held more positive attitudes to future discrimination ($M = 6.43, SE = .200$) compared to when they imagined using an avoidance response strategy ($M = 3.98, SE = .267$).⁶²

There was no interaction effect between embarrassment and response strategy on attitude to future discrimination, $F(2, 76) = .076, p = .927, \text{partial } \eta^2 = .002$ (see Figure 45)⁶³.

⁶² Levene's test within the avoidance condition was significant indicating unequal condition variances. As between subjects condition sizes were quite unequal in this study, the variance ratio was computed to double check whether this deviation was problematic, following advice given by Field (2009). The computation suggested that condition variances were not different enough to be problematic to the analysis.

⁶³ With the covariates added, the main effect of embarrassment on attitude to future discrimination became marginally significant, $F(1, 68) = 2.55, p = .085, \text{partial } \eta^2 = .070$, as did the contrast between the low ($M = 6.82, SE = .338$) and high ($M = 5.85, SE = .326$) conditions. Additionally, the main effect of response strategy became non-significant, $F(1, 68) = 1.60, p = .210, \text{partial } \eta^2 = .023$. Severity of disability, $F(1, 68) = 5.21, p = .026, \text{partial } \eta^2 = .071$, gender, $F(1, 68) = 8.97, p = .004, \text{partial } \eta^2 = .117$, and age, $F(1, 68) = 4.60, p = .036, \text{partial } \eta^2 = .063$, had a significant influence on attitude toward future discrimination. Additionally, there was a significant interaction between response strategy and personal experience, $F(1, 68) = 5.70, p = .020, \text{partial } \eta^2 = .077$.

Figure 45. Main effects and interaction of embarrassment and response strategy on attitude to future discrimination.



Discussion

The findings of this study outline a possible strategy that physically disabled people could use in response to an embarrassing situation involving discrimination that may maintain positive interactional outcomes with non-disabled people. Specifically, when imagining using a feedback response (vs. an avoidance response), participants expected better quality contact with non-disabled people, held greater approach intentions and had more positive attitudes towards future discrimination. This supported the predictions made by H₂.

Consistent with H₁ and the previous work (i.e. Study 2), embarrassment had a main effect on approach intentions, attitude toward future discrimination and a (marginally) significant main effect on contact quality. Specifically, higher levels of embarrassment resulted in reduced contact quality, approach intentions and more negative attitudes

toward future discrimination. For contact quality, a possible reason why the effect was only marginal is due to methodological differences. Specifically, the present study asked about *future* contact quality, whereas the previous studies focused on real or imagined interactions that had already taken place. In other words, the experience of embarrassment may be less relevant to determining the quality of future encounters, compared to those that have already occurred.

Embarrassment did not appear to interact with the response strategy manipulation. This means that a feedback response may be useful as a general strategy for physically disabled people to employ subsequent to an encounter involving discrimination.

However, an important caveat to this suggestion is that, in contrast to the previous studies, the above findings become non-significant when controlling for personal experience and demographic characteristics. These results are therefore less robust than those in the previous studies. Additionally, it is essential to be mindful of the gulf between intentions (measured here) and real-life behaviour (Ajzen, 2002). As such, while the identification of a beneficial strategy for physically disabled people represents a valuable insight, it remains to be seen how effective this would be in praxis.

A further limitation is that it is unclear how realistic it is for all physically disabled people to give feedback after a discriminatory interaction. Put simply, while the right feedback strategy at the interpersonal level may be effective, ultimately, it may be difficult to implement for all group members. On the other hand, a collective or societal strategy orientated towards producing social change would eliminate the need to employ strategies to restore contact quality perceptions at the interpersonal level (Hebl & Kleck, 2000). During the course of this research, one such opportunity presented itself in the form of the 2012 Paralympic Games, which the UK hosted. The next and final study of

this work will investigate to what extent this national event improved the quality of interactions between non-disabled and physically disabled people.

Testing the efficacy of the Paralympics as a natural method of improving contact quality between non-disabled people and physically disabled people (Study 8)

Study 6 and Study 7 have examined the efficacy of social feedback, given by the physically disabled person after an embarrassing interaction, to improve contact quality perceptions for members of both groups. The findings suggested that such feedback may be beneficial for maintaining quality of contact between the groups. However, the approach has some limitations; for instance, it may be difficult to get all physically disabled people to use an interpersonal feedback strategy in response to an embarrassing interaction. Not all may feel confident to do so. An alternative approach is to use collective or societal level strategies to promote social change (e.g., modifying the environment, see Hebl & Kleck, 2000).

In 2012 the UK hosted the Paralympic Games.⁶⁴ Across the country, there was widespread belief among disabled people and their families that the event could improve attitudes, through generating contact opportunities and increasing knowledge about disability (Scope, 2012). This potential for social legacy was emphasised to the general public by many major media outlets, both shortly before and after the Games (e.g., Dawson, 2012, Rickman, 2012), as well as by academics in the preceding years (e.g., Weed & Dowse, 2009). Additionally, this aim was also recognised by the organisers of the Games themselves (Department for Culture, Media and Sport [DCMS], 2010, as cited in Ferrara et al., in press).

In support of these popular opinions, research has indicated that media portrayals of disabled people can shift attitudes in a positive (Daruwalla & Darcy, 2005) or negative direction (Dahl, 1993) based on how members of the group are depicted. For instance, positive portrayals may increase knowledge about the group leading to attitudinal

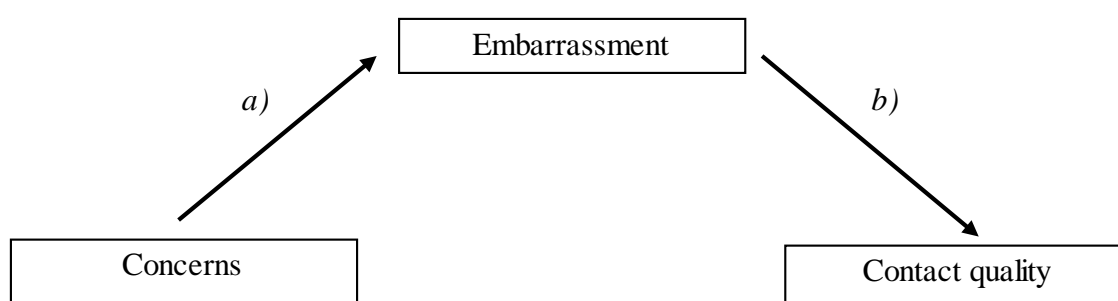
⁶⁴ Specifically, the Games began on the 29th of August 2012 and ended on the 9th of September 2012.

change (Daruwalla & Darcy, 2005) while negative portrayals may confirm and exacerbate harmful stereotypes (Elliot & Byrd, 1982); for example, that disabled people are dependent, incompetent or asexual (see Nario-Redmond, 2010). Importantly, coverage of disabled athletes at the Paralympic Games has been growing steadily more representative and mainstream (Pappous, Marcellini, & de Leseleuc, 2011). Indeed, in 2012 coverage of the Games was shown on one of the UK's four major television channels (i.e. Channel 4) and reached a sizeable demographic (39.9 million people or 69% of the viewing public; Chartered Institute of Public Relations [CIPR], 2014). Coverage was similarly televised in other nations (e.g., Australia, the USA), though in some cases not in the same quantity as in the UK (e.g., the USA; see Gibson, 2012).

At the time of the writing, evaluations of the legacy of the 2012 Paralympic Games for attitudes towards disabled people have been mostly anecdotal (e.g., Barber, 2014), though there are a couple of exceptions. For instance, one survey found that 65% of non-disabled viewers thought that television coverage had a favourable impact on their attitudes toward disabled people (CIPR, 2014). Converging evidence on the potential attitudinal benefits of the Games comes from an experimental study conducted by Ferrara et al. (in press). They investigated the extent that viewing Olympic and Paralympic footage of intellectually disabled athletes could shift non-disabled implicit and explicit attitudes towards the group as a whole. Findings indicated that both types of footage improved implicit and certain explicit (e.g., beliefs about empowerment) attitudes towards intellectually disabled people, though neither footage type was more effective than the other. Nevertheless, such research hints at the potential for global events to engender attitudinal change towards stigmatized groups.

So far, the extant research has only examined attitudinal *shift* from the perspective of non-disabled people toward those with intellectual disabilities (Ferrara et al., in press). The present study contributes to research in this area by investigating the impact of the 2012 Paralympic Games on attitudes to *physically disabled* people from the perspectives of *both* non-disabled people and physically disabled people. Specifically, Study 8a will examine whether physically disabled people's own concerns, embarrassment and contact quality with non-disabled people were altered by exposure to the Paralympic Games. Following this, Study 8b will investigate the impact of the Games on non-disabled people's concerns, embarrassment and contact quality with physically disabled people. In short, these studies aimed to capture the dynamic impact of the 2012 Paralympic Games on members of both groups. Additionally, a secondary aim of both studies was to test some of the predictions made by my primary model (of the antecedents of contact quality; reproduced in Figure 46, below).

Figure 46. Model depicting the relationship between concerns, embarrassment and contact quality (both samples).⁶⁵



⁶⁵ Note that the model is slightly different from that in Chapter 3, Figure 1, in that there is now no pathway specified from concerns to contact quality. This is due to the empirical data gleaned from other studies, which has suggested that these constructs do not have a direct, bivariate relationship.

Testing the efficacy of the Paralympics as a natural method of improving contact quality for physically disabled people (Study 8a)

There were two main hypotheses for Study 8a:

H₁ The 2012 Paralympic Games will have a positive effect on physically disabled people's concerns, embarrassment and contact quality with non-disabled people. Specifically, the "normalization" of disability through extensive media coverage may counteract concerns about disability being the focus of interactions with disabled people (Hebl & Kleck, 2000). This should attenuate embarrassment levels and increase contact quality. An alternative possibility is that interactions with non-disabled people will improve due to an increase in general positive affect (R. Brown & Hewstone, 2005, Ferrara et al., in press).

H₂ In line with the previous work presented in this thesis, concerns should positively predict embarrassment over time, while embarrassment in turn should predict a reduction in contact quality.

Method

Participants

Two hundred and twelve physically disabled people took part in the first wave of the study (T1), 153 of which were female and 53 who were male (six did not state their gender). These participants were aged between 16 to 81 ($M = 42.46$, $SD = 15.02$) and approximately 66% reported being from the UK in origin. The most common physical disabilities listed were: muscular weaknesses, atrophy or paralysis ($N = 49$), arthritis ($N = 37$), cerebral palsy or hip dysplasia ($N = 34$) and neurological disorders (e.g., Fibromyalgia, ($N = 34$)). Additionally, 37 participants reported a co-occurrence of two or more disabilities (e.g., a person who has arthritis and is legally blind). This was most common among respondents who reported arthritis ($N = 12$) and neurological disorders

($N = 10$). The mean reported severity of disability for the full sample was 5.99 ($SD = 1.99$). At Time 2 (T2), respondents fell to 101 participants (21 males, 78 females, two who did not state gender) approximately 68% of whom reported being from the UK in origin. Age range was now 20 to 76 years ($M = 43.92$, $SD = 14.78$). The most frequently reported impairments and co-occurrences of impairments did not change and the mean reported severity of disability was not significantly different from the Time 1 sample ($M = 5.89$, $SD = 1.77$).

Design

A longitudinal design was used in which physically disabled participants completed a survey containing all measures at two time periods. Data were collected from respondents from early June 2012 to mid-August 2012 (Time 1, T1) and resumed immediately after the Paralympic games until mid-October 2012 (Time 2, T2).

Procedure

Physically disabled people were recruited from several online disability websites (e.g., OuchToo) forums (e.g., Apparalyzed), and social media groups (e.g., Hemihelp-Facebook) to take part in a short online questionnaire. Participants were told that the study would investigate how they interact with non-disabled people and their exposure to the 2012 Paralympic Games.

Second wave data were collected using contact email addresses provided in the first survey. Measures were identical across the two surveys.

Dependent measures

All variables in the study were assessed using a Likert scale of 1 to 9, where participants were asked to select the number closest to how they were feeling (1 = *Not at all* and 9 = *Very much so*).⁶⁶

Concerns. Psychological concerns over interacting with non-disabled people were measured using five items. These items were the same as used in the previous studies (i.e. Study 2, Study 7). Reported worries were aggregated to form a single measure of psychological concerns over interacting with non-disabled people, with high scores indicating a greater degree of concerns (T1 $\alpha = .90$, T2 $\alpha = .92$).

Embarrassment. Participants were asked how they personally felt when interacting with non-disabled people. Six items were used to measure embarrassment, derived from commonly used descriptions of the emotion and its corollaries (e.g., “embarrassed”, “uncomfortable”, “foolish”, “nervous”, “awkward” and “incompetent”; see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Ratings for each item were averaged into a single index to measure embarrassment, with high scores indicating greater reported embarrassment (T1 $\alpha = .94$, T2 $\alpha = .91$).

Contact quality. Contact quality was measured on a three item scale, where participants were asked to indicate how “pleasant”, “positive” or “intimate” their contact with non-disabled people had been. Scores were averaged to form a single scale measuring quality of contact, with high scores indicating greater levels of contact (T1 $\alpha = .91$, T2 $\alpha = .89$).

⁶⁶ Chronologically, Study 8a and 8b were the first quantitative designs employed in this thesis and the first to utilize scale measures. As such, scales reflect earlier versions of the measures used in later work.

Contact quantity. Quantity of contact with members of the other group was measured using three items. Participants were asked to what extent they mixed with non-disabled people "...in the area you live in", "...when socialising", and "...when engaging with leisure activities". Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact (T1 $\alpha = .91$; T2 $\alpha = .89$).

Exposure to the Paralympics. Three items measured exposure to the 2012 Paralympic Games. Specifically, participants indicated their "amount of interest", "amount of [athlete] knowledge" and "exposure to coverage" of the Games. Item scores were averaged to form a single measure of exposure (T1 $\alpha = .78$; T2 $\alpha = .89$).

Demographics. Participant age, gender and severity of disability (1 = *Not at all*, 9 = *Very much so*) were also recorded.

Results

Preliminary analyses

Correlations between all measured variables are shown in Table 11.

Table 11. Longitudinal and cross-sectional correlations among the key measured variables.

Variable	1	2	3	4
1. Concerns	.63***	.39***/.65***	-.37***/-.34**	-.34**/-.03
2. Embarrassment	.48***	.59***	-.44***/-.46***	-.09/.06
3. Contact quality	-.34**	-.36**	.70***	.09/.04
4. Exposure	-.22*	-.12	.06	.75***

Note. Coefficients on or below the diagonal in bold type are Time 1 (T1) and Time 2 (T2) correlations (e.g., from T1 values of variables in column 1 to T2 values of variables in top row). Above the diagonal are cross-sectional correlations at T1/T2. T1 $N = 212$, T2 $N = 101$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Note that at Time 1, concerns and embarrassment have only a moderate positive correlation. At Time 2 this increases, but it is still under the cut-off point (.80) that Field (2009) suggests indicates multicollinearity. None of the forthcoming regression models violated the assumption of no multicollinearity.

Following this, differences between the Time 1 and Time 2 samples were checked.

Participants who completed the second wave reported significantly lower contact quantity with non-disabled people ($M = 6.44$, $SD = 2.47$) than did non-respondents ($M = 7.30$, $SD = 2.26$), $F(1, 210) = 6.93$, $p = .009$. No other differences were found between responders and non-responders. While the above represents an unfortunate attrition bias, longitudinal analyses can still be performed on the data.

Pre and post-Paralympic changes in attitudes towards non-disabled people

Analytic strategy. A series of repeated measures ANOVA’s were conducted on each matched pair of dependent variables to measure change over time.⁶⁷

Repeated measures ANOVA’s. The results of the analyses are shown in Table 12.

Table 12. Change over time on the key measures over the 2012 Paralympic Games.

Measure	Pre-Paralympics	Post-Paralympics	<i>F</i>	<i>p</i>	partial η^2
	Mean (SD)	Mean (SD)			
Concerns	4.49 (2.36)	3.83 (2.18)	11.40	.001	.102
Embarrassment	3.14 (1.99)	2.52 (1.62)	13.90	< .001	.122
Contact quality	6.74 (1.79)	6.55 (1.78)	1.82	.180	.018
Exposure	4.52 (2.16)	5.32 (2.50)	22.63	< .001	.185

Table 12 shows that, as might be expected, exposure to the Paralympics rose between the time periods. Furthermore, concerns and embarrassment experienced while interacting with non-disabled people decreased. However, this was not followed by a change in contact quality.⁶⁸

Testing the model of concerns, embarrassment and contact quality

Study 8a also provided one last opportunity to test the pathways predicted by my primary model (see Figure 46, above) with a physically disabled sample. Specifically, it

⁶⁷Subsequently, the same models were computed when controlling for demographic factors (i.e. age, gender [dummy coded, 0 = Male, 1 = Female], contact quantity, severity of disability). The reason for this presentation order is given in footnote 59 (Study 7).

⁶⁸When accounting for the covariates, change over time for concerns, $F(1, 92) = .001, p = .980$, partial $\eta^2 = .000$, embarrassment, $F(1, 92) = .947, p = .333$, partial $\eta^2 = .010$, and exposure, $F(1, 92) = .148, p = .702$, partial $\eta^2 = .002$, became non-significant. Specifically, contact quantity had a significant effect on concerns, $F(1, 92) = 7.76, p = .006$, partial $\eta^2 = .078$, age had a significant effect on embarrassment, while severity had a significant influence on exposure, $F(1, 92) = 4.21, p = .043$, partial $\eta^2 = .044$.

was expected that concerns would predict increased embarrassment (path *a*) and that embarrassment, but not concerns, would predict decreased contact quality (path *b*).

Cross-sectional analyses. To examine the relationship between contact quality and its predictors in the cross-sectional data (path *b*), contact quality was regressed on embarrassment and concerns *separately* at both Time 1 and Time 2. The predictors were centred around the mean prior to analyses (see Field, 2009).⁶⁹

At T1, both concerns, $\beta = -.20, p = .007$, and embarrassment, $\beta = -.33, p < .001$, were significant negative predictors of contact quality, $F(2, 209) = 28.99, p < .001$. The model explained a reasonable proportion of the variance, $R^2 = .22$. At T2, only embarrassment, $\beta = -.43, p < .001$, remained a significant negative predictor of contact quality, as concerns was non-significant, $\beta = -.07, p = .603, F(2, 98) = 13.65, p < .001, R^2 = .22$.

Longitudinal analyses. To test the model longitudinally, two further regression models were conducted. Of primary interest was testing path *a*), whether concerns predicted embarrassment over time, and path *b*), whether concerns and embarrassment predicted contact quality over time. Recommendations made by Finkel (1995) for analysis of longitudinal data were followed. Specifically, to test path *a*), for each sample, T2 embarrassment levels were regressed on T1 concerns while controlling for T1 embarrassment. Similarly, to test path *b*), T2 contact quality was regressed on T1 concerns and embarrassment, while controlling for T1 contact quality ratings. All predictors were centred around the mean prior to analysis (see Field, 2009).⁷⁰

⁶⁹ Models were also tested with the covariates (i.e. age, gender, contact quantity, severity of disability). Their inclusion did not change the results of the analyses.

⁷⁰ As above, the longitudinal models were tested with the covariates included. Again, their inclusion did not change the results of the analyses.

Table 13 shows the regression model testing path *a*). The model was significant, $F(2, 98) = 32.53$ $p < .001$, explaining 40% of the variance in embarrassment at Time 2.

Inspection of the predictors revealed that concerns, $\beta = .25$, $p = .006$, in addition to embarrassment at T1, $\beta = .47$, $p < .001$ was a reliable predictor of embarrassment at T2.

Table 13. Regression analysis of concerns (T1) on T2 embarrassment while controlling for T1 embarrassment.

	B	SE B	β
Constant	2.52	0.13	
Concerns (T1)	0.17	0.06	.25**
Embarrassment (T1)	0.38	0.07	.47***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

Table 14 shows the regression model testing path *b*). The model was significant, $F(3, 97) = 33.96$ $p < .001$, explaining 51% of the variance in contact quality at Time 2.

Inspection of the predictors revealed that only contact quality at T1, $\beta = .65$, $p < .001$, predicted contact quality at T2. Neither concerns, $\beta = -.01$, $p = .871$, or embarrassment, $\beta = -.14$, $p = .106$, were significant predictors.

Table 14. Regression analysis of concerns (T1) and embarrassment (T1) on T2 contact quality while controlling for T1 contact quality.

	B	SE B	β
Constant	6.54	0.13	
Concerns (T1)	-0.01	0.06	-.01
Embarrassment (T1)	-0.13	0.07	-.14
Contact quality (T1)	0.65	.08	.65***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

Discussion

The objective of Study 8a was to investigate the extent that the 2012 Paralympic Games could operate as a natural intervention to improve the quality of interactions for physically disabled people.

A reduction in concerns and embarrassment over the period of the Games was observed. However, this was not accompanied by an increase in reported contact quality. The findings therefore only partially support H₁. Moreover, the observed differences in concerns and embarrassment disappeared when controlling for demographic factors (see footnote 68) and should therefore be treated with the requisite caution.

The cross-sectional and longitudinal regression analyses provide only partial support for the previous empirical findings presented in this thesis (see H₂; Figure 46, above). In the cross-sectional data, embarrassment predicted reduced contact quality at both Time 1 and Time 2; however, contrary to the hypothesis concerns also negatively predicted contact quality at Time 1. Longitudinally, concerns were observed to negatively predict embarrassment over time. However, contrary to the hypothesis, embarrassment was not found to be a negative predictor of contact quality over time.

Possible reasons for these divergent findings will be discussed after Study 8b, which investigates the effect of the 2012 Paralympic Games among a non-disabled sample.

Testing the efficacy of the Paralympics as a natural method of improving contact quality for non-disabled people (Study 8b)

There were two main hypotheses for Study 8b:

H₁ Non-disabled concerns, embarrassment and contact quality with physically disabled people should be lower after the 2012 Paralympic Games, compared to before. Viewing footage of Paralympic athletes may increase knowledge about physically disabled people (Daruwalla & Darcy, 2005), and counteract the negative impressions and stereotypes (e.g., that disabled people are dependent; Nario-Redmond, 2010) that underpin non-disabled people's concerns in mixed interactions (e.g., about appearing prejudiced). Without these concerns, embarrassment should also be attenuated, leading to an increase in contact quality. Alternatively, the 2012 Paralympic Games might simply promote an upswing in general positive affect, which may impact how non-disabled people interact with physically disabled people (R. Brown & Hewstone, 2005; Ferrara et al., in press).

H₂ In line with the previous work presented in this thesis, concerns should predict an increase in embarrassment over time, while embarrassment in turn should predict a reduction in contact quality.

Method

Participants

The initial Time 1 (T1) sample consisted of 336 participants (133 males and 201 females, while two respondents did not state their gender). These participants were aged between 16-84 ($M = 31.18$, $SD = 14.27$) and approximately 80% mentioned being from the U.K. in origin. At Time 2 (T2) respondents fell to 65 non-disabled participants, roughly a fifth of the original sample. However, of the original sample, only 190 participants gave their consent to be contacted for the second wave. The 65 participants

at Time 2 therefore represent approximately a third of the respondents who stated a willingness to engage in the second stage. The second wave sample consisted of 22 males and 43 females, who were aged between 16 and 67 ($M = 36.98$, $SD = 15.63$). Approximately, 92% of the participants stated that they were from the U.K. in origin.

Design

A longitudinal design was used in which non-disabled participants completed a survey containing all measures at two time periods. Data were collected from both non-disabled and physically disabled respondents between early June 2012 to mid-August 2012 (Time 1, T1) and resumed immediately after the Paralympic games until mid-October 2012 (Time 2, T2).

Procedure

Once data collection began, letters were first distributed to 5000 households in several areas of the Medway region, Kent, in order to gain as representative a sample as possible of the county. Each letter contained a link to the online survey as well as information about the study and the prizes that could be won. Distribution was handled by a professional company based in Medway and areas were chosen by the researcher based on regional demographics available online (Medway Council, 2012). Specific streets and the times for delivery were allocated based on recommendations from the company used for distribution.

Due to a lukewarm response from county households, further participation in the first wave was encouraged using online mailing lists (e.g., JISCmail). In conjunction with this online recruitment, two non-disabled research assistants collected data from non-

disabled people within the Medway and Canterbury area using identical paper copies of the survey. Sampling in this case was conducted on an opportunity basis.⁷¹

Second wave data were collected using contact email addresses provided in the first survey. Measures were identical across the two surveys.

Dependent measures

All variables in the study were assessed using a Likert scale of 1 to 9, where participants were asked to select the number closest to how they were feeling (1 = *Not at all* and 9 = *Very much so*).

Concerns. Psychological concerns over interacting with physically disabled people were measured using eight items. These items were the same as used in the previous studies (e.g., Study 3, Study 4). Reported worries were aggregated to form a single measure of psychological concerns over interacting with physically disabled people, with high scores indicating a greater degree of concerns (T1 $\alpha = .93$, T2 $\alpha = .96$).

Embarrassment. Participants were asked how they personally felt when interacting with physically disabled people. Six items were used to measure embarrassment, derived from commonly used descriptions of the emotion and its corollaries (e.g., “embarrassed”, “uncomfortable”, “foolish”, “nervous”, “awkward” and “incompetent”; see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). Ratings for each item were averaged into a single index to measure embarrassment, with high scores indicating greater reported embarrassment (T1 $\alpha = .91$, T2 $\alpha = .94$).

Contact quality. Contact quality was measured on a three item scale, where participants were asked to indicate how “pleasant”, “positive” or “intimate” their contact with

⁷¹ Mode of data collection did not affect scores on any of the dependent variables (i.e. all $p > .05$). Therefore, this variable is not considered further in the analyses.

physically disabled people had been. Scores were averaged to form a single scale measuring quality of contact, with high scores indicating greater levels of contact (T1 $\alpha = .67$, T2 $\alpha = .69$).

Contact quantity. Quantity of contact with members of the other group was measured using three items. Participants were asked to what extent they mixed with physically disabled people "...in the area you live in", "...when socialising", and "...when engaging with leisure activities". Scores were averaged to form a single scale measuring quantity of contact, with high scores indicating greater levels of contact (T1 $\alpha = .85$, T2 $\alpha = .87$).

Exposure to the Paralympics. Three items measured exposure to the 2012 Paralympic Games. Specifically, participants indicated their "amount of interest", "amount of [athlete] knowledge" and "exposure to coverage" of the Games. Item scores were averaged to form a single measure of exposure (T1 $\alpha = .78$; T2 $\alpha = .89$).

Demographics. Participant age and gender were also recorded.

Results

Preliminary analyses

Correlations between all measured variables are shown in Table 15.

Table 15. Longitudinal and cross-sectional correlations among the key measured variables.

Variable	1	2	3	4
1. Concerns	.51***	.46***/.78***	-.17**/-.41***	-.06/- .33**
2. Embarrassment	.37**	.58***	-.34***/-.45***	-.16**/-.21
3. Contact quality	-.13	-.38**	.37**	.29***/.17
4. Exposure	-.28*	-.27*	.19	.67***

Note. Coefficients on or below the diagonal in bold type are Time 1 (T1) and Time 2 (T2) correlations (e.g., from T1 values of variables in column 1 to T2 values of variables in top row). Above the diagonal are cross-sectional correlations at T1/T2. T1 $N = 336$, T2 $N = 65$, * $p < .05$, ** $p < .01$, *** $p < .001$.

As in the physically disabled sample (Study 8a), at Time 1 concerns and embarrassment have only a moderate positive correlation. At Time 2 this increases, but is still (just) under the cut-off point (.80) that Field (2009) suggests indicates multicollinearity. None of the forthcoming regression models violated the assumption of no multicollinearity.

Following this, differences between the Time 1 and Time 2 samples were checked.

Participants who completed the second wave were significantly older ($M = 37.11$, $SD = 15.69$) than non-respondents ($M = 29.75$, $SD = 13.55$), $F(1, 334) = 14.49$, $p < .001$. No other differences were found between responders and non-responders. While the above represents an unfortunate attrition bias, longitudinal analyses can still be performed on the data.

Pre and post-Paralympic changes in attitudes towards the other group

Analytic strategy. A series of repeated measures ANOVA's were conducted on each matched pair of dependent variables to measure change over time.⁷²

⁷²Subsequently, the same models were computed when controlling for demographic factors (i.e. age, gender [dummy coded, 0 = Male, 1 = Female], contact quantity). See footnote 59.

Repeated measures ANOVA's. The results of the analyses are shown in Table 16.

Table 16. Change over time on the key measures over the 2012 Paralympic Games.

Measure	Pre- Paralympics	Post- Paralympics	<i>F</i>	<i>p</i>	partial η^2
	Mean (SD)	Mean (SD)			
Concerns	4.91 (2.11)	4.16 (2.21)	7.92	.007	.110
Embarrassment	3.30 (1.82)	2.89 (1.81)	4.02	.049	.059
Contact quality	5.96 (1.59)	5.88 (1.53)	0.16	.690	.003
Exposure	3.83 (1.83)	5.41 (2.24)	56.02	< .001	.467

Table 16 shows that, as might be expected, exposure to the Paralympics rose between the time periods. Furthermore, concerns and embarrassment experienced while interacting with physically disabled people decreased. However, this was not followed by a change in contact quality.⁷³

Testing the model of concerns, embarrassment and contact quality

Study 8b also provided one last opportunity to test the pathways predicted by my primary model (see Figure 46, above) with a non-disabled sample. Specifically, it was expected that concerns would predict increased embarrassment (path *a*) and that embarrassment, but not concerns, would predict decreased contact quality (path *b*).

Cross-sectional analyses. To examine the relationship between contact quality and its predictors in the cross-sectional data (path *b*), contact quality was regressed on

⁷³ When accounting for the covariates, change over time for concerns, $F(1, 61) = 1.51, p = .224$, partial $\eta^2 = .024$, and embarrassment, $F(1, 61) = .001, p = .974$, partial $\eta^2 = .000$, became non-significant. Specifically, contact quantity had a significant effect on concerns, $F(1, 61) = 7.18, p = .009$, partial $\eta^2 = .105$, and embarrassment, $F(1, 61) = 11.50, p < .001$, partial $\eta^2 = .159$.

embarrassment and concerns *separately* at both Time 1 and Time 2. The predictors were centred around the mean prior to analyses (see Field, 2009).⁷⁴

At T1, embarrassment, $\beta = -.33, p < .001$, but not concerns, $\beta = -.02, p = .706$, was a significant negative predictor of contact quality, $F(2, 335) = 21.27, p < .001$. The model explained a relatively small proportion of the variance, $R^2 = .12$. At T2, embarrassment, $\beta = -.34, p = .063$, became a marginally significant predictor of reduced contact quality, while concerns, $\beta = -.15, p = .403$, remained non-significant, $F(2, 62) = 8.47, p = .001, R^2 = .22$.

Longitudinal analyses. To test the model longitudinally, two further regression models were conducted. Of primary interest was testing path *a*), whether concerns predicted embarrassment over time, and path *b*), whether concerns and embarrassment predicted contact quality over time. Recommendations made by Finkel (1995) for analysis of longitudinal data were followed. Specifically, to test path *a*), for each sample, T2 embarrassment levels were regressed on T1 concerns while controlling for T1 embarrassment. Similarly, to test path *b*), T2 contact quality was regressed on T1 concerns and embarrassment, while controlling for T1 contact quality ratings. All predictors were centred around the mean prior to analysis (see Field, 2009).⁷⁵

Table 17 shows the regression model testing path *a*). The model was significant, $F(2, 62) = 16.31, p < .001$, explaining 35% of the variance in embarrassment at Time 2.

Inspection of the predictors revealed that embarrassment at T1, $\beta = .52, p < .001$, but not concerns, $\beta = .13, p = .281$, was a predictor of embarrassment at T2.

⁷⁴ Models were also tested with the covariates (i.e. age, gender, contact quantity). Their inclusion did not change the results of the analyses.

⁷⁵ As above, the longitudinal models were tested with the covariates included. Again, their inclusion did not change the results of the analyses.

Table 17. Regression analysis of concerns (T1) on T2 embarrassment while controlling for T1 embarrassment.

	B	SE B	β
Constant	2.71	0.19	
Concerns (T1)	0.11	0.10	.13
Embarrassment (T1)	0.51	0.12	.52***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

Table 18 shows the regression model testing path *b*). The model was significant, $F(3, 61) = 6.19$ $p = .001$, explaining 23% of the variance in contact quality at Time 2.

Inspection of the predictors revealed that both contact quality at T1, $\beta = .31$, $p = .010$, and embarrassment, $\beta = -.35$, $p = .008$, predicted contact quality at T2. Concerns were not a significant predictor, $\beta = .11$, $p = .389$.

Table 18. Regression analysis of concerns (T1) and embarrassment (T1) on T2 contact quality while controlling for T1 contact quality.

	B	SE B	β
Constant	5.96	0.18	
Concerns (T1)	0.09	0.09	.11
Embarrassment (T1)	-0.30	0.11	-.35**
Contact quality (T1)	0.30	.11	.31**

Note. *** $p < .001$, ** $p < .01$, * $p < .05$

Discussion

The objective of Study8b was to investigate the extent that the 2012 Paralympic Games could operate as a natural intervention to improve the quality of interactions for non-disabled people.

A reduction in concerns and embarrassment over the period of the Games was observed.

However, this was not accompanied by an increase in reported contact quality. The

findings therefore only partially support H₁. Moreover, the observed differences in concerns and embarrassment disappeared when controlling for demographic factors (see footnote 73) and should therefore be treated with the requisite caution.

The cross-sectional and longitudinal regression analyses provide only partial support for the previous empirical findings presented in this thesis (see H₂; Figure 46, above). In the cross-sectional data, embarrassment predicted reduced contact quality at both Time 1 and (marginally) at Time 2. Additionally, embarrassment was found to be a negative predictor of contact quality over time. However, longitudinally, no relationship between concerns and embarrassment was observed.

What follows is a short general discussion to Study 8.

General discussion to Study 8

Both Study 8a and 8b provide only partial support for the model tested in the previous work (see Figure 46, above). Perhaps the failure to replicate all of the previous findings is a reflection that the link between concerns, embarrassment and contact quality is most prominent when a concrete context is offered (i.e. through vignettes; see Study 2 & 3). As noted previously (see Chapter 4), Study 8b (matched $N = 65$) was also statistically underpowered. While longitudinal research has been conducted previously with smaller sample sizes (e.g., $N = 40$, Greenland & Brown, 1999), this could conceivably account for the failure to detect some effects.

Both studies did find that concerns and embarrassment among both non-disabled people and physically disabled people did decrease over the period of the 2012 Paralympic Games. However, a limitation is that the studies did not measure exposure to the 2012 Olympic Games. Subsequent research conducted since the Games found that both types

of footage are effective in producing more positive attitudes towards intellectually disabled people (Ferrara et al., in press). Therefore, perhaps the observed shifts in concerns and embarrassment were due to exposure to the Olympic Games. Note that this reasoning is only speculative however and should be treated with caution.

Chapter summary

Comprising two experimental and one longitudinal study (Studies 6-8), the work presented in this chapter tested potential interventions to improve contact quality within mixed physical ability encounters. There was some evidence that interpersonal feedback, delivered by the physically disabled person, may be able restore or maintain positive expectations of contact quality. Additionally, national disability events such as the 2012 Paralympic Games may also have a positive effect on the perceptions of members of both groups.

Specifically, Study 6 demonstrated that receiving positive social feedback (vs. negative) improved contact quality perceptions after an embarrassing interaction, as well as interest in further contact. No interaction was observed with the embarrassment manipulation however, so it was unclear if this improvement was due to the attenuation of embarrassment.

Following on from this, Study 7 observed that physically disabled people who imagined using a feedback (vs. an avoidance) response expected better contact quality, and held greater approach intentions and more positive attitudes toward future discrimination. A caveat is that these results disappeared when controlling for demographic factors.

Finally, Study 8 observed a decrease in concerns and embarrassment over the period of the 2012 Paralympic Games among both non-disabled and physically disabled people. However, this was not accompanied by a change in reported contact quality.

Overall, the studies presented in this chapter have highlighted some novel methods of improving contact quality among both non-disabled and physically disabled people.

While there was some evidence of the efficacy of these measures, they were not wholly

effective (e.g., some effects disappeared when controlling for demographics). As such, psychologists should be mindful of the challenges involved in trying to improve the quality of contact between non-disabled and physically disabled people. What follows is a General Discussion to my work which will discuss this and other issues.

CHAPTER 10

General Discussion and Conclusions

The overall aim of this thesis was to investigate social psychological antecedents of contact quality among non-disabled and physically disabled people. The following section will summarise the main findings, outline potential limitations and discuss the theoretical and practical implications of this thesis.

Summary of main findings

Study 1: Non-disabled and physically disabled people's perceptions of interactions with members of the other group. It was highlighted that existing work has only looked at contact as a predictor and has thus far not identified its determinants. Furthermore, it was noted that research conducted on this unique intergroup context is sparse and does not generally examine the dynamic, interactive nature of this contact or the perspective of physically disabled people specifically. Study 1 was conducted as a way to gain initial insight into these issues. Specifically, it comprised an exploratory qualitative investigation carried out with both non-disabled and physically disabled people. The phenomenological approach of the chosen methodology allowed both for identification of key determinants of contact quality (i.e. concerns, embarrassment) and the required depth to capture any differences between group members (e.g., their unique concerns).

Analysis of the data revealed that psychological concerns and embarrassment are common features for members of both groups within mixed encounters. Specifically, non-disabled people seemed to hold concerns over their own behaviour, such as appearing prejudiced to physically disabled people (see also Plant & Devine, 2003; Shelton, 2003). On the other hand, physically disabled people were concerned about impairment being the focus of interactions, even if this attention was meant well (e.g.,

helping). Support was also found for the notion that unintentionally treating a physically disabled person differently (for non-disabled respondents) and receiving differential treatment (for physically disabled respondents) would be associated with embarrassment. The reasons given for experiencing this emotion generally supported the work of previous interpersonal theorists (see R. S. Miller, 1996). The perception that they had been negatively evaluated appeared to be a key source of embarrassment for respondents, as was inability to maintain a smooth public performance. Non-disabled people also described feeling embarrassed due to a violation of situational and personal moral standards. In sum, the study provided evidence for the existence of these constructs within the mixed physical ability context and formed the basis for the following experimental work.

Study 2: The effect of physically disabled people's psychological concerns on embarrassment, contact quality and approach intentions in vignette-based

interactions. This thesis then built on the findings of Study 1 by examining the role of concerns in mixed physical ability interactions. Specifically, Study 2 investigated the impact that physically disabled people's concerns have on embarrassment, contact quality and approach intentions across two different interaction contexts. Existing literature has demonstrated that these worries lead to a tendency to readily perceive negative outcomes in mixed interactions (e.g., Vorauer, 2006, 2013). Based on the data from Study 1, it was thought that concerns may increase reported embarrassment, perhaps by leading participants to view their impairment both as a barrier to maintaining a smooth public performance and the object of unfavourable evaluations from non-disabled people (see R. S. Miller, 1996). Additionally, it was predicted that concerns may negatively affect contact quality and reduce approach intentions. Further, the

experience of embarrassment was proposed to mediate these relationships (see Chapter 3, Figure 1).

The experimental manipulation appeared to be effective and results generally supported the above hypotheses. Specifically, participants in whom high concerns were induced (vs. a low concerns and control condition) reported increased embarrassment and reduced approach intentions towards non-disabled people. However, contrary to the predictions, these psychological concerns did not influence contact quality directly.

Further analyses revealed that concerns exerted a negative indirect effect on contact quality through embarrassment, though there was no direct relationship between the two. Embarrassment also mediated the link between concerns and approach intentions in the traditional sense (i.e. the existing relationship between these variables was driven by embarrassment).

The existing literature has highlighted that majority and minority groups may experience mixed interactions differently (e.g., Hebl & Dovidio, 2005). Therefore, in light of the observed findings, the next step was to establish whether concerns impact non-disabled people's perceptions of mixed physical ability interactions, and if so, whether they do so in the same manner as for physically disabled people.

Study 3: The effect of non-disabled people's psychological concerns on embarrassment, contact quality and approach intentions within vignette-based interactions. Study 3 investigated the impact that non-disabled people's concerns have on embarrassment, contact quality and approach intentions across two different interaction contexts. Based on the data from Study 1, it was thought that concerns may increase reported embarrassment, perhaps by causing participants to believe they had committed a transgression, and thus risk negative self or out-group evaluations as well

as a “failure to perform” (see R. S. Miller, 1996). The same hypotheses for contact quality and approach intentions were retained from Study 2, except it was acknowledged that, for the latter, due to countervailing pressure to interact with the physically disabled, concerns may engender a freezing response among the non-disabled (see also Chapter 3, Figure 1).

The experimental manipulation was effective. Like Study 2, participants in whom high concerns were induced (vs. a low concerns condition) reported increased embarrassment on average, but their contact quality did not change. Further, concerns were subsequently observed to exert a negative indirect effect on contact quality through embarrassment.

However, contrary to the previous study, there was no direct effect of concerns on approach intentions, suggesting that participants may have experienced a freezing response (see Greenland et al., 2012). Further analyses revealed that, as for contact quality, concerns exerted a negative indirect effect on approach intentions through embarrassment.

Study 3 produced generally supportive evidence for the previous findings in this thesis. Importantly, like Study 2, it suggests that the experience of embarrassment links psychological concerns to reduced contact quality. This is explored further in the following study.

Study 4: The effect of non-disabled people’s embarrassment on contact quality, approach intentions and prejudiced attributions within an imagined interaction. The previous studies have focused on the impact of concerns on both contact quality and approach intentions. The evidence gleaned has identified embarrassment as the linking mechanism driving these relationships. Study 4 extended this work by directly

investigating the effect of non-disabled people's embarrassment on contact quality and approach intentions after an imagined interaction (see Chapter 3, Figure 1). Moreover, it sought to investigate whether embarrassment could increase prejudicial attributions towards physically disabled people. This line of inquiry was based on established research which has demonstrated the importance of affect and emotions to either causing (e.g., anxiety) or attenuating prejudice (e.g., empathy) towards out-groups (see R. Brown & Hewstone, 2005; Pettigrew & Tropp, 2008). Following this, it was plausible to assume that the negative affect generated by embarrassment might serve to increase prejudice towards physically disabled people. Consistent with the previous studies, it was also predicted that those in the embarrassment condition (vs. a positive affect and control condition) would report reduced contact quality and approach intentions.

The experimental manipulation appeared to be effective. As predicted, those in the embarrassment condition reported reduced contact quality and approach intentions towards the physically disabled. However, there was no overall effect of the manipulation on prejudice, though planned contrasts revealed a marginally significant difference between the embarrassment and positive affect conditions. Regression analyses also revealed that embarrassment (i.e. the scale-based manipulation check) predicted increased prejudice within the cross-sectional data. Additionally, embarrassment was found to contribute independently of concerns to predicting both contact quality and approach intentions (i.e. where embarrassment but not concerns was a significant predictor). In sum, Study 4 provided important converging evidence for the deleterious role of embarrassment in mixed physical ability interactions and for the proposed models (see Chapter 3, Figure 1).

Study 5: Testing a novel manipulation of psychological concerns on embarrassment, contact quality and willingness to help the physically disabled within an actual interaction. Though the preceding work did shed some light on the relationships between concerns, embarrassment and contact quality, these studies did not investigate how these processes operate in actual interactions. Moreover, it was unclear how easy it would be to manipulate concerns within the context of actual interactions.

Study 5 addressed these issues by testing a novel manipulation of non-disabled people's concerns (high vs. low) on embarrassment and contact quality within an actual encounter with a physically disabled person. This study also built on the previous experiment by replacing the intention-based measure of contact avoidance (see Studies 2, 3 & 4) with a behavioural one (willingness to help). In light of the findings of the earlier experiments, it was expected that participants would experience more embarrassment in the high concerns condition (vs. a low concerns condition), though no specific hypothesis was made regarding contact quality and willingness to help (see Study 5). However, as for the previous studies, embarrassment was proposed as the mechanism which linked concerns to both reduced contact quality and contact avoidance. The study also included a second manipulation, known as the Bogus Pipeline (BPL; Imhoff & Banse, 2009) designed to control for socially desirable responding (BPL present vs. BPL absent). Extant literature suggests that people's underlying attitudes towards stigmatized out-groups are often more negative in tone (e.g., Dovidio et al., 2011), However, it was not known whether participants would attempt to obscure their true attitudes in an artificial, laboratory setting.

The manipulation appeared only to induce a subset of concerns in participants regarding "not knowing how to behave" towards the physically disabled. Moreover, contrary to

some of the predictions, no experimental effect of the concerns manipulation was found on the dependent variables.

Additionally, there were no experimental effects of the BPL manipulation. This could indicate that participants in both conditions gave answers approximating their true attitudes. However, it should be noted that the effectiveness of this manipulation can only be inferred (Imhoff & Banse, 2009). Therefore, failure to detect experimental effects could also mean that the BPL manipulation did not work on participants.

Despite the limitations of this study, investigation of the cross-sectional data reproduced key findings from the previous studies (i.e. Studies 3 & 4). Specifically, concerns were found to positively predict embarrassment, while embarrassment negatively predicted contact quality. Moreover, concerns were found to be indirectly, negatively associated with contact quality through embarrassment.

Study 6: The extent that feedback from physically disabled people can restore positive perceptions of contact quality for non-disabled people. The preceding empirical work has painted a somewhat mixed picture of the relationship between concerns, embarrassment and contact quality. On the one hand, the vignette-based studies provide consistent results (i.e. that concerns reduces contact quality indirectly through embarrassment). However, Study 5, which examined actual interactions, did not replicate these findings experimentally, though some supporting evidence was gleaned from the cross-sectional dataset (see above). Moreover, the experimental manipulation of concerns used in Study 5 was not effective. Following this, subsequent research presented an opportunity to test how easy it would be to implement effective intervention strategies in the mixed physical ability context. In light of this, the following study tested an intervention to attenuate embarrassment, which the above

findings suggest might restore positive perceptions of contact quality. Embarrassment is a negative affective reaction to a *perceived* social transgression (R. S. Miller, 1996) and may be common in mixed interactions which often involve misinterpretations and misperceptions (Vorauer, 2006). As such, it was reasoned that explicit social feedback might attenuate embarrassment by acting as a corrective for erroneous beliefs, allowing group members to gain an accurate impression of their performance, the situation, and associated out-group evaluations. Building on the previous study, the experiment used an actual interaction involving a confederate with a physical disability, in order to ensure the encounters were as close to real-life as possible (see Hebl & Dovidio, 2005).

The embarrassment manipulation (high vs. low) was delivered as part of a task that participants and the confederate completed together. After completing the dependent measures, participants received randomised bogus feedback from the confederate (positive vs. negative). Then, in light of an ostensible computer crash, participants completed the dependent measures again, which allowed for an investigation into attitudinal change over time (before feedback vs. after feedback). Consistent with my previous findings, it was expected that those in the high embarrassment condition (vs. the low embarrassment condition) would report reduced contact quality, desire for future contact and increased prejudiced attributions. It was also reasoned that positive feedback should have a beneficial effect on these outcomes through expectancy disconfirmation (i.e. participants realise they have not committed a transgression) while negative feedback should have a deleterious effect through expectancy confirmation (i.e. participants receive confirmation that they have committed a transgression). It was predicted that this effect would be observable over time (i.e. a time x feedback interaction); however, no specific hypotheses were made for the two and three-way interactions involving embarrassment due to a lack of research into the subject.

Contrary to some of the predictions, no experimental effect of embarrassment was observed on the dependent variables. This may be because the manipulation was of questionable success. Specifically, there was a non-significant effect on the manipulation check overall, though inspection of the individual items showed a significant difference on the item “embarrassed” in the predicted direction. However, condition means also displayed a “floor effect” (i.e. clustered towards the lower end of the scale), suggesting effectiveness of the manipulation may have been limited. On the other hand, experimental effects of the feedback manipulation were observed on the dependent variables, but these changed according to whether certain extraneous variables were controlled for (e.g., interpersonal liking, competitiveness, age, gender). With these covariates included, negative feedback had a marginal simple main effect on desire for future contact, lowering it over time. Without these covariates, positive feedback was also shown to increase desire for future contact across time points, while negative feedback increased prejudiced attributions towards the physically disabled. Lastly, both with and without the covariates, positive feedback improved perceptions of the quality of the interaction over time, while negative feedback left them unaffected. The study therefore provides some evidence that receiving (positive) feedback may be beneficial for non-disabled people within mixed physical ability interactions.

Study 7: The extent that using a feedback strategy after an embarrassing interaction can be beneficial for physically disabled people’s contact quality. The previous study examined the extent that social feedback could engender positive interactional outcomes for non-disabled people after an embarrassing interaction with a physically disabled person. Study 7 built on this by testing whether using such feedback can also produce beneficial outcomes for physically disabled people. Specifically, physically disabled participants were presented with an embarrassing vignette depicting discrimination. It

was reasoned that a vignette should be used due the sensitive nature of the study and the ethical implications of exposing vulnerable participants to actual instances of discrimination. Subsequently, a repeated measures design was employed to gauge the effect of using a feedback response (i.e. telling the non-disabled person that discrimination has occurred) on (expected) contact quality and approach intentions. Study 7 also extended the previous empirical work on prejudice in this thesis (i.e. Studies 5 & 6) to measure the impact of response type on physically disabled people's attitudes towards future discrimination. It was predicted that using a feedback (vs. an avoidance) response strategy would result in more positive contact quality, greater approach intentions and more positive attitudes toward discrimination. Additionally, the effect of different levels of embarrassment (low, medium and high) on the dependent measures was investigated. Consistent with the previous studies, it was hypothesised that higher levels of embarrassment would lead to reduced contact quality, approach intentions and more negative attitudes toward future discrimination. No specific hypothesis was made for an interaction between embarrassment and response strategy due to a lack of research into the subject.

As hypothesised, when participants imagined using a feedback response they expected higher quality contact, held greater approach intentions and possessed more positive attitudes towards discrimination than when imagining giving an avoidance response. However, a caveat to the above is when controlling for demographic factors (e.g., age, severity of disability), the difference between response types became non-significant for all dependent measures. Additionally, there was a main effect of embarrassment on both approach intentions and attitude to future discrimination and a marginal main effect of embarrassment on contact quality in the predicted direction; though embarrassment and response strategy did not interact. As such, Study 7 does provide some initial support

for the efficacy of a feedback response in situations where physically disabled people encounter discrimination. Moreover, as the type of response did not interact with embarrassment level, feedback may be a good general strategy for physically disabled people to use subsequent to embarrassing interactions. However, the role that demographic factors play should be more thoroughly investigated (see Future research, below).

Study 8: Testing the efficacy of the Paralympics as a natural method of improving contact quality between non-disabled people and physically disabled people. While Study 6 and 7 provide some evidence that social feedback from physically disabled people may engender positive interactional outcomes for both groups there are some limitations to this strategy. Specifically, as this intervention operates at the interpersonal level, it may be difficult to implement across all group members and contact situations. An alternative approach is to use collective and societal level strategies. In this vein, Study 8a and 8b tested the efficacy of the 2012 Paralympic Games as a method of improving the quality of interactions between both physically disabled people (Study 8a) and non-disabled people (Study 8b). Although research on the potential benefits of the Games is rare, Ferrara et al. (in press) found that both Paralympic and Olympic footage improved attitudes towards people with intellectual disabilities. Similarly, it was suggested that both non-disabled people and physically disabled people would experience less concerns and embarrassment and higher contact quality with the out-group after the Games, perhaps due to a general upswing in positive affect caused by the event (Ferrara et al., in press). Lastly, Study 8a and 8b provided another opportunity to test my primary model (i.e. concerns – embarrassment – contact quality; see Chapter 8, Figure 46) longitudinally.

In partial support of the hypotheses, Study 8a found that physically disabled people reported lower levels of concerns and embarrassment after the Games compared to before. However, contact quality remained unaffected across time periods. Moreover, when controlling for demographics (e.g., age) the changes in concerns and embarrassment became non-significant. Cross-sectional and longitudinal analyses also provided partial support for the model specified in the previous studies (e.g., Study 2). Specifically, at both time points, embarrassment significantly predicted reduced contact quality. Moreover, concerns were observed to negatively predict embarrassment over time. However, contrary to the hypothesis, embarrassment was not found to be a negative predictor of contact quality over time.

Following this, Study 8b identified that non-disabled people reported lower levels of concerns and embarrassment after the Games while their contact quality remained unaffected. As in the physically disabled sample, when controlling for demographics (e.g., age) the changes in concerns and embarrassment became non-significant. Partial support was also retained for the proposed model. Specifically, embarrassment was a significant negative predictor of reduced contact quality at both Time 1 and Time 2 (marginal), as well as over time. However, longitudinally, no relationship between concerns and embarrassment was observed.

It is encouraging that concerns and embarrassment were attenuated in both samples over the period of the Games. However, as in Study 7, these differences disappeared when controlling for demographic factors. This again suggests that these factors may play an important role in mixed physical ability interactions, which future research should account for (see Future research, below).

Major theoretical contributions of the thesis

Contact quality. This thesis has highlighted that, despite being a well-established subject for inquiry for the last five decades, elements of intergroup contact are still poorly understood by psychologists. Specifically, existing work has focused largely on the extent that optimal contact can reduce prejudice and the mechanisms by which this is achieved (R. Brown & Hewstone, 2005; Pettigrew & Tropp, 2006). As such, less optimal contact between groups, such as that which occurs in everyday encounters, has rarely been studied, especially in under-researched contexts such as mixed physical ability interactions (see Dixon et al., 2005). Consequently, relatively little is known about what may contribute or detract from the quality of intergroup encounters, which this thesis aimed to address.

Drawing on the extant research of how non-disabled people and physically disabled people interact (e.g., Reeve, 2012), two possible antecedents of contact quality were identified: psychological concerns and embarrassment. However, as these constructs had not been investigated within the mixed physical ability context (and in the case of embarrassment, at intergroup level), a qualitative study (Study 1) was undertaken. The phenomenological data gleaned from this approach allowed for new insight into the content of concerns and sources of embarrassment within these interactions.

Importantly, as the thesis took a holistic approach by investigating the perceptions of both groups, Study 1 also produced an understanding of the differences between how non-disabled people and physically disabled people experience concerns and embarrassment in mixed encounters (discussed in more detail below).

Studies 2-5 provided some consistent evidence regarding the nature of the relationship between concerns, embarrassment and contact quality. Across, the majority of this experimental work, manipulation checks revealed concerns (Study 2, Study 3) and

embarrassment (Study 4) were successfully induced among participants. The consequent findings suggested that holding psychological concerns increased embarrassment, while experiencing embarrassment negatively impacted contact quality. On the other hand, no evidence was found for a direct effect of psychological concerns on quality among either group. A caveat is that the above findings were observed using only vignette-based (Study 2 & 3) and imagined interactions (Study 4). When the impact of concerns was tested using an actual interaction between a non-disabled and a physically disabled person, no significant effects were found. A possible explanation for these null results was that the experimental manipulation used in this study was not effective (see Study 5). Indeed, when tested cross-sectionally, concerns were found to predict embarrassment as in the other studies. Thus, overall, a major contribution of this thesis has been in identifying two antecedents of contact quality.

In each of the studies (i.e. Studies 2-5), analyses revealed that concerns exerted an indirect negative effect on contact quality through embarrassment. That is, concerns were observed to indirectly reduce contact quality through causing embarrassment. This is consistent with the idea that the negative affect generated by aversive emotions, such as embarrassment, may transfer to objects and situations perceived to be associated with them (e.g., R. Brown & Hewstone, 2005). Thus, as can be seen, the thesis goes beyond establishing antecedents of contact quality by identifying the relationship between these constructs, allowing for insight into what may be accounting for the impoverishment of contact quality in the mixed physical ability context. Note that this impoverishment may be relatively short-term however, as Studies 8a and 8b failed to find evidence that embarrassment could reduce contact quality over time.

Interventions. Traditionally, intergroup contact had been tested as a way of reducing anxiety and prejudice within mixed encounters (see Pettigrew & Tropp, 2006).

However, more recent research has explored the cognitive basis for anxiety within cross-group interactions and it has been suggested that these biases may be especially difficult to remove (e.g., Vorauer, 2013). Moreover, other factors specific to the mixed physical ability context, such as heterogeneity of impairment, may mean that intergroup contact is limited for use as an intervention among non-disabled and physically disabled people. A possible solution then, was to focus on other detrimental factors that limit the success of cross-group interactions. That is, although the identification of concerns and embarrassment as important antecedents of contact quality was theoretically interesting in itself, this thesis went beyond this by investigating potential interventions within this context. In this respect, another central contribution of this thesis was in testing strategies to improve the quality of interactions within the mixed physical ability context

As Studies 2-5 found that embarrassment accounts for the relationship between psychological concerns and reduced contact quality for both groups, Study 6 and 7 were directed towards testing strategies to attenuate this harmful emotion. Certain predictions were made based on the existing literature. For non-disabled people, as embarrassment often stems from the mistaken belief they have caused offence, it was reasoned that positive social feedback could act as a corrective to counteract this (Study 6). For physically disabled people, who frequently encounter discrimination, it was plausible that giving feedback might allow those with impairments to shift responsibility (and therefore embarrassment) for the social transgression onto the non-disabled person (Study 7). These feedback interventions were successful at improving contact quality, though within Study 7 the effects of feedback disappeared when accounting for

demographic factors. Additionally, as the feedback manipulation did not interact with embarrassment in either study it is proposed that feedback may be useful as a general strategy to counteract the deleterious effects of embarrassing interactions. With that said, the role of several potential moderating factors on these interventions should be clarified (e.g., demographics, interpersonal attraction; see Future research, below).

The thesis also investigated the extent that a naturally occurring event could operate as a societal-level strategy to improve interactions in the mixed physical ability context- the 2012 Paralympic Games (Study 8a and 8b). While some positive changes (i.e. in concerns, embarrassment) were observed over the period of the event among both non-disabled and physically disabled people, this thesis did not explicitly establish the reason by why this might have occurred (e.g., knowledge to counteract negative stereotypes, general positive affect). This, again, is a possible direction for future research (see below). Nevertheless, the theoretical contribution this thesis makes in this respect is, as stated, to identify possible routes to high quality contact in the mixed physical ability context. As with intergroup contact theory (see Pettigrew, 1998), the first (on-going) step is to establish if these routes work, before moving onto the how and why.

Psychological concerns. To my knowledge, this thesis is the first to investigate psychological concerns within the mixed physical ability context. Although the importance of the affective component of these concerns (i.e. anxiety) within intergroup contact is now well-established (see Pettigrew & Tropp, 2008), researchers have only recently began to investigate their cognitive element (i.e. the specific beliefs and expectancies that people hold about mixed interactions; e.g., Plant & Devine, 2003; Shelton, 2003). At present, this latter strand of research is largely confined to the interracial or interethnic context (cf. Greenland et al., 2012). The specific concerns that

non-disabled people and physically disabled people hold and their consequences have not been investigated.

This thesis addressed the aforementioned gap in the literature by firstly looking into the phenomenology behind these concerns. Importantly, Study 1 investigated the content of these concerns for *both* physically disabled people and non-disabled people, allowing insight into the unique differences between these two groups. Specifically, in common with other majority groups, non-disabled people seemed to hold worries over their own behaviour (e.g., being offensive; see Plant & Devine, 2003; Shelton, 2003), while physically disabled people were concerned that their impairment(s) would become the focus of mixed encounters (see Hebl & Kleck, 2000). These data formed the basis for two group-specific scales of psychological concerns that were developed for use in the later studies. Although a general consensus in the literature is unclear, in common with one perspective (e.g., W. G. Stephan, 2014), these scales were intended to reflect that concerns have both a cognitive and an affective aspect.

In addition to establishing concerns as an important antecedent of contact quality (see above), this thesis (Studies 2-5) tested the extent that psychological concerns could engender contact avoidance. The extant literature has identified a link between the two, although this is not consistent. That is, some sources show that concerns are linked to (intentions of) avoidance (e.g., Plant & Devine, 2003), while others suggest that, among majority groups, concerns lead to a “freezing” response (Greenland et al., 2012). In the present work, physically disabled people’s concerns were found to directly foster contact avoidance (Study 2), whereas non-disabled people’s concerns had no corresponding direct effect (Study 3). Overall, the findings agree with a literature that is beginning to capture the complexities of how concerns may affect groups uniquely (e.g., Plant et al., 2008). For instance, though an overall tendency towards avoidance was

documented among physically disabled people, one of “freezing” was established among the majority group- non-disabled people. As well as providing specific insight into the mixed physical ability context, this suggests that researchers should continue to pay attention to the idiosyncrasies between groups (see Hebl & Dovidio, 2005; Shelton, 2000). A caveat however, is that a corresponding effect of concerns was not observed when using a behavioural measure of avoidance (Study 5). This indicates that participant intentions may not necessarily translate to behaviour in real-life mixed physical ability interactions (see Azjen, 2002).

Embarrassment. Embarrassment has previously been investigated almost exclusively at the interpersonal level (see R. S. Miller, 1996; cf. Eller et al., 2011). The emotion has generally been conceptualised as a negative affective response to a perceived social transgression (R. S. Miller, 1996). It is thought that, despite lay opinion of embarrassment as benign, this aversive experience may lead to negative consequences for the individual. For example, researchers have documented the tendency for abashed individuals to avoid healthcare procedures due to embarrassment (McCambridge & Consedine, 2014). This thesis is not only the first to investigate embarrassment in the mixed physical ability context, but also the first, to my knowledge, that investigates the consequences of embarrassment at the intergroup level. Given the existing interpersonal literature on embarrassment and the central role now accorded to affect and emotions within intergroup relations (i.e. as mediating processes; R. Brown & Hewstone, 2005, Pettigrew & Tropp, 2008) it was plausible, that although presently overlooked, embarrassment may play an important role in mixed encounters.

Given the dearth in prior research, the thesis first sought to establish that embarrassment was a common occurrence in interactions between non-disabled and physically disabled people. Study 1 demonstrated that this was indeed the case and the phenomenological

data gathered suggested that manifestations of embarrassment in these encounters were predicated on similar causes as put forward in the interpersonal literature (e.g., negative self-evaluations, failure to perform; see R. S. Miller, 1996). As highlighted above, the subsequent experimental work (i.e. Studies 2-5) then established embarrassment as an important antecedent of contact quality.

In these studies, the impact of embarrassment on further outcomes, namely contact avoidance (Studies 2-5) and prejudice was also tested (Study 4). Embarrassment was found to be a mediator of the relationship between concerns and contact avoidance for both non-disabled and physically disabled people.⁷⁶ There was no direct experimental evidence that embarrassment could shift prejudice, though Study 4 observed an overall positive relationship between the two. In sum, what the results point to is that embarrassment is an important aspect of mixed physical ability interactions. It drives both the impoverishment of contact quality and contact avoidance for members of both groups. It may also be linked to prejudice, though as stated, less evidence was found for this. Beyond demonstrating the importance of the emotion to this specific context, given the lack of prior research, it is fair to say that this thesis has highlighted the potential importance of embarrassment to intergroup relations as a whole.

Developing an understanding of the mixed physical ability intergroup context.

Remembering that contact within the mixed physical ability context is generally under-researched and skewed both towards specific settings (e.g., schools) and the perspective of non-disabled people (Pettigrew & Tropp, 2006), the approach taken in the present thesis is relatively rare in the fact that it examines contact from the perspective of *both* physically disabled people and non-disabled people. Thus, through this work, physically

⁷⁶ For, non-disabled people, this was indirect (i.e. embarrassment as a linking mechanism, where concerns and avoidance did not have a bivariate relationship). For physically disabled people, this was direct (i.e. embarrassment as a mediator in the traditional sense). See Mathieu and Taylor (2006).

disabled people have been afforded rare voice and agency to inform a subject that falls outside of what those with impairments are normally recruited for (e.g., rehabilitation research; see Olkin, 2003). Moreover, the form of contact explored in this research, namely casual daily-life interactions, stands in contrast to the settings that have been investigated in the limited amount of mixed physical ability contact studies so far (see Pettigrew & Tropp, 2006). That is, the work presented in this thesis allows a rare insight in the brief everyday interactions that make up the bulk of encounters between these two groups.

Aside from a better understanding of the mixed physical ability context, an equally important contribution that thesis has made is the way that this understanding was developed. As stated, this thesis examined the perspectives of both non-disabled and physically disabled people. Two studies brought this methodology to its natural conclusion by studying an actual interaction between a non-disabled and physically disabled person. Again, this is relatively novel when compared to the majority of contact research, which tends to use measures that capture historical interactions or designs that simulate encounters somehow (e.g., vignettes, computer-mediated communication). While a body of research has examined actual mixed physical encounters before (e.g., Kleck et al., 1966), the part of the physically disabled person has always, to my knowledge, been played by a non-disabled person (see Hebl & Dovidio, 2005). Conversely, this thesis used a confederate with a genuine physical disability in actual mixed interactions. Although not directly tested by this thesis, this could be potentially be an important methodological element, as participants may pick up on abnormal movements and similar, that able-bodied confederates are not capable of “faking”.

Practical contributions of the thesis and recommendations for disability campaigns

Contact quality. Broadly, these findings act as a counterweight to the extant fifty odd years of intergroup contact research. This work has occupied itself with first asking if, and then subsequently investigating when and how contact reduces prejudice (see R. Brown & Hewstone, 2005; Hewstone & Swart, 2011). However, in some areas, such as the mixed physical ability context, this has led to a preoccupation with specialised situations where optimal contact is most likely to occur (e.g., schools, organisations; see Pettigrew & Tropp, 2006). As such, daily life contact between these groups has largely been neglected. Conversely, this thesis provides useful information regarding how to improve the quality of non-disabled and physically disabled people's everyday interactions.

Specifically, this thesis suggests (see Studies 2-5) that psychological concerns and embarrassment negatively affect the contact quality that both non-disabled and physically disabled people enjoy. Furthermore, it identifies embarrassment as the linking mechanism that accounts for the relationship between concerns and contact quality. Therefore, an obvious practical contribution of this thesis is that it gives researchers, campaigners and group members themselves a road map of what to focus on in order to improve contact quality between non-disabled and physically disabled people.⁷⁷ This thesis confers further practical benefits in this area by testing interventions to reduce embarrassment and improve contact quality (Studies 6-8; see below).

⁷⁷ A good example of a campaign that touches on these issues is "End the awkward" by Scope (2014). The campaign gives prescriptive advice to non-disabled people (e.g., not to help without asking first) to help resolve the awkward moments in interactions.

Interventions. This thesis has provided several practical methods of improving the contact quality between non-disabled and physically disabled people. Specifically, Study 6 and 7 provided initial evidence that interpersonal feedback, delivered by physically disabled people, may produce beneficial outcomes after an embarrassing encounter. In Study 6, receiving positive social feedback from a physically disabled person after an embarrassing encounter was shown to improve reported contact quality and interest in future contact. Similarly, Study 7 found that when physically disabled participants imagined using a feedback (vs. an avoidance) response strategy after encountering discrimination, they expected better contact quality, held greater approach intentions and more positive attitudes about future discrimination (although these effects disappeared when controlling for demographic factors). One practical implication arising from this is that physically disabled people may be able to improve interaction quality by providing feedback in certain contexts (e.g., when a non-disabled person feels embarrassed due to misinterpretation or when a physically disabled person encounters discrimination). However, these two situations are not polar opposites and it remains to be seen how, for example, a non-disabled person would react to feedback in an interaction where they had discriminated against a physically disabled person. Study 6 also found that receiving negative feedback had a (marginal) effect on desire for future contact among non-disabled people, so it is plausible to suggest that feedback confirming discrimination might have similar deleterious effects. This could be tested by future research (see below).

Additionally, Study 8a and 8b provided evidence that exposure to the 2012 Paralympic Games may be able to attenuate the concerns and embarrassment experienced in mixed physical ability interactions. One practical implication arising from this is that disability activists could incorporate Paralympic footage and material into their campaigns. Doing

so, may be able to replicate the beneficial effects observed in Study 8 and the work of other authors (e.g., Ferrara et al., in press). However, there are a number of caveats. The first is that, although a shift in concerns and embarrassment was observed over the period of the Games, reported contact quality did not change. The second is that the change over time of concerns and embarrassment disappeared when controlling for demographic factors. Thus, there may be limitations to the efficacy of Paralympic-based campaigns. Lastly, the thesis did not establish how long the beneficial effects lasted after the event.

Although the thesis focused on the above interventions as the primary method by which to improve contact quality between non-disabled and physically disabled people, there may of course be other possibilities. These are discussed below.

Psychological concerns. Phenomenological data gathered in Study 1 indicated several reasons why psychological concerns may be part and parcel of interactions in the mixed physical ability context. Findings indicated that non-disabled people are often worried about their own behaviour in such encounters. For instance, they strive to avoid offending physically disabled people through their actions, but are often unsure of what to do. This leads non-disabled people to be fearful of negative evaluations from physically disabled people.

As such, one key method that non-disabled people and campaigns can employ is increasing knowledge around how to interact with the physically disabled (e.g., the correct terminology to use). However, this strategy may have limitations due to the heterogeneity of impairments that physically disabled people possess. For instance, guidelines on how to interact with a person who uses a wheelchair may not successfully equip a non-disabled person to interact with someone who has dwarfism. Advice given

should therefore be kept at a relatively general level. However, another tactic that campaigns could use is to reassure non-disabled people that physically disabled people are unlikely to judge them poorly due to small errors (e.g., saying “see you later” to a blind person). That is, removing negative expectations about upcoming interactions may attenuate concerns (see also Mallett & Wilson, 2010).

Any campaign that focuses on these psychological concerns should recognise that physically disabled people also hold their own unique set of worries. Qualitative data from Study 1 suggests that these relate to whether their impairment(s) will be seen as the focus of an encounter with a non-disabled person. However, some physically disabled people noted that they commonly did not think of themselves as disabled until some behaviour from a non-disabled person highlighted this fact. This suggests that campaigners should primarily target the able-bodied in order to alleviate the concerns of the physically disabled as well. Specifically, campaigners must be careful to highlight to non-disabled people that it is not necessarily the tone of their actions that causes worries but rather the level of attention on impairments that some actions bring. Study 1 revealed that benign behaviour from non-disabled people was still seen as a source of concerns for physically disabled people.

This thesis also linked concerns to (intentions of) contact avoidance among both non-disabled and physically disabled people. As such, psychological concerns are important not only as an antecedent of impoverished contact, but also as an obstacle to contact occurring. The worries that non-disabled people and physically disabled people hold about interacting with each other are broadly similar to some of those that majority group and minority members have been identified to possess in the interracial context (e.g., Plant & Devine, 2003; Son & Shelton, 2011). As such, the findings of this thesis

(i.e. that embarrassment mediates between concerns and its negative outcomes) have the potential to inform other contexts beyond the mixed physical ability one (see below).

Study 5 also tested a novel method of manipulating concerns within mixed physical ability interactions. While not wholly successful, (i.e. the manipulation appeared to only induce a subset of concerns about “not knowing how to behave” around physically disabled people), this paradigm does provide some guidance to researchers wishing to induce disability-related concerns among non-disabled people in actual interactions. In this respect, it is also important to highlight what the study did not find; perhaps the failure to fully manipulate concerns indicates that this construct might be generally difficult to manipulate within actual mixed physical ability interactions.

Embarrassment. As suggested by this thesis, embarrassment accounts for the relationship between concerns and reduced contact quality among non-disabled and physically disabled people. This led to investigation of interventions that might attenuate embarrassment and thus improve contact quality between these groups (Studies 6-8; see above). In addition to the mixed physical ability context, it has been noted that these interventions may have beneficial effects in other intergroup contexts.

In other words, a major practical implication of this thesis lies in its identification of embarrassment as an important process within intergroup encounters. In the course of developing this work, I synthesised the literature on intergroup emotions with the interpersonal literature on embarrassment in order to identify how the emotion might operate in the mixed physical ability context. As such, it is reasonable to suggest that my findings may apply to other mixed encounters, such as interracial interactions, especially in light of the fact that these groups may hold broadly similar concerns about interacting with each other (e.g., Whites’ concern about appearing prejudiced towards

Blacks; see Shelton, 2003). In the course of moving away from the conceptualisation of embarrassment as a harmless experience reserved for humorous situations, psychologists should question the pervasiveness of the consequences of the emotion. For example, this thesis also demonstrated that embarrassment mediates between concerns and increased (intentions to) avoid. As such, in addition to its importance to areas where groups frequently interact, addressing embarrassment may be a key step in encouraging contact where groups *need* to interact (see Pettigrew & Tropp, 2011). This could include, for example, contexts where historical conflict means that groups have fallen into patterns of segregation (e.g., South Africa; Dixon et al., 2005). Of course, there are also many other psychological and non-psychological factors that keep groups apart. Moreover, the present thesis did not observe the same effects on contact avoidance when substituting the intentional measure for a behavioural one (Study 5). Therefore, it is fair to say that understanding other processes that have been reliably shown to operate in areas of historical strife is certainly more pressing (see Hewstone et al., 2014).

Developing an understanding of the mixed physical ability intergroup context.

Predominantly, physical disability is seen as a matter of functional limitation. Historically, this was seen as a sphere for the medical professional to influence (e.g., by curative treatment), but more recently the onus has been placed on society to modify the environment (e.g., by building ramps) so that physically disabled people can participate fully in normal life (see Oliver, 1990, 1996). The overarching practical contribution of this thesis is to show that relevant psychological elements must be attended to as well. That is, the quality of physically disabled people's interactions is affected not just by material obstacles but by psychological ones as well. A key recommendation then, is to

address the way that non-disabled and physically disabled people interact, in addition to targeting accessibility problems.

Another vital point is that the issue must be looked at holistically. As the findings of this thesis show, both non-disabled people and physically disabled people bring unique psychological baggage to mixed encounters which can affect the quality of their interactions. Although many of the problems physically disabled people encounter are created by the experience of living in a non-disabled society (e.g., discrimination), as this thesis shows, they can be exacerbated by processes internal to the disabled person. For instance, Study 2 showed that the concerns increased embarrassment and reduced contact quality in the absence of any explicit negative behaviour from non-disabled people (depicted in vignettes). In other words, both non-disabled people and physically disabled people may contribute to misperceptions and misinterpretations in mixed interactions (see also Vorauer, 2013).

Limitations of the thesis and methodological issues

Operationalisation of embarrassment. The present thesis used a scale to measure embarrassment that was based on previous definitions and instruments used in the interpersonal literature (see R. S. Miller, 1996; Modigliani, 1968; Parrot & Smith, 1991). This was employed both as a dependent measure and as a manipulation check to assess the effectiveness of experimental manipulations. However, one must exercise caution regarding the extent that this scale is able to indicate the presence of embarrassment. Recall that in addition to “embarrassed”, common epiphenomena of the emotion (e.g., “awkward”, “incompetent”) were measured. Some of these are part and parcel of other emotions too. For example, though anxiety involves the *anticipation* of negative consequences, such as negative evaluations, while embarrassment is the

response to these consequences, both emotions are thought to involve the experience of awkwardness (see R. S. Miller, 1996; W. G. Stephan & Stephan, 1985). Therefore, when participants reported feeling awkward, technically they could be experiencing anxiety. There are however, several aspects of my research that may render this unlikely. One was that, in the majority of the empirical work, (e.g., Study 2-7) participants were instructed to respond to a depicted or actual contact situation that had already taken place. Secondly, reasoning that an embarrassing interaction may also cause anxiety about future encounters, I tested the independent predictive power of embarrassment using my concerns measure as a proxy for anxiety (Study 4). While by no means definitive, embarrassment did make a unique contribution to each of the dependent variables, whereas concerns were a non-significant predictor. Still, future research should measure both embarrassment and anxiety, ideally in a longitudinal design. Indeed, it would be interesting to test the predictive power of embarrassment against other intergroup emotions that play a role in intergroup contact (e.g., empathy; see below).

Generalisation of findings. In the preceding discussion, I have emphasised the potential applicability of my findings to other intergroup contexts. This should of course be tested by investigating the impact of concerns and embarrassment on contact quality among other groups. A related issue is to what extent the results of this thesis can be generalised to all interactions between non-disabled people and physically disabled people. As stated throughout, physically disabled people possess a range of heterogeneous impairments, which this thesis did not explicitly take into account. For instance, for the studies involving depicted contact, non-disabled people were asked to respond to an encounter with a “physically disabled person”. In light of research which

has found that non-disabled people hold distinct attitudes to different impairment groups (e.g., Thomas, 2000; Tringo, 1970) it is conceivable that had a specific impairment been referenced participants might have experienced concerns of a different nature and intensity. The reverse issue is true for the experiments that involved actual interactions (Studies 5 & 6). Both involved a confederate with a specific disability (cerebral palsy affecting left-side ambulatory movement). Caution should therefore be used when generalising these results to all interactions that take place within the mixed physical ability context.

The same is true for results observed within physically disabled samples. For example, though participants reported holding concerns about disability being the focus of mixed encounters, how salient these would be for people with non-obvious disabilities is unclear. To address this, my studies did control for severity of impairment (Studies 2, 7, & 8a) and the physically disabled samples collected were heterogeneous and possessed a diverse range of impairments. That the studies generated consistent findings in spite of these measures lends plausibility to the idea that the thesis has captured processes that apply across the range of interactions that take place in the mixed physical ability context. However, as is well-established in social psychology, individuals possess multiple social identities which may be activated depending on the context of encounters (Tajfel & Turner, 1978). The measures used in this thesis encouraged participants to think of themselves as “physically disabled people”. This may not be fully representative of some interactions, for example where a person may face discrimination targeted at their specific impairment. Moreover, it would be interesting to capture interactional differences caused by the nature of the impairment itself; for instance establishing whether embarrassment is a common occurrence for non-disabled people when interacting with visually impaired people who may not be able to pick up

on their interactional errors. In sum, it is likely that this thesis has missed some of the nuanced differences regarding interactions that involve people with distinct impairment types. However, this provides a promising future research avenue and should not detract from what this thesis has found at the general level.

Non-observed vs. actual contact. The majority of studies in this thesis measured non-observed contact (e.g., through vignettes, imagined interactions) using self-reports in place of observing actual interactions. This means that the data gleaned may not be representative of how participants would actually behave in real-life encounters. Overreliance on self-reports is a problem endemic to the contact literature as a whole (Hewstone et al., 2011; Pettigrew & Tropp, 2006), though that is not to suggest that it is a trivial limitation of the present work. For instance, Study 3 established that non-disabled people's concerns negatively affected embarrassment across a range of vignette-based interactions. However, when Study 5 looked at the effect of non-disabled people's concerns after an actual interaction with a physically disabled person, no effect of concerns on embarrassment was found. While this could be due to limitations of the experimental manipulation, it is also plausible that concerned (and embarrassed) participants do not behave the way reported in vignette or imagined encounters when faced with real-life contact. In relation, the gulf between intention and behaviour has been noted within the literature previously (Ajzen, 2002). Indeed, although both concerns and embarrassment were linked to increased intentions of avoidance, Study 5 did not replicate these findings with a corresponding behavioural measure. In the mixed physical ability context, the disparity between self-reports of contact and actual interactions may be particularly prominent. That is, non-disabled people are often motivated to hide their true feelings towards members of this group, perhaps due to the prevailing societal norm to be kind. For example, Kleck (1969;

Kleck et al., 1966) found that while non-disabled participants evaluated interactions with physically disabled people favourably, their non-verbal behaviour reflected distancing behaviour consistent with more negative underlying attitudes (see also Dovidio et al., 2011; Katz et al., 1978; Kleck et al., 1966). As this thesis did not focus exclusively on observed contact, some of intricacies of how non-disabled and physically disabled people behave in actual interactions may not have been captured. A caveat however, is that two studies in the thesis employed an interactive paradigm in which actual cross-group contact occurred (Studies 5 & 6). These interactions were observed by a confederate, whose feedback tallied with participant self-reports. Additionally, Study 5 directly investigated the role of social desirability and found that it exerted no effect on responses. This lends some degree of confidence that participant self-reports were generally reliable.

Methodological issues. As stated, this thesis used a holistic approach, examining mixed physical ability interactions from the perspective of both non-disabled people and physically disabled people. This incorporated two rare interactive experiments, in which scripted encounters between non-disabled participants and a (genuine) physically disabled confederate were studied. However, this approach could be taken further to its natural conclusion. In recent years, social psychologists have begun to study interactions dynamically using participants from both the majority and minority group (e.g., Shelton, 2003; T.V. West & Dovidio, 2013). A limitation of this thesis therefore is that it uses a physically disabled *confederate* to simulate encounters, rather than studying natural exchanges. Moreover, a study was not conducted in which physically disabled people were the participants interacting with a non-disabled confederate. This would have been especially useful for Study 7, where participants had to imagine using different response strategies rather than actually carrying out the behaviour. With that

said, there are a number of rejoinders to be made against this methodological critique. Firstly, due to the sensitive nature of this research (e.g., regarding embarrassment), using physically disabled people as participants in actual encounters may have exposed them to psychological harm. Secondly, practically speaking, it would have been extremely difficult to obtain an adequate experimental sample for these studies that was matched in terms of impairment. Thirdly, the approach employed by this thesis actually represents an improvement on the majority of contact research conducted in the mixed physical ability context, which has generally used scales to tap historical interactions or simulated encounters somehow.

A second related methodological issue was that the role of the physically disabled confederate used in these interactive lab experiments (i.e. Studies 5 & 6) was played by the main researcher and author of the present work. This decision may raise questions about the extent that I could have influenced the results of these experiments. However, some precautions were taken in each experiment to avoid just this eventuality. That is, I was blind to all experimental conditions, except where this was unavoidable (i.e. the embarrassment manipulation in Study 6). Furthermore, the non-disabled assistant who ran the experiments was able to hear each interaction from the hallway and was instructed to note any novel elements (i.e. deviations from the confederate's script). When these notes were reviewed, there was no suggestion of any significant alterations in confederate behaviour between trials. Therefore, critics can have some confidence that the participants were not influenced in a meaningful way by my status as the main researcher.

Of course, as with any line of research, it is impossible to conclusively rule out an effect of my unconscious and unintentional experimenter bias on the participants. While acknowledging this, note that there were also several a priori reasons for using myself

as a confederate, rather than someone else. Given the sensitive nature of the interactions (i.e. regarding embarrassment) it would have been unethical to use another physically disabled person as a confederate, where long-term exposure could have resulted in significant psychological harm. While a non-disabled person could have played the role, it was questioned whether they would be able to fully capture the range of abnormal movement and motion involved in physical impairment, which may potentially guide able-bodied judgements of the physically disabled. This could have been avoided by having the confederate use a wheelchair; however, this strategy may have made a lot of participants suspicious.⁷⁸ In sum, the decision to use myself as a confederate was not without its drawbacks, but was deemed the best option for the above reasons.

A third general methodological limitation was that certain studies presented in the thesis were underpowered. Specifically, Study 5 and Study 6, which investigated actual contact encounters had only the power to detect medium to large effects (i.e. effect sizes of .50 to .80) through ANOVA. Additionally, due to panel attrition of the non-disabled sample in Study 8b, the regression analyses had only the power to detect medium to large effects. This could potentially account for some of the non-significant findings produced by this study. These aspects of the aforementioned studies are therefore slightly underpowered and should be treated with caution. Moreover, due to lack of statistical power, the role of covariates that were identified as influencing the dependent

⁷⁸ In recent years there have been notable comedies that show non-disabled characters pretending to be disabled by using a wheelchair (e.g., *Little Britain*, 2003-2006). Many award winning films have also used non-disabled actors to portray wheelchair users (e.g., *Avatar*, 2009; *The Theory of Everything*, 2014). As such, arguably, non-disabled people may be wise to this strategy. A related practical point is that the labs where the research was conducted were not wheelchair accessible.

measures could not be adequately probed. Although this was not the aim of the thesis, it would have been interesting to do so.⁷⁹

Future research

A primary contribution that the thesis has made is the finding that psychological concerns and embarrassment negatively affect contact quality within the mixed physical ability context. There are a number of other avenues through which this work can be extended. These are discussed below.

Testing embarrassment against other forms of affect. It would be interesting to test the predictive power of embarrassment against other forms of affect. This idea was touched upon in Study 4, when embarrassment was examined as a predictor of contact quality while controlling for concerns (as a proxy for anxiety). Future studies could measure anxiety specifically, in order to better control for the possibility that anxiety generated by awkward encounters might influence contact quality, in addition to embarrassment.⁸⁰ It is also plausible that other forms of affect may play a role in the quality of these interactions. Study 1 revealed that the concerns of non-disabled people pertain to their own their behaviour in mixed encounters. As such, one common antecedent to non-disabled embarrassment in these interactions is the belief that the physically disabled person has been offended in some way. However, non-disabled people may also likely experience guilt and even empathy due to this. On the other hand, physically disabled people feel embarrassed when they perceive their disability to be the focus of the encounter. This could also conceivably lead to anger as has been documented in some of the first-person narratives of discrimination (Reeve, 2012). Future research could test

⁷⁹ As previously stated (see Chapter 4), I intend to collect more data for the laboratory experiments before dissemination *beyond* this doctoral thesis.

⁸⁰ That is, although anxiety occurs prior to encounters, it can also be caused by the awkward interactions themselves, which may induce worry about *future* interactions. A longitudinal design may be best placed to investigate the influence of anxiety and embarrassment on contact quality in this staggered fashion.

the impact of embarrassment and these other emotions on contact quality. Furthermore, extant literature has linked differing forms of affect to distinct behavioural outcomes (e.g., Plant et al., 2008). It is plausible that there is a similar case here. For instance, while this thesis linked embarrassment to contact avoidance it is possible that experiencing guilt and empathy could lead to contact engagement through the desire to make reparations.

Exploring the psychological processes behind interventions to improve contact

quality. This thesis tested a number of interventions that have the potential to improve contact quality in the mixed physical ability context (Studies 6-8). Future research could explore the psychological processes by which these methods can improve interactions between non-disabled and physically disabled people. For instance, based on the extant literature (e.g., Shnabel & Nadler, 2006), it was reasoned that an interpersonal feedback strategy may improve the quality of mixed encounters by attenuating embarrassment. One interesting way to test this would be through a roommate diary study (e.g., T. V. West et al., 2009; see also T. V. West & Dovidio, 2013). Specifically, non-disabled and physically disabled people in shared accommodation (e.g., at university) could keep track of embarrassing interactions, their responses to these encounters and subsequent contact quality. If measures were completed day to day over a specified period this would allow the study to examine carry-over effects of different responses on embarrassment levels and contact quality. Of course, such a design could also be implemented in the laboratory. However, an important way of expanding on the methodology used in this thesis, would be to study actual interactions between genuine non-disabled and physically disabled people, instead of using a confederate. For this reason, practically speaking, a diary study might be easier to use for the recruitment of physically disabled participants, though this method may still present some challenges.

Future studies should also investigate the psychological processes behind Paralympic-based interventions. For example, it would be interesting to see whether the changes observed in Study 8b (i.e. with concerns and embarrassment) and also by other authors like Ferrara et al. (in press) are due to a general upswing in positive affect or exposure to more information to challenge disability stereotypes and normalise impairment. This is especially important given that Studies 8a and 8b did not observe any changes in reported contact quality. Perhaps delving into how Paralympic interventions may influence attitudes may provide the impetus to design more effective strategies that will be able to shift contact quality.

Investigating interpersonal characteristics within mixed physical ability interactions.

While not the primary aim of the present research, this thesis has identified that a number of interpersonal and demographic characteristics may play an important role in mixed physical ability interactions. These include embarrassability (e.g., Studies 3 & 4) interpersonal liking (e.g., Study 6), gender (e.g., Studies 3 & 7) and severity of disability (e.g., Studies 2 & 7). The above could conceivably be moderators of the effects of concerns and embarrassment. In this vein, I draw a number of preliminary thoughts and observations: Firstly, it is reasonable to expect more chronically easily embarrassed individuals to experience embarrassment to a greater degree. This thesis provided some evidence that high levels of embarrassment (vs. medium and low) can lead to more deleterious outcomes for physically disabled people (Study 7). Thus, physically disabled people who are more easily embarrassed may be more at risk than those who are not. Secondly, individuals may feel more concerned when interacting with likeable or attractive out-group members. It is plausible that more weight may be placed on these out-group members judgements, either as a source of feedback of how to behave (for non-disabled people) or as indicators of social competence (for physically

disabled people; Crosby et al., 2008). The same may be true for out-group members of the gender individuals find attractive. Thirdly, there may be existing gender variation in concerns or embarrassment anyway. For instance, R. S. Miller (1996) notes that, in common with other emotions, embarrassment is experienced to a greater degree by women. However, within mixed physical ability interactions it is also plausible that gender will not always be salient due to non-disabled-physically disabled categorisation being the more accessible social identity (see Tajfel & Turner, 1978). As the concerns and embarrassment experienced in these interactions are ultimately group-based (see Chapter 3), gender differences may thus be attenuated in these situations. Additionally, commentators have suggested that women may actually feel less discomfort with interacting with men with disabilities compared to able-bodied men (Shakespeare, 1999; Vilchinsky, Werner & Findler, 2010). This may be because when interacting with disabled people, non-disabled people retrieve stereotypes about their asexuality and incompetence (see Fiske et al, 2002; Nario-Redmond, 2010), preventing the stress that may arise when communicating with a potential romantic or sexual partner. Of course, the same cannot be said for physically disabled men and women, who may experience this discomfort when interacting with non-disabled people of the gender that they find attractive. Moreover, regarding the categorisation argument presented above, physically disabled people may not commonly see the able-bodied people they interact with as non-disabled, as these encounters are so frequent. Lastly, it is reasonable to expect that the severity of disability may affect the nature of interactions for both groups. This is explored further below.

Although this thesis did not have the statistical power to fully probe the effects of the covariates, it is encouraging that the majority of results did not change when taking these important factors into account, indicating relatively robust findings. However, the

covariates did appear to have an effect within the intervention-based research (Studies 6-8). Perhaps future research wishing to clarify the role of these factors in mixed physical ability interactions could begin here.

Exploring mixed physical ability interactions at the impairment level. Although this thesis took a holistic approach to understanding the mixed physical ability context by examining the perceptions of both non-disabled and physically disabled people, differences *between* individual impairments may have been missed (see above).

Initially, a qualitative approach may lend itself especially well to the explorative nature of this line of research. It would be intriguing to see, for example, whether those with “hidden” disabilities still worry about their impairment becoming the focus of mixed encounters or perhaps hold more unique, impairment-specific concerns. For instance, those with ambiguous impairments are often mistaken for members of other more derogated groups (e.g., alcoholics; Dovidio et al., 2000). This may be a salient concern among only a subset of physically disabled people.

Likewise, non-disabled people may experience concerns and embarrassment around some impairment types more than others. Several commentators have noted the existence of a hierarchy of impairments, where some disabilities are more derogated than others by both non-disabled people (e.g., Tringo, 1970) and physically disabled people (e.g., Deal, 2003). As such, it is also plausible that physically disabled people may hold concerns similar to non-disabled people when interacting with disabled people who have different impairments to their own. Future research could test this.

The role of group identification. Eller et al. (2011) conducted a study which found that people experience more embarrassment when committing a (non-group related) faux pas in front of out-groups of an equal or higher status. This work could be combined

with the work presented in this thesis in two ways. Firstly, studies could investigate the role of audience membership on amplifying or attenuating the effect of embarrassment. For example, a physically disabled person may feel more embarrassed if made to feel non-normative in front of several non-disabled people, as opposed to just one. As such, in these situations embarrassment may have a more pervasive impact on contact quality.

Another line of research would be to test group identification as a moderator of the occurrence of psychological concerns and embarrassment. One of the pre-conditions for these constructs to emerge in mixed interactions is the awareness that out-group members possess “expertise” in a specific domain that members of the ingroup do not have access to (see Vorauer, 2013). For instance, non-disabled people recognise that physically disabled people can act as a moral compass to guide their actions in mixed physical ability encounters. On the other hand, those with impairments commonly see non-disabled people as benchmarks of social competence to aspire to (see Crosby et al., 2008). It is plausible that high identifiers would place more import on the evaluations of the out-group compared to low identifiers. As such, they may experience concerns and embarrassment in these interactions to a greater degree.

A further interesting direction would be to investigate how effective Paralympic-based interventions are among high-identifying and low identifying physically disabled people. It is plausible that low-identifying physically disabled people may suffer deleterious effects from engaging with the Paralympic content. Specifically, they may dis-identify with Paralympians and become worried that they will be rejected from interactions with non-disabled people due to not sharing similar characteristics.

Embarrassment and intergroup contact. One of the central contributions of this thesis has been to demonstrate that embarrassment is an important feature of intergroup life.

Future research can expand upon this. For example, embarrassment may potentially be a mediator of contact effects on prejudice. Although Study 4 found no direct experimental evidence that embarrassment can shift prejudice, cross-sectionally, the two variables were observed to be weakly and positively related. Theorists, such as W. G. Stephan (2014), have noted that one of the affective consequences of (intergroup) anxiety is likely embarrassment, which the results observed in this thesis broadly support. It is plausible that that embarrassment could mediate between anxiety and increased prejudice.

Critical reflection

From the above, it should be clear that despite its limitations, I believe this thesis contributes important findings to the literature. A secondary product of the work, but no less important (to me), is that crafting this empirical work has allowed me to develop into a competent and critical researcher, as I hope has been evident throughout. As with any period of training, there is an inevitable learning curve and of course, there are some things I would change if beginning again with the knowledge I have now. Firstly, the concerns and embarrassment manipulations used in my interactive studies were perhaps not strong enough. As such, both studies provide useful data about how concerns and embarrassment can be induced in non-disabled people. However, they do not replicate my findings from the earlier studies that used non-observed contact (Studies 2 - 4). Due to the limitations of the manipulations, I cannot say that this is evidence that my model of concerns, embarrassment and contact quality does not translate to real-life encounters. On reflection, I would try to design stronger concerns and embarrassment manipulations in order to address this. Secondly, I would have tried harder to ensure that the matched sample size in Study 8b was larger. Studies 8a and 8b were conducted at the start of my doctorate, due to the timing of the 2012 Paralympic

Games. Coming into my first quantitative and longitudinal study at this level, I did perhaps not use the best strategies to engender non-disabled participation.

Strictly, there was no a priori reason to include the covariates in each experiment, as participants were randomly allocated to conditions (see Field, 2009). I believe I did so, because at time of when I began this research, social psychology had suffered a number of recent scandals regarding ‘false positives’ – peer-reviewed findings that were discovered to be the result of scientific fraud and misconduct (see Jha, 2012). This motivated me (further) to train as an open, honest and ethical a researcher as possible, as well as be methodologically diligent in my work. Hence, I made the (in hindsight) conservative decision to include covariates in the studies anyway, despite the fact that random allocation exists in my experimental work. It should be noted that this results in a small loss of power which could theoretically result in ‘false negatives’ – instances where valid findings are missed (i.e. Type II errors). However, in this thesis, all analyses were also conducted without the covariates to check for this. It was found that their inclusion did not make a significant difference, except in Studies 7 and 8, where findings became non-significant. Results in these studies are presented *without* the covariates for this very reason. Beyond the desire to be methodologically rigorous, including covariates in the analyses also highlighted several interpersonal characteristics that may play an important role in mixed physical ability interactions (see Future research, above).

As stated, conducting this work has allowed me to develop as a researcher and I feel that I have learnt some important things along the way. Firstly, I have come to understand the effort and diligence needed in order to obtain high quality data. In relation, I now realise that it is vital to have multiple routes and strategies to reach participants, especially when working with hard to reach populations like physically

disabled people. The present thesis allowed me to develop some vital skills in this respect, such as the ability to negotiate and clearly communicate my expectations to respondents. Secondly, I now also appreciate the position of the participant to a greater degree and try to always put myself in their shoes when designing empirical studies. This stems primarily from my experience with laboratory work, but also qualitative interviewing as well. I recognise that, as psychologists, we have only a brief window to interact with the participants, who may bring their own baggage to the study and may, understandably, not fully engage with our research. As such, a strategy I have found helpful is to explicitly ask the participant to put outside events from their mind and focus on the tasks at hand. Lastly, I believe that the process of coming to know my research and subsequently contributing to the area has deepened not only my knowledge, but also my enthusiasm and curiosity for the field. In my opinion, this is as important to me as the practical skills that I have gained throughout.

Final thought

Although intergroup contact is a well-researched area of social psychology very little is known about the determinants of contact quality in mixed interactions. The main focus of this thesis was to identify social psychological antecedents of contact quality within the mixed physical ability context. From the work presented, it is clear that non-disabled people and physically disabled people bring distinct psychological baggage to their encounters, in the shape of psychological concerns, which impinge upon their ability to enjoy fruitful contact with one another. This relationship is accounted for by embarrassment, a common, familiar and often neglected emotion, which has been revealed as having pernicious consequences for intergroup life in the mixed physical ability context. With this in mind, social psychologists can implement interventions to improve the contact quality of these encounters, such as the feedback and Paralympic-

based strategies tested here. Broadly, the work presented also shows that psychological factors are important elements in dictating the quality of interactions for non-disabled and physically disabled people. As such, it serves as a reminder that disability campaigners should seek to change the psychological landscape in addition to the physical environment around disabled people. Lastly, in tandem with these psychological factors, the thesis also highlights that there may be other (demographic) characteristics, more broad and embedded within the fabric of society, like age and gender, which prevent non-disabled and physically disabled people from coming together and enjoying good quality contact.

References

- Abrams, D., & Houston, D. M. (2006). Equality, diversity and prejudice in Britain: results from the 2005 national survey. *Report for the Cabinet Office Equalities Review. Kent: University of Kent Center for the Study of Group Processes.*
- Abrams, D., Jackson, D., & St. Claire, L. S. (1990). Social identity and the handicapping functions of stereotypes: Children's understanding of mental and physical handicap. *Human Relations, 43*, 1085-1098. doi: 10.1177/001872679004301103
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology, 32*, 665–683. doi: 10.1111/j.1559-1816.2002.tb00236.x
- Al Ramiah, A., & Hewstone, M. (2013). Intergroup contact as a tool for reducing, resolving and preventing intergroup conflict: Evidence, limitations, and potential. *American Psychologist, 68*, 527-542. doi: 10.1037/a0032603
- Al Ramiah, A., Hewstone, M., Little, T., & Lang, K. M. (2013). The influence of status on the relationship between intergroup contact, threat, and prejudice in the context of a nation-building intervention in Malaysia. *Journal of Conflict Resolution, 1-28*. doi: 10.1177/0022002713492634
- Alexander, C. S., & Becker, H. J. (1978). The use of vignettes in survey research. *Public Opinion Quarterly, 42*, 93-104. doi: 10.1086/268432
- Alexander, L., & Tredoux, C. (2010). The spaces between us: A spatial analysis of informal segregation at a South African university. *Journal of Social Issues, 66*, 367-386. doi: 10.1111/j.1540-4560.2010.01650.x
- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Altman, B. M. (1981). Studies of attitudes toward the handicapped: The need for a new direction. *Social Problems, 28*, 321-337.
- Amodio, D. M. (2009). Intergroup anxiety effects on the control of racial stereotypes: A psychoneuroendocrine analysis. *Journal of Experimental Social Psychology, 45*, 60-67. doi:10.1016/j.jesp.2008.08.009
- Amsel, R., & Fichten, C. S. (1988). Effects of contact on thoughts about interaction with students who have a physical disability. *Journal of Rehabilitation, 54*, 61-65.
- Anderssen, N. (2002). Does contact with lesbians and gays lead to friendlier attitudes? A two year longitudinal study. *Journal of Community & Applied Social Psychology, 12*, 124-136. doi: 10.1002/casp.665

- Andrighetto, L., Durante, F., Lugani, F., Volpato, C., & Mirisola, A. (2013). Obstacles to intergroup contact: When outgroup partner's anxiety meets perceived ethnic discrimination. *British Journal of Social Psychology*, *52*, 781-792. doi: 10.1111/bjso.12039
- Apsler, R. (1975). Effects of embarrassment on behavior toward others. *Journal of Personality and Social Psychology*, *32*, 145-153. <http://dx.doi.org/10.1037/h0076699>
- Aron, A., Melinat, E., Aron, E. N., Vallone, R. D., & Bator, R. J. (1997). The experimental generation of interpersonal closeness: A procedure and some preliminary findings. *Personality and Social Psychology Bulletin*, *23*, 363-377. doi: 10.1177/0146167297234003
- Aronson, E., & Gonzalez, A. (1988). Desegregation, jigsaw, and the Mexican-American experience. In P. Katz & D. Taylor (Eds.), *Eliminating racism: Profiles in controversy*. New York: Plenum Press.
- Atzmüller, C., & Steiner, P. M. (2010). Experimental vignette studies in survey research. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, *6*, 128-138. <http://dx.doi.org/10.1027/1614-2241/a000014>
- Babcock, M. K. (1988). Embarrassment: A window on the self. *Journal for the Theory of Social Behaviour*, *18*, 459-483. doi: 10.1111/j.1468-5914.1988.tb00510.x
- Babcock, M. K., & Sabini, J. (1990). On differentiating embarrassment from shame. *European Journal of Social Psychology*, *20*, 151-169. doi: 10.1002/ejsp.2420200206
- Balota, D. A., Tse, C. S., Hutchison, K. A., Spieler, D. H., Duchek, J. M., & Morris, J. C. (2010). Predicting conversion to dementia of the Alzheimer's type in a healthy control sample: The power of errors in stroop color naming. *Psychology and Aging*, *25*, 208-218. doi: 10.1037/a0017474
- Barber, C. (2014). Disability discrimination in the 21st century: a short introduction. *British Journal of Healthcare Assistants*, *8*, 234-237. <http://dx.doi.org/10.12968/bjha.2014.8.5.234>
- Barlow, F. K., Louis, W. R., & Hewstone, M. (2009). Rejected! Cognitions of rejection and intergroup anxiety as mediators of the impact of cross-group friendships on prejudice. *British Journal of Social Psychology*, *48*, 389-405. doi: 10.1348/014466608X387089

- Barlow, F. K., Louis, W. R., and Terry, D. J. (2010). Minority report: Social identity, cognitions of rejection and intergroup anxiety predicting prejudice from one racially marginalized group towards another. *European Journal of Social Psychology, 40*, 805-818. doi: 10.1002/ejsp.651
- Barlow, F. K., Sibley, C. G., & Hornsey, M. J. (2012). Rejection as a call to arms: Interracial hostility and support for political action as outcomes of race-based rejection in majority and minority groups. *British Journal of Social Psychology, 51*, 167-177. doi: 10.1111/j.2044-8309.2011.02040.x
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. <http://dx.doi.org/10.1037/0022-3514.51.6.1173>
- Barr, J. J., & Bracchitta, K. (2008). Effects of contact with individuals with disabilities: Positive attitudes and majoring in education. *The Journal of Psychology, 142*, 225-244. doi: 10.3200/JRLP.142.3.225-244
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529. <http://dx.doi.org/10.1037/0033-2909.117.3.497>
- Bell, A. H. (1962). Attitudes of selected rehabilitation workers and other hospital employees toward the physically disabled. *Psychological Reports, 10*, 183-186.
- Bellisario, R. (2014). Refused access: fighting for the right to travel on the buses. *The Guardian*. Retrieved from: <http://www.theguardian.com/society/2012/jul/10/fighting-right-travel-buses>
- Ben-Ari, R., & Amir, Y. (1986). Contact between Arab and Jewish youth in Israel: Reality and potential. In M. Hewstone & R. Brown (Eds.), *Contact and conflict in intergroup encounters* (pp. 45–58). New York: Blackwell.
- Binder, J., Zagefka, H., Brown, R., Funke, F., Kessler, T., Mummendey, A., ... & Leyens, J. P. (2009). Does contact reduce prejudice or does prejudice reduce contact? A longitudinal test of the contact hypothesis among majority and minority groups in three European countries. *Journal of Personality and Social Psychology, 96*, 843-856. doi: 10.1037/a0013470
- Blair, I. V., Park, B., & Bachelor, J. (2003). Understanding intergroup anxiety: Are some people more anxious than others?. *Group Processes & Intergroup Relations, 6*, 151-169. doi: 10.1177/1368430203006002002

- Blascovich, J., Mendes, W. B., Hunter, S. B., & Lickel, B. (2000). Stigma, threat, and social interaction. In T. F. Heatherton, M. R. Hebl, & J. G. Hull (Eds.), *The social psychology of stigma* (pp. 307-333). New York: Guilford.
- Blascovich, J., Mendes, W. B., Hunter, S. B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology*, *80*, 253-267. <http://dx.doi.org/10.1037/0022-3514.80.2.253>
- Blumberg, H. H. (1972). Communication of interpersonal evaluations. *Journal of Personality and Social Psychology*, *23*, 157-162. <http://dx.doi.org/10.1037/h0033027>
- Booth-Kewley, S., Larson, G.E. & Miyoshi, D.K. (2005). Social desirability effects on computerised and paper-pencil questionnaires. *Computers in Human Behaviour*, *23*, 463-477. doi:10.1016/j.chb.2004.10.020
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, CA: Sage.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77-101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- British Telecom. (2011). Two thirds avoid disabled people [Press release]. Retrieved from:<http://www.btplc.com/News/Articles/Showarticle.cfm?ArticleID=A558F129-8F6C-410A-AB4B-703E976AD053>.
- Britt, T. W., Boniecki, K. A., Vescio, T. K., Biernat, M., & Brown, L. M. (1996). Intergroup anxiety: A person_situation approach. *Personality and Social Psychology Bulletin*, *22*, 1177-1188. doi: 10.1177/01461672962211008
- Brown, B. R., & Garland, H. (1971). The effects of incompetency, audience acquaintanceship, and anticipated evaluative feedback on face-saving behavior. *Journal of Experimental Social Psychology*, *7*, 490-502. doi:10.1016/0022-1031(71)90011-4
- Brown, R. (2011). *Prejudice: Its social psychology*. Chichester, UK : John Wiley & Sons.
- Brown, R., & Čehajić, S. (2008). Dealing with the past and facing the future: Mediators of the effects of collective guilt and shame in Bosnia and Herzegovina. *European Journal of Social Psychology*, *38*, 669-684. doi: 10.1002/ejsp.466
- Brown, R., & Hewstone, M. (2005). An integrative theory of intergroup contact. *Advances in Experimental Social Psychology*, *37*, 255-343. [http://dx.doi.org/10.1016/S0065-2601\(05\)37005-5](http://dx.doi.org/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*, 692-703. doi: 10.1002/ejsp.384
- Brown, R., Maras, P., Masser, B., Vivian, J., & Hewstone, M. (2001). Life on the ocean wave: Testing some intergroup hypotheses in a naturalistic setting. *Group Processes & Intergroup Relations, 4*, 81-97. doi: 10.1177/1368430201004002001
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?. *Perspectives on Psychological Science, 6*, 3-5. doi: 10.1177/1745691610393980
- Butz, D. A., & Plant, E. A. (2006). Perceiving outgroup members as unresponsive: Implications for approach-related emotions, intentions, and behavior. *Journal of Personality and Social Psychology, 91*, 1066–1079.
- Byrd, K. (1989). Theory regarding attitudes and how they may relate to media portrayals of disability. *Journal of Applied Rehabilitation Counseling, 20*, 36-38.
- Cameron, L., & Rutland, A. (2006). Extended contact through story reading in school: Reducing children's prejudice toward the disabled. *Journal of Social Issues, 62*, 469-488. doi: 10.1111/j.1540-4560.2006.00469.x
- Cameron, L., Rutland, A., & Brown, R. (2007) Promoting children's positive intergroup attitudes towards stigmatized groups: Extended contact and multiple classification skills training. *International Journal of Behavioral Development, 31*, 454 – 466. doi: 10.1177/0165025407081474
- Cameron, L., Rutland, A., Turner, R., Holman-Nicolas, R., & Powell, C. (2011). Changing attitudes with a little imagination': Imagined contact effects on young children's intergroup bias. *Anale de Psychologia, 27*, 708-717.
- Camic, P. M., Rhodes, J. E., & Yardley, L. (2003). Naming the stars: Integrating qualitative methods into psychological research. In P. M. Camic, J. E. Rhodes & L. Yardley (Eds.), *Qualitative methods in psychology: Expanding perspectives in methodology* (pp. 3–16). Washington, DC: American Psychological Association.
- Carew, M. (2013, 21st February). Download Festival: do accessibility and heavy metal mix?. *Disability Horizons*. Retrieved from: <http://disabilityhorizons.com/2013/02/accessing-download-festival/>
- Casey, K. (1978). The semantic differential technique in the examination of teacher attitudes to handicapped children. *The Exceptional Child, 25*, 41-52. doi:10.1080/0156655780250105

- Čehajić, S., & Brown, R. (2010). Silencing the past effects of intergroup contact on acknowledgment of in-group responsibility. *Social Psychological and Personality Science, 1*, 190-196. doi: 10.1177/1948550609359088
- Cehajic, S., Brown, R., & Castano, E. (2008). Forgive and forget? Antecedents and consequences of intergroup forgiveness in Bosnia and Herzegovina. *Political Psychology, 29*, 351-367. doi: 10.1111/j.1467-9221.2008.00634.x
- Chartered Institute of Public Relations. (2014). Best Sporting Campaign – case study [Press release]. Retrieved from: <http://www.cipr.co.uk/content/events-awards/excellence-awards/results/5-best-sporting-campaign/case-study>
- Chatzitheochari, S., Parsons, S., & Platt, L. (2014). *Bullying experiences among disabled children and young people in England: Evidence from two longitudinal studies* (No. 14-11). Department of Quantitative Social Science-Institute of Education, University of London.
- Christ, O. & Wagner, U. (2013). Methodological issues in the study of intergroup contact: Towards a new wave of research. In G. Hodson & M Hewstone (eds.), *Advances in intergroup contact* (pp. 233-261). Hove, UK: Psychology Press.
- Christ, O., Schmid, K., Lollot, S., Swart, H., Stolle, D., Tausch, N., ... & Hewstone, M. (2014). Contextual effect of positive intergroup contact on outgroup prejudice. *Proceedings of the National Academy of Sciences, 111*, 3996-4000. doi: 10.1073/pnas.1320901111
- Chu, D., & Griffey, D. (1985). The contact theory of racial integration: The case of sport. *Sociology of Sport Journal, 2*, 323-333.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Comer, R. J., & Piliavin, J. A. (1972). The effects of physical deviance upon face-to-face interaction: the other side. *Journal of Personality and Social Psychology, 23*, 33-39. <http://dx.doi.org/10.1037/h0032922>
- Cook, S. W. (1978). Interpersonal and attitudinal outcomes in cooperating interracial groups. *Journal of Research and Development in Education, 12*, 97–113.
- Cook, S. W. (1984). Cooperative interaction in multiethnic contexts. In N. Miller & M. B. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 155–185). Orlando, FL: Academic Press.
- Crisp, R. J., & Turner, R. N. (2009). Can imagined interactions produce positive perceptions?: Reducing prejudice through simulated social contact. *American Psychologist, 64*, 231-240. doi: 10.1037/a0014718

- Crisp, R. J., & Turner, R. N. (2013). Imagined intergroup contact: Refinements, debates, and clarifications. In G. Hodson, & M. Hewstone, (Eds.). *Advances in intergroup contact* (pp. 135-151). Hove, UK: Psychology Press.
- Crosby, J. R., Monin, B., & Richardson, D. (2008). Where do we look during potentially offensive behavior?. *Psychological Science, 19*, 226-228. doi: 10.1111/j.1467-9280.2008.02072.x
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology, 92*, 631–648. <http://dx.doi.org/10.1037/0022-3514.92.4.631>
- Cuddy, A. J. C., Norton, M. I., & Fiske, S. T. (2005). This old stereotype: The pervasiveness and persistence of the elderly stereotype. *Journal of Social Issues, 61*, 267-285. doi: 10.1111/j.1540-4560.2005.00405.x
- Dahl, M. (1993). The role of the media in promoting images of disability – disability as metaphor: The evil cripp. *Canadian Journal of Communication, 18*, 1-3.
- Daruwalla, P., & Darcy, S. (2005). Personal and societal attitudes to disability. *Annals of Tourism Research, 32*, 549-570. doi:10.1016/j.annals.2004.10.008
- Davies, K., Tropp, L. R., Aron, A., Pettigrew, T. F., & Wright, S. C. (2011). Cross-group friendships and intergroup attitudes: A meta-analytic review. *Personality and Social Psychology Review, 15*, 332-351. doi: 10.1177/1088868311411103
- Davies, K., Wright, S., Arthur, A., & Comeau, J. (2013). Intergroup contact through friendship: Intimacy and norms. In G. Hodson & M. Hewstone (eds.), *Advances in intergroup contact* (pp. 200-230). Hove, UK: Psychology Press.
- Davis, F. (1961). Deviance disavowal: The management of strained interaction by the visibly handicapped. *Social Problems, 120-132*.
- Dawson, A. (2012, December). Did the Paralympics change attitudes to disability? *BBC News*. Retrieved from: <http://www.bbc.co.uk/news/uk-20686035>
- Deal, M. (2003). Disabled people's attitudes toward other impairment groups: a hierarchy of impairments. *Disability & Society, 18*, 897-910. doi:10.1080/0968759032000127317
- Deal, M. (2007). Aversive disablism: Subtle prejudice toward disabled people. *Disability & Society, 22*, 93-107. doi:10.1080/09687590601056667
- Department for Work and Pensions, Office for Disability Issues (2012). *Disability prevalence estimates 2011/2012*. London: ODI. Retrieved from: <http://odi.dwp.gov.uk/docs/res/factsheets/disability-prevalence.pdf>.

- Department for Work and Pensions, Office for Disability Issues (2013). Fulfilling Potential – building a deeper understanding of disability in the UK today. London: ODI. Retrieved from: <https://www.gov.uk/government/publications/fulfilling-potential-understanding-disability>.
- Devine, P. G., & Vasquez, K. A. (1998). The rocky road to positive intergroup relations. In J. Eberhardt & S. T. Fiske (Eds.), *Confronting racism: The problem and the response* (pp. 234–262). Newbury Park, CA: Sage.
- Dhont, K., Roets, A., & Van Hiel, A. (2011). Opening closed minds: The combined effects of intergroup contact and need for closure on prejudice. *Personality and Social Psychology Bulletin*, *37*, 514–528. doi: 10.1177/0146167211399101
- Dixon, J., & Durrheim, K. (2003). Contact and the ecology of racial division: Some varieties of informal segregation. *British Journal of Social Psychology*, *42*, 1–23. doi: 10.1348/014466603763276090
- Dixon, J., Durrheim, K., & Tredoux, C. (2005). Beyond the optimal contact strategy: a reality check for the contact hypothesis. *American Psychologist*, *60*, 697–711. <http://dx.doi.org/10.1037/0003-066X.60.7.697>
- Dixon, J., Durrheim, K., Tredoux, C., Tropp, L., Clack, B., & Eaton, L. (2010). A paradox of integration? Interracial contact, prejudice reduction, and perceptions of racial discrimination. *Journal of Social Issues*, *66*, 401–416. doi: 10.1111/j.1540-4560.2010.01652.x
- Dovidio, J. F., Gaertner, S. L., & Kawakami, K. (2003). Intergroup contact: the past, present and future. *Group Processes and Intergroup Relations*, *6*, 5–21. doi: 10.1177/1368430203006001009
- Dovidio, J. F., Major, B., & Crocker, J. (2000). Stigma: Introduction and overview. In T. F., Heatherton, Kleck, R. E., Hebl, M. R., & Hull, J. G. (Eds.), *The social psychology of stigma* (pp. 1– 30). New York: Guilford.
- Dovidio, J. F., Pagotto, L., & Hebl, M. R. (2011). Implicit attitudes and discrimination against people with physical disabilities. In R. L. Wiener & S. L. Willborn (Eds.), *Disability and aging discrimination* (pp. 157–184). New York, NY: Springer.
- Eberhardt, K., & Mayberry, W. (1995). Factors influencing entry-level occupational therapists' attitudes toward persons with disabilities. *American Journal of Occupational Therapy*, *49*, 629–636.
- Edelmann, R. J. (1987). *The psychology of embarrassment*. Chichester, UK: Wiley.
- Elison, J., & Harter, S. (2007). Humiliation: Causes, correlates and consequences. In J. L. Tracy & R. W. Robins (Eds.), *The self-conscious emotions: Theory and research* (pp. 310–329).

- Eller, A., & Abrams, D. (2004). Come together: longitudinal comparisons of Pettigrew's reformulated intergroup contact model and the common ingroup identity model in Anglo-French and Mexican-American contexts. *European Journal of Social Psychology, 34*, 229-256. doi: 10.1002/ejsp.194
- Eller, A., Koschate, M., & Gilson, K. M. (2011). Embarrassment: The ingroup–outgroup audience effect in faux pas situations. *European Journal of Social Psychology, 41*, 489-500. doi: 10.1002/ejsp.815
- Elliott, T. R., & Byrd, E. K. (1982). Media and disability. *Rehabilitation Literature, 43*, 348-55.
- Esposito, B. G., & Peach, W. J. (1983). Changing attitudes of preschool children toward handicapped persons. *Exceptional Children, 49*, 361-363.
- Esposito, B. G., & Reed, T. M. (1986). The effects of contact with handicapped persons on young children's attitudes. *Exceptional Children, 53*, 224-229.
- Esses, V. M., & Dovidio, J. F. (2002). The role of emotions in determining willingness to engage in intergroup contact. *Personality and Social Psychology Bulletin, 28*, 1202–1214. doi: 10.1177/01461672022812006
- Evans, J. H. (1976). Changing attitudes toward disabled persons: An experimental study. *Rehabilitation Counseling Bulletin, 19*, 572-579.
- Feinberg, M., Willer, R., & Keltner, D. (2012). Flustered and faithful: embarrassment as a signal of prosociality. *Journal of Personality and Social Psychology, 102*, 81-97. doi: 10.1037/a0025403
- Felton, G. S. (1975). Changes in attitudes toward disabled persons among allied health paraprofessional trainees in an interdisciplinary setting. *Perceptual and Motor Skills, 40*, 118-118.
- Ferrara, K., Burns J. & Mills, H. (in press). Public attitudes towards people with intellectual disabilities after viewing Olympic/Paralympic performance. *Adapted Physical Education Quarterly*.
- Fichten, C. S., Schipper, F., & Cutler, N. (2005). Does volunteering with children affect attitudes toward adults with disabilities? A prospective study of unequal contact. *Rehabilitation Psychology, 50*, 164-173. <http://dx.doi.org/10.1037/0090-5550.50.2.164>
- Fichten, C.S., Amsel, R., Bourdon, C.V., & Creti, L. (1988). Interaction between college students with a physical disability and their professors. *Journal of Applied Rehabilitation Counseling, 19*, 13-20.

- Fichten, C. S., Amsel, R., Robillard, K., Sabourin, S., & Wright, J. (1997). Personality, attentional focus, and novelty effects: Reactions to peers with disabilities. *Rehabilitation Psychology, 42*, 209-230.
- Field, A. (2009). *Discovering statistics*. London: Sage.
- Finchilescu, G., & Tredoux, C. (2008). Intergroup contact, social context and racial ecology in South Africa. In U. Wagner, L. Tropp, G. Finchilescu, & C. Tredoux (eds.). *Improving intergroup relations: Building on the legacy of Thomas F. Pettigrew* (p. 179-194). Malden, MA: Blackwell.
- Fine, M., & Asch, A. (1988). Disability beyond stigma: Social interaction, discrimination, and activism. *Journal of Social Issues, 44*, 3-21. doi: 10.1111/j.1540-4560.1988.tb02045.x
- Fish, B., Karabenick, S., & Heath, M. (1978). The effects of observation on emotional arousal and affiliation. *Journal of Experimental Social Psychology, 14*, 256-265.
- 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*, 878-902. doi: 10.1037//0022-3514.82.6.878
- Florian, V., & Kehat, D. (1987). Changing high school students' attitudes toward disabled people. *Health & Social Work, 12*, 57-63. doi: 10.1093/hsw/12.1.57
- Ford, W. S. (1986). Favorable intergroup contact may not reduce prejudice: Inconclusive journal evidence, 1960–1984. *Sociology and Social Research, 70*, 256–258.
- Frank, G. (1988). Beyond stigma: Visibility and self-empowerment of persons with congenital limb deficiencies. *Journal of Social Issues, 44*, 95-115. doi: 10.1111/j.1540-4560.1988.tb02051.x
- Friedman, L. (1981). How affiliation affects stress in fear and anxiety situations. *Journal of Personality and Social Psychology, 40*, 1102-1117. <http://dx.doi.org/10.1037/0022-3514.40.6.1102>
- Friedman, R. S. (1975). *The peer-to-peer program: A model project for the integration of severely physically handicapped youngsters with nondisabled peers*. New York State Education Dept: Albany Division of Drug and Health Education Services.
- Garland, H., & Brown, B. R. (1972). Face - saving as affected by subjects' sex, audiences' sex and audience expertise. *Sociometry, 35*, 280-289.
- Gibson, O. (2012, August). Paralympics organisers criticise lack of US media coverage. *The Guardian*. Retrieved from: <http://www.theguardian.com/sport/2012/aug/31/paralympics-organisers-criticise-us-media>

- Gill, C. J. (2001). Divided understandings: The social experience of disability. In G. L. Albrecht & K. D. Seelman (Eds.), *Handbook of disability studies*. Thousand Oaks, CA: Sage.
- Goffman, E. (1956). On face-work: An analysis of ritual elements in social interaction. *Psychiatry: Journal for the Study of Interpersonal Processes*, 18, 213-231.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. New Jersey: Prentice Hall.
- Gonzales, M. H., Pederson, J. H., Manning, D. J., & Wetter, D. W. (1990). Pardon my gaffe: Effects of sex, status, and consequence severity on accounts. *Journal of Personality and Social Psychology*, 58, 610-621.
- Goodley, D. (2012). The psychology of disability. In N. Watson, A. Roulstone, & C. Thomas (Eds.), *Routledge handbook of disability studies*. (pp. 310-323). London: Routledge.
- Gouvier, W. D., Coon, R. C., Todd, M. E., & Fuller, K. H. (1994). Verbal interactions with individuals presenting with and without physical disability. *Rehabilitation Psychology*, 39(4), 263-268. <http://dx.doi.org/10.1037/h0080322>
- Greenland, K., & Brown, R. (1999). Categorization and intergroup anxiety in contact between British and Japanese nationals. *European Journal of Social Psychology*, 29, 503-521. doi: 10.1002/(SICI)1099-0992(199906)29:4<503::AID-EJSP941>3.0.CO;2-Y
- Greenland, K., Xenias, D., & Maio, G. (2012). Intergroup anxiety from the self and other: Evidence from self-report, physiological effects, and real interactions. *European Journal of Social Psychology*, 42, 150-163. doi: 10.1002/ejsp.867
- Hamberger, J., & Hewstone, M. (1997). Inter-ethnic contact as a predictor of blatant and subtle prejudice: Tests of a model in four Western European nations. *British Journal of Social Psychology*, 36, 173-190. doi: 10.1111/j.2044-8309.1997.tb01126.x
- Harré, R. (1990). Embarrassment: A conceptual analysis. In W. R. Crozier (Ed.), *Shyness and embarrassment: Perspectives from social psychology* (pp. 181-204). Cambridge, UK: Cambridge University Press.
- Hastorf, A. H., Northcraft, G. B., & Picciotto, S. R. (1979). Helping the handicapped: How realistic is the performance feedback received by the physically handicapped. *Personality and Social Psychology Bulletin*, 5, 373-376. doi: 10.1177/014616727900500321
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76, 408-420. <http://dx.doi.org/10.1080/03637750903310360>

- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York: The Guilford Press.
- Hebl, M. R., & Dovidio, J. F. (2005). Promoting the “social” in the examination of social stigmas. *Personality and Social Psychology Review*, *9*, 156–182. doi: 10.1207/s15327957pspr0902_4
- Hebl, M., & Kleck, R. E. (2000). The social consequences of physical disability. In T. F., Heatherton, Kleck, R. E., Hebl, M. R., & Hull, J. G. (Eds.), *The social psychology of stigma* (pp. 419–440). New York: Guilford.
- Hebl, M., Tickle, J., & Heatherton, T. F. (2000). Awkward moments in interactions between stigmatized and non-stigmatized individuals. In T. F., Heatherton, Kleck, R. E., Hebl, M. R., & Hull, J. G. (Eds.), *The social psychology of stigma* (pp. 273–306). New York: Guilford.
- Henderson-King, E. I., & Nisbett, R. E. (1996). Anti-black prejudice as a function of exposure to the negative behaviour of a single black person. *Journal of Experimental Social Psychology*, *71*, 654-664.
- Herek, G. M., & Capitano, J. P. (1996). “Some of my best friends”: Intergroup contact, concealable stigma, and heterosexuals’ attitudes toward gay men and lesbians. *Personality and Social Psychology Bulletin*, *22*, 412–424. doi: 10.1177/0146167296224007
- Hewstone, M. (2003). Intergroup contact: Panacea for prejudice? *Psychologist*, *16*, 352–355.
- Hewstone, M. (2009). Living apart, living together? The role of intergroup contact in social integration. *Proceedings of the British Academy*, *162*, 243–300.
- Hewstone, M., & Swart, H. (2011). Fifty-odd years of inter-group contact: From hypothesis to integrated theory. *British Journal of Social Psychology*, *50*, 374–386. doi: 10.1111/j.2044-8309.2011.02047.x
- Hewstone, M., Judd, C. M., & Sharp, M. (2011). Do observer ratings validate self-reports of intergroup contact?: A round-robin analysis. *Journal of Experimental Social Psychology*, *47*, 599-609. doi:10.1016/j.jesp.2010.12.014
- Hewstone, M., Cairns, E., Voci, A., Hamberger, J., & Niens, U. (2006). Intergroup contact, forgiveness, and experience of “The Troubles” in Northern Ireland. *Journal of Social Issues*, *62*, 99–120. doi: 10.1111/j.1540-4560.2006.00441.x
- Hewstone, M., Lolliot, S., Swart, H., Myers, E., Voci, A., Al Ramiah, A., & Cairns, E. (2014). Intergroup contact and intergroup conflict. *Peace and Conflict: Journal of Peace Psychology*, *20*, 39- 53. <http://dx.doi.org/10.1037/a0035582>

- Hodson, G., & Hewstone, M. (2013). Introduction: Advances in intergroup contact. In: G. Hodson, & M. Hewstone, (Eds.). *Advances in intergroup contact* (pp. 3-20). Hove, UK : Psychology Press.
- Hodson, G., Hewstone, M., & Swart, H. (2013). Epilogue and future directions. In: G. Hodson, & M. Hewstone, (Eds.). *Advances in intergroup contact* (pp. 262-305). Hove, UK : Psychology Press.
- Hornsey, M. J., & Imani, A. (2004). Criticizing groups from the inside and the outside: An identity perspective on the intergroup sensitivity effect. *Personality and Social Psychology Bulletin*, *30*, 365-383. doi: 10.1177/0146167203261295
- Hyers, L. L., & Swim, J. K. (1998). A comparison of the experiences of dominant and minority group members during an intergroup encounter. *Group Processes and Intergroup Relations*, *1*, 143-163. doi: 10.1177/1368430298012003
- Imhoff, R., & Banse, R. (2009). Ongoing victim suffering increases prejudice: The case of secondary anti-Semitism. *Psychological Science*, *20*, 1443-1447. doi: 10.1111/j.14679280.2009.02457.x
- Islam, M. R., & Hewstone, M. (1993). Dimensions of contact as predictors of intergroup anxiety, perceived out-group variability, and out-group attitude: An integrative model. *Personality and Social Psychology Bulletin*, *19*, 700-710. doi: 10.1177/0146167293196005
- Iyer, A., & Leach, C. W. (2008). Emotion in inter-group relations. *European Review of Social Psychology*, *19*, 86-125. doi: 10.1080/10463280802079738
- Iyer, A., Schmader, T., & Lickel, B. (2007). Why individuals protest the perceived transgressions of their country: The role of anger, shame, and guilt. *Personality and Social Psychology Bulletin*, *33*, 572-587. doi: 10.1177/0146167206297402
- Jha, A. (2012, September). False positives: fraud and misconduct are threatening scientific research. *The Guardian*. Retrieved from: <http://www.theguardian.com/science/2012/sep/13/scientific-research-fraud-bad-practice>
- Johnson, B. T., & Eagly, A. H. (2000). Quantitative synthesis of social psychological research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 496-528). Cambridge, England: Cambridge University Press.
- Johnson, D. W., & Johnson, R. T. (1985). Mainstreaming hearing-impaired students: The effect of effort in communicating on cooperation and interpersonal attraction. *The Journal of Psychology*, *119*, 31-44.

- Joinson, A.N. (1999). Social desirability, anonymity and internet-based questionnaires. *Behaviour Research Methods, Instruments and Computers*, *31*, 433-438.
- Katz, I., Farber, J., Glass, D. C., Lucido, D., & Emswiller, T. (1978). When courtesy offends: Effects of positive and negative behavior by the physically disabled on altruism and anger in normals. *Journal of Personality*, *46*, 506-518. doi: 10.1111/j.1467-6494.1978.tb01014.x
- Keith, L. (1996). Encounters with strangers: The public's responses to disabled women and how this affects our sense of self. In J. Morris, (Ed.), *Encounters with strangers: Feminism and disability* (pp. 69–88). London: Women's Press.
- Kelly, K. M., & Jones, W. H. (1997). Assessment of dispositional embarrassability. *Anxiety, Stress, and Coping*, *10*, 307-333. doi: 10.1080/10615809708249306
- Kenworthy, J., Turner, R. N., Hewstone, M., & Voci, A. (2005). Intergroup contact: When does it work, and why? In J. Dovidio, P. Glick, & L. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport*. Malden, MA: Blackwell.
- Kitchin, R. (1998) "Out of place", "knowing one's place": Space, power and the exclusion of disabled people. *Disability & Society*, *13*, 343– 356. doi:10.1080/09687599826678
- Kleck, R. (1966). Emotional arousal in interactions with stigmatized persons. *Psychological Reports*, *19*, 1226-1226. <http://dx.doi.org/10.2466/pr0.1966.19.3f.1226>
- Kleck, R. E. (1968). Physical stigma and nonverbal cues emitted in face-to-face interaction. *Human Relations*, *21*, 19-28. <http://dx.doi.org/10.1177/001872676802100102>
- Kleck, R. E. (1969). Physical stigma and task orientated interactions. *Human Relations*, *19*, 425-436. <http://dx.doi.org/10.1177/001872676902200103>
- Kleck, R. E., Ono, H., & Hastorf, A. H. (1966). The effects of physical deviance upon face-to-face interaction. *Human Relations*, *19*, 425-436. doi: 10.1177/001872676601900406
- Krahé, B., & Altwasser, C. (2006). Changing negative attitudes towards persons with physical disabilities: An experimental intervention. *Journal of Community & Applied Social Psychology*, *16*, 59-69. doi: 10.1002/casp.849

- Langer, E. J., Fiske, S., Taylor, S. E., & Chanowitz, B. (1976). Stigma, staring, and discomfort: A novel-stimulus hypothesis. *Journal of Experimental Social Psychology, 12*, 451-463. doi:10.1016/0022-1031(76)90077-9
- Leary, M. R. (1983). Social anxiousness: The construct and its measurement. *Journal of Personality Assessment, 47*, 66-75. doi: 10.1207/s15327752jpa4701_8
- Leary, M. R., & Atherton, S. C. (1986). Self-efficacy, social anxiety, and inhibition in interpersonal encounters. *Journal of Social and Clinical Psychology, 4*, 256-267. doi: 10.1521/jscp.1986.4.3.256
- Leary, M. R., & Kowalski, R. M. (1995). *Emotions and social behavior*. New York: Guilford.
- Levin, S., Van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendships on ethnic attitudes in college: A longitudinal study. *Group Processes & Intergroup Relations, 6*, 76-92. doi: 10.1177/1368430203006001013
- Lickel, B., Schmader, T., & Spanovic, M. (2007) Group-conscious emotions: The implications of others' wrongdoings for identity and relationships. In J. L. Tracy & R. W. Robins (Eds.), *The self-conscious emotions: Theory and research* (pp. 351-367).
- Livneh, H. (1988). A dimensional perspective on the origin of negative attitudes towards persons with disabilities. In H. E. Yuker (Ed.), *Attitudes towards persons with disabilities* (pp. 35-46). New York: Springer.
- Lolliot, S., Fell, B., Schmid, K., Wölfer, R., Swart, H., Voci, A., Christ, O., New, R., & Hewstone, M. (2014). Measures of intergroup contact. In G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of Personality and Social Psychological Constructs* (pp.652-683). London, UK: Academic Press.
- Louvet, E., Odile, R., & Dubois, N. (2009). Social judgment of people with a disability in the workplace: How to make a good Impression on employers. *Swiss Journal of Psychology, 68*, 53-159. doi: 10.1024/1421-0185.68.3.153
- Mackie, D. M., Devos, T., & Smith, E. R. (2000). Intergroup emotions: Explaining offensive action tendencies in an intergroup context. *Journal of Personality and Social Psychology, 79*, 602-616. <http://dx.doi.org/10.1037/0022-3514.79.4.602>
- Mackie, D. M., Smith, E. R., & Ray, D. G. (2008). Intergroup emotions and intergroup relations. *Social and Personality Psychology Compass, 2*, 1866-1880. doi: 10.1111/j.1751-9004.2008.00130.x
- Mähönen, T. A., Jasinskaja-Lahti, I., Liebkind, K. (2011). The impact of perceived social norms, gender and intergroup anxiety on the relationship between intergroup contact and ethnic attitudes of adolescents. *Journal of Applied Social Psychology, 41*, 1877-1899. Doi: 10.1111/j.1559-1816.2011.00793.x

- Major, B., Quinton, W. J., McCoy, S. K., & Schmader, T. (2000). Reducing prejudice: The target's perspective. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 211-238). Hillsdale, NJ: Lawrence Erlbaum.
- Makas, E. (1988). Positive attitudes toward disabled people: Disabled and nondisabled persons' perspectives. *Journal of Social Issues, 44*, 49-61. doi: 10.1111/j.1540-4560.1988.tb02048.x
- Mallett, R. K., & Wilson, T. D. (2010). Increasing positive intergroup contact. *Journal of Experimental Social Psychology, 46*, 382- 387. doi:10.1016/j.jesp.2009.11.006
- Mallett, R. K., Wilson, T. D., & Gilbert, D. T. (2008). Expect the unexpected: failure to anticipate similarities leads to an intergroup forecasting error. *Journal of Personality and Social Psychology, 94*, 265-277. doi: 10.1037/0022-3514.94.2.94.2.265
- Maltby, J., & Day, L. (2000). The reliability and validity of a susceptibility to embarrassment scale among adults. *Personality and Individual Differences, 29*, 749-756. doi:10.1016/S0191-8869(99)00229-9
- Maras, P. & Brown, R. J. (1996). Effects of contact on children's attitudes to disability: A longitudinal study. *Journal of Applied Social Psychology, 26*, 2113-2134. doi: 10.1111/j.1559-1816.1996.tb01790.x
- Maras, P., & Brown, R. (2000). Effects of different forms of school contact on children's attitudes toward disabled and non-disabled peers. *British Journal of Educational Psychology, 70*, 337-351. doi: 10.1348/000709900158164
- Mathieu, J. E., & Taylor, S. R. (2006). Clarifying conditions and decision points for mediational type inferences in Organizational Behavior. *Journal of Organizational Behavior, 27*, 1031-1056. doi: 10.1002/job.406
- McCambridge, S. A., & Consedine, N. S. (2014). For whom the bell tolls: Experimentally-manipulated disgust and embarrassment may cause anticipated sexual healthcare avoidance among some people. *Emotion, 14*, 407-415. doi: 10.1037/a0035209
- McClendon, M. J. (1974). Interracial contact and the reduction of prejudice. *Sociological Focus, 7*, 47-65. doi: 10.1080/00380237.1974.10571409
- McGarry J., & O'Leary, B. (1995). *Explaining Northern Ireland: Broken images*. Oxford, UK: Blackwell.
- Medway Council (2012). *Demographic ward profiles*. Retrieved from: <http://www.medway.gov.uk/environmentandplanning/developmentplan/factsandfigures/demographicwardprofiles.aspx>

- Meyerson, L. (1948). Physical disability as a social psychological problem. *Journal of Social Issues, 4*, 2-10. doi: 10.1111/j.1540-4560.1948.tb01513.x
- Miles, E., & Crisp, R. J. (2014). A meta-analytic test of the imagined contact hypothesis. *Group Processes & Intergroup Relations, 17*, 3-26. doi: 10.1177/1368430213510573
- Miller, D. A., Smith, E. R., & Mackie, D. M. (2004). Effects of intergroup contact and political predispositions on prejudice: Role of Intergroup Emotions. *Group Processes and Intergroup Relations, 7*, 221-237. doi: 10.1177/1368430204046109
- Miller, K. D., Schleien, S. J., Rider, C., Hall, C., Roche, M., & Worsley, J. (2002). Inclusive volunteering: Benefits to participants and community. *Therapeutic Recreation Journal, 36*, 247-259.
- Miller, N. (2002). Personalization and the promise of contact theory. *Journal of Social Issues, 58*, 387-410. doi: 10.1111/1540-4560.00267
- Miller, R. S. (1992). The nature and severity of self-reported embarrassing circumstances. *Personality and Social Psychology Bulletin, 18*, 190-198. doi: 10.1177/0146167292182010
- Miller, R. S. (1996). *Embarrassment: Poise and peril in everyday life*. New York: Guilford Press.
- Miller, R. S. (2004). Emotion as adaptive interpersonal communication: The case of embarrassment. In C. W. Leach & L. Z. Tiedens (Eds.), *The social life of emotions* (pp. 87- 104). New York: Cambridge University Press.
- Miller, R. S. (2007). Is embarrassment a blessing or a curse? In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self - conscious emotions: Theory and research* (pp. 245-262). New York: Oxford University Press
- Miller, R. S., & Tangney, J. P. (1994). Differentiating embarrassment and shame. *Journal of Social and Clinical Psychology, 13*, 273-287. doi: 10.1521/jscp.1994.13.3.273
- Modigliani, A. (1968). Embarrassment and embarrassability. *Sociometry, 31*, 313-326.
- Modigliani, A. (1971). Embarrassment, facework, and eye contact: testing a theory of embarrassment. *Journal of Personality and Social Psychology, 17*, 15-24. <http://dx.doi.org/10.1037/h0030460>
- Molina, L. E., & Wittig, M. A. (2006). Relative importance of contact conditions in explaining prejudice reduction in a classroom context: Separate and equal?. *Journal of Social Issues, 62*, 489-509. doi: 10.1111/j.1540-4560.2006.00470.x

- Moore, S. G., Dahl, D. W., Gorn, G. J., & Weinberg, C. B. (2006). Coping with condom embarrassment. *Psychology, Health & Medicine, 11*, 70-79. doi:10.1080/0954012070186721
- Morris, J. (1991). *Pride against prejudice*. London: The Women's Press.
- Mosher, D. L., & White, B. B. (1981). On differentiating shame and shyness. *Motivation and Emotion, 5*, 61-74.
- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology, 22*, 103-122. doi: 10.1002/ejsp.2420220202
- Nario-Redmond, M. R. (2010). Cultural stereotypes of disabled and non-disabled men and women: Consensus for global category representations and diagnostic domains. *British Journal of Social Psychology, 49*, 471-488. doi: 10.1348/014466609X468411.
- Nelson, T. D. (2011). Ageism: the strange case of prejudice against the older you. In R. L. Wiener & S. L. Willborn (Eds.), *Disability and aging discrimination* (pp. 37-47). New York, NY: Springer.
- Neuberg, S. L., & Cottrell, C. A. (2008). Managing the threats and opportunities afforded by human sociality. *Group Dynamics: Theory, Research, and Practice, 12*, 63-72. <http://dx.doi.org/10.1037/1089-2699.12.1.63>
- Oliver, M. (1990). *The politics of disablement*. London: Macmillan.
- Oliver, M. (1996). *Understanding disability, from theory to practice*. London: Macmillan.
- Olkin, R., & Pledger, C. (2003). Can disability studies and psychology join hands? *American Psychologist, 58*, 296-304.
- Osgood, C.E. (1962). *An alternative to war or surrender*. Urbana: University of Illinois Press.
- Page-Gould, E., Mendoza-Denton, R., & Tropp, L. R. (2008). With a little help from my cross-group friend: reducing anxiety in intergroup contexts through cross-group friendship. *Journal of Personality and Social Psychology, 95*, 1080-1094. doi: 10.1177/1088868311411103
- Page-Gould, E., Mendoza-Denton, R., Alegre, J. M., & Siy, J. O. (2010). Understanding the impact of cross-group friendship on interactions with novel outgroup members. *Journal of Personality and Social Psychology, 98*, 775-793. <http://dx.doi.org/10.1037/a0017880>

- Pagotto, L., Voci, A. and Maculan, V. (2010). The effectiveness of intergroup contact at work: Mediators and moderators of hospital workers' prejudice towards immigrants. *Journal of Community and Applied Social Psychology*, 20, 317–330. doi: 10.1002/casp.1038
- Paolini, S., Hewstone, M., Cairns, E., & Voci, A. (2004). Effects of direct and indirect cross-group friendships on judgments of Catholics and Protestants in Northern Ireland: The mediating role of an anxiety-reduction mechanism. *Personality and Social Psychology Bulletin*, 30, 770-786. doi: 10.1177/0146167203262848
- Paolini, S., Hewstone, M., Voci, A., Harwood, J., & Cairns, E. (2006). Intergroup contact and the promotion of intergroup harmony: The influence of intergroup emotions. In R. Brown & D. Capozza (Eds.). *Social identities: Motivational, emotional, and cultural influences* (209-238). Hove, UK: Psychology Press.
- Pappous, A., Marcellini, A., de Leseleuc, E. (2011). From Sydney to Beijing: the evolution of the photographic coverage of Paralympic Games in five European countries. *Sport in Society*, 14, 345–354. doi: 10.1080/17430437.2011.557271
- Parker, J. H. (1968). The interaction of negroes and whites in an integrated church setting. *Social Forces*, 46, 359-366.
- Parkinson, B., Fischer, A. H., & Manstead, A. S. R. (2005). *Emotion in social relations: Cultural, group, and interpersonal processes*. New York: Psychology Press.
- Parrott, W. G., & Smith, S. F. (1991). Embarrassment: Actual vs. typical cases, classical vs. prototypical representations. *Cognition and Emotion*, 5, 467-488. doi: 10.1080/02699939108411053
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Paulhus, D. L (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology*, 46, 598-609. doi: 10.1037/0022-3514.46.3.598
- Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). New York, NY: Guilford Press.
- Pearson, A. R., West, T. V., Dovidio, J. F., Powers, S. R., Buck, R., & Henning, R. (2008). The fragility of intergroup relations. *Psychological Science*, 19, 1272-1279. doi: 10.1111/j.1467-9280.2008.02236.x
- Perry, F. (2014, 28th July). Inaccessible high street shops: retailers listen up! *Disability Horizons*. Retrieved from: <http://disabilityhorizons.com/2014/07/inaccessible-high-street-shops-retailers-listen-up/>

- Petrocelli, J. V., & Smith, E. R. (2005). Who I am, who we are, and why: Links between emotions and causal attributions for self- and group discrepancies. *Personality and Social Psychology Bulletin, 31*, 1628–1642.
- Pettigrew, T. F. (1986). The contact hypothesis revisited. In M. Hewstone & R. Brown (Eds.), *Contact and conflict in intergroup encounters* (pp. 169–195). Oxford, England: Basil Blackwell.
- Pettigrew, T. F. (1997). Generalized intergroup contact effects on prejudice. *Personality and Social Psychology Bulletin, 23*, 173-185. doi: 10.1177/0146167297232006
- Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*, 65-85. doi: 10.1146/annurev.psych.49.1.65
- Pettigrew, T. F. (2008). Future directions for intergroup contact theory and research. *International Journal of Intercultural Relations, 32*, 187-199. doi:10.1016/j.ijintrel.2007.12.002
- Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice? Recent meta-analytic findings. In J. Dovidio, P. Glick, & L. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport*. Malden, MA: Blackwell.
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology, 90*, 751-770. 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
- Pettigrew, T. F., & Tropp, L. R. (2011). *When groups meet: The dynamics of intergroup contact*. [Kindle Fire version]. Retrieved from Amazon.co.uk.
- Piedmont, R. L., McCrae, R. R., Riemann, R., & Angleitner, A. (2000). On the invalidity of validity scales: Evidence from self-reports and observer ratings in volunteer samples. *Journal of Personality and Social Psychology, 78*, 582-593.
- Pinel, E. C. (1999). Stigma consciousness: the psychological legacy of social stereotypes. *Journal of Personality and Social Psychology, 76*, 114-128. <http://dx.doi.org/10.1037/0022-3514.76.1.114>
- Plant, E. A. (2004). Responses to interracial interactions over time. *Personality and Social Psychology Bulletin, 30*, 1458-1471. doi: 10.1177/0146167204264244
- Plant, E. A., & Butz, D. A. (2006). The causes and consequences of an avoidance-focus for interracial interactions. *Personality and Social Psychology Bulletin, 32*, 833-846. <http://dx.doi.org/10.1177/0146167206287182>

- Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, *29*, 790-801. doi: 10.1177/0146167203029006011
- Plant, E. A., Butz, D. A., & Tartakovsky, M. (2008). Interethnic interactions: Expectancies, emotions, and behavioral intentions. *Group Processes & Intergroup Relations*, *11*, 555-574. <http://dx.doi.org/10.1177/1368430208095827>
- Pledger, C. (2003). Discourse on disability and rehabilitation issues: Opportunities for psychology. *American Psychologist*, *58*, 279-284. <http://dx.doi.org/10.1037/0003-066X.58.4.279>
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychological Inquiry*, *8*, 1-20.
- Reeve, D. (2002). Negotiating psycho-emotional dimensions of disability and their influence on identity constructions. *Disability and Society*, *17*, 493-508. doi:10.1080/09687590220148487
- Reeve, D. (2012). Psycho-emotional disablism: the missing link?. In N. Watson, A. Roulstone, & C. Thomas (Eds.), *Routledge handbook of disability studies*. (pp. 78-92). London: Routledge.
- Richeson, J. A., & Shelton, J. N. (2003). When prejudice does not pay effects of interracial contact on executive function. *Psychological Science*, *14*, 287-290. doi: 10.1111/1467-9280.03437
- Richeson, J. A., & Trawalter, S. (2005). Why do interracial interactions impair executive function? A resource depletion account. *Journal of Personality and Social Psychology*, *88*, 934-947. <http://dx.doi.org/10.1037/0022-3514.88.6.934>
- Richeson, J.A., & Shelton, J.N. (2007). Negotiating interracial interactions: Costs, consequences, and possibilities. *Current Directions in Psychological Science*, *16*, 316-320. doi: 10.1111/j.1467-8721.2007.00528.x
- Richeson, J. A., Trawalter, S., & Shelton, J. N. (2005). African Americans' implicit racial attitudes and the depletion of executive function after interracial interactions. *Social Cognition*, *23*, 336-352. doi: 10.1521/soco.2005.23.4.336
- Rickman, D. (2012, August). Paralympics 2012 could improve public attitudes to disability, Scope research shows. *The Huffington Post*. Retrieved from: http://www.huffingtonpost.co.uk/2012/08/28/paralympics-change-attitudes-disability-says-scope_n_1836424.html
- Robins, R. W., Nofle, E. E., & Tracy, J. L. (2007). Assessing self-conscious emotions: A review of self-report and non-verbal measures. In J. L. Tracy & R. W. Robins (Eds.), *The self-conscious emotions: Theory and research* (pp. 443-467).

- Rohmer, O., & Louvet, E. (2012). Implicit measures of the stereotype content associated with disability. *British Journal of Social Psychology, 51*, 732-740. doi: 10.1111/j.2044-8309.2011.02087.x
- Schlenker, B. R., & Leary, M. R. (1982). Social anxiety and self-presentation: A conceptualization model. *Psychological Bulletin, 92*, 641-669. <http://dx.doi.org/10.1037/0033-2909.92.3.641>
- Schmader, T., & Lickel, B. (2006). Stigma and shame: Emotional responses to the stereotypic actions of one's ethnic ingroup. In S. Levin & C. van Laar (Eds.), *Stigma and group inequality: Social psychological approaches* (pp. 281-286). New York: Erlbaum.
- Scope (2012). *Paralympics have power to change attitudes towards disabled people*. Retrieved from: <https://www.scope.org.uk/About-Us/Media/Press-releases/August-2012/Paralympics-have-power-to-change-attitudes-towards>
- Seifert, K. H., & Bergmann, C. (1983). The EKB-Scale: An inventory to measure the attitudes toward physically disabled persons. *International Journal of Rehabilitation Research, 6*, 186-187. <http://dx.doi.org/10.1097/00004356-198306000-00006>
- Semin, G. R., & Manstead, A. S. R. (1982). The social implications of embarrassment displays and restitution behaviour. *European Journal of Social Psychology, 12*, 367-377. <http://dx.doi.org/10.1002/ejsp.2420120404>
- Shakespeare, T. W. (1999). The sexual politics of disabled masculinity. *Sexuality and Disability, 17*, 53-64.
- Shakespeare, T. W. (2006). *Disability rights and wrongs*. London: Routledge.
- Shakespeare, T. W., Gillespie-Sells, K., & Davies, D. (1996). *The sexual politics of disability: Untold desires*. London: Burns & Oates.
- Shelton, J. N. (2000). A re-conceptualization of how we study issues of racial prejudice. *Personality and Social Psychology Review, 4*, 374-390.
- Shelton, J. N. (2003). Interpersonal concerns in social encounters between majority and minority group members. *Group Processes & Intergroup Relations, 6*, 171-185. doi: 10.1177/1368430203006002003
- Shelton, J. N., Richeson, J. A., & Salvatore, J. (2005). Expecting to be the target of prejudice. Implications for interethnic interactions. *Personality and Social Psychology Bulletin, 31*, 1189-1202. doi: 10.1177/0146167205274894

- Shelton, J. N., West, T. V., & Trail, T. E. (2010). Concerns about appearing prejudiced: Implications for anxiety during daily interracial interactions. *Group Processes & Intergroup Relations*, *13*, 329-344. doi: 10.1177/1368430209344869
- Shelton, J. N., Richeson, J. A., Salvatore, J., & Trawalter, S. (2005). Ironic effects of racial bias during interracial interactions. *Psychological Science*, *16*, 397-402. doi: 10.1111/j.0956-7976.2005.01547.x
- Shepherd, L., Spears, R., & Manstead, A. S. (2013). 'This will bring shame on our nation': The role of anticipated group-based emotions on collective action. *Journal of Experimental Social Psychology*, *49*, 42-57. doi:10.1016/j.jesp.2012.07.011
- Sherif, M. (1966). *In common predicament*. Boston: Houghton Mifflin.
- Shnabel, N., & Nadler, A. (2008). A needs-based model of reconciliation: satisfying the differential emotional needs of victim and perpetrator as a key to promoting reconciliation. *Journal of Personality and Social Psychology*, *94*, 116-132. doi: 10.1037/0022-3514.94.1.116
- Shnabel, N., Halabi, S., & Noor, M. (2013). Overcoming competitive victimhood and facilitating forgiveness through re-categorization into a common victim or perpetrator identity. *Journal of Experimental Social Psychology*, *49*, 867-877. doi:10.1016/j.jesp.2013.04.007
- Silver, M., Sabini, J., & Parrott, W. G. (1987). Embarrassment: A dramaturgic account. *Journal for the Theory of Social Behaviour*, *17*, 47-61. doi: 10.1111/j.1468-5914.1987.tb00087.x
- Snyder, M. L., Kleck, R. E., Strenta, A., & Mentzer, S. J. (1979). Avoidance of the handicapped: an attributional ambiguity analysis. *Journal of Personality and Social Psychology*, *37*, 2297-2306. <http://dx.doi.org/10.1037/0022-3514.37.12.2297>
- Son, D., & Shelton, J. N. (2011). Stigma consciousness among Asian Americans: Impact of positive stereotypes in interracial roommate relationships. *Asian American Journal of Psychology*, *2*, 51-60. Doi: 10.1037/a0022651
- Stöber, J. (2001). The Social Desirability Scale-17 (SDS-17): Convergent validity, discriminant validity, and relationship with age. *European Journal of Psychological Assessment*, *17*, 222-232. doi: 10.1027//1015-5759.17.3.222
- Stephan, C. W., Stephan, W. G., Demitrakis, K. M., Yamada, A. M., & Clason, D. L. (2000). Women's attitudes toward men: An integrated threat theory approach. *Psychology of Women Quarterly*, *24*, 63-73. doi: 10.1111/j.1471-6402.2000.tb01022.x

- Stephan, W. G. (2014). Intergroup anxiety: Theory, research, and practice. *Personality and Social Psychology Review*, *18*, 239-255.
- Stephan, W. G., & Rosenfield, D. (1978). Effects of desegregation on racial attitudes. *Journal of Personality and Social Psychology*, *36*, 795-804. <http://dx.doi.org/10.1037/0022-3514.36.8.795>
- Stephan, W. G., & Stephan, C. W. (1985). Intergroup anxiety. *Journal of Social Issues*, *41*, 157-175. doi: 10.1111/j.1540-4560.1985.tb01134.x
- Stephan, W. G., Diaz-Loving, R., & Duran, A. (2000). Integrated Threat Theory and intercultural attitudes in Mexico and the United States. *Journal of Cross-Cultural Psychology*, *31*, 240-249. doi: 10.1177/0022022100031002006
- Strenta, A. C., & Kleck, R. E. (1985). Physical disability and the attribution dilemma: Perceiving the causes of social behavior. *Journal of Social and Clinical Psychology*, *3*, 129-142. doi: 10.1521/jscp.1985.3.2.129
- Stürmer, S., Snyder, M., & Omoto, A. M. (2005). Prosocial emotions and helping: the moderating role of group membership. *Journal of Personality and Social Psychology*, *88*, 532-546. <http://dx.doi.org/10.1037/0022-3514.88.3.532>
- Swart, H., Hewstone, M., Christ, O., & Voci, A. (2011). Affective mediators of intergroup contact: A three-wave longitudinal study in South Africa. *Journal of Personality and Social Psychology*, *101*, 1221-1238. <http://dx.doi.org/10.1037/a0024450>
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Boston: Allyn & Bacon.
- Tajfel, H. (1981). *Human groups and social categories*. Cambridge: Cambridge University Press.
- Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2009). Intergroup trust in Northern Ireland. *Personality and Social Psychology Bulletin*, *35*, 45-59. doi: 10.1177/0146167208325004
- Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt, and embarrassment distinct emotions?. *Journal of Personality and Social Psychology*, *70*, 1256-1269. <http://dx.doi.org/10.1037/0022-3514.70.6.1256>
- Tausch, N., Hewstone, M., Kenworthy, J. B., Psaltis, C., Schmid, K., Popan, J. R., ... & Hughes, J. (2010). Secondary transfer effects of intergroup contact: Alternative accounts and underlying processes. *Journal of Personality and Social Psychology*, *99*, 282-302. doi: 10.1037/a0018553
- Tausch, N., Hewstone, M., Kenworthy, J., Cairns, E., & Christ, O. (2007). Cross-community contact, perceived status differences, and intergroup attitudes in Northern Ireland: The mediating roles of individual-level versus group-level

- threats and the moderating role of social identification. *Political Psychology*, 28, 53-68. doi: 10.1111/j.1467-9221.2007.00551.x
- Thomas, A. (2000). Stability of Tringo's hierarchy of preference toward disability groups: 30 years later. *Psychological Reports*, 86, 1155–1156.
- Todino, E. (2014). I use a wheelchair, why can't I find a disabled-friendly flat? *The Guardian*. Retrieved from: <http://www.theguardian.com/commentisfree/2014/jul/28/wheelchair-disabled-friendly-flat-accessible-housing-london>
- Townsend, M. A. R., Wilton, K. M. & Vakilrad, T. (1993). Children's attitudes toward peers with intellectual disability. *Journal of Intellectual Disability Research*, 37, 405–411.
- Trawalter, S., Richeson, J. A., & Shelton, J. N. (2009). Predicting behavior during interracial interactions: A stress and coping approach. *Personality and Social Psychology Review*, 13, 243-268. doi: 10.1177/1088868309345850
- Tredoux, C., & Dixon, J. (2009). Mapping the multiple contexts of racial isolation: Some reflections on the concept of scale in segregation research. *Urban Studies*, 46, 761-77.
- Tringo, J. L. (1970). The hierarchy of preference toward disability groups. *Journal of Special Education*, 4, 295–306. <http://dx.doi.org/10.1177/002246697000400306>
- Tropp, L. R. (2003). The psychological impact of prejudice: Implications for intergroup contact. *Group Processes and Intergroup Relations*, 6, 131-149. doi: 10.1177/1368430203006002001
- Tropp, L. R. (2006). Stigma and intergroup contact among members of minority and majority status groups. In S. Levin & C. Van Laar (Eds.), *Stigma and group inequality: Social psychological perspectives* (pp. 171-191). Mahwah, NJ: Erlbaum.
- Tropp, L. R. (2007). Perceived discrimination and interracial contact: Predicting interracial closeness among Black and White Americans. *Social Psychology Quarterly*, 70, 70-81. doi: 10.1177/019027250707000108
- Tropp, L. R., & Pettigrew, T. F. (2004). Intergroup contact and the central role of affect in intergroup prejudice. In C. W. Leach & L. Tiedens (Eds.), *The social life of emotion* (pp. 246-269). New York: Cambridge University Press.
- Tropp, L. R., & Pettigrew, T. F. (2005). Relationships between intergroup contact and prejudice among minority and majority status groups. *Psychological Science*, 16, 951-957. doi: 10.1111/j.1467-9280.2005.01643.x

- Turner, R. N., Crisp, R. J., & Lambert, E. (2007). Imagining intergroup contact can improve intergroup attitudes. *Group Processes & Intergroup Relations*, *10*, 427-441. doi: 10.1177/1368430207081533
- Turner, R. N., Hewstone, M., & Voci, A. (2007). Reducing explicit and implicit outgroup prejudice via direct and extended contact: The mediating role of self-disclosure and intergroup anxiety. *Journal of Personality and Social Psychology*, *93*, 369-388. <http://dx.doi.org/10.1037/0022-3514.93.3.369>
- Turner, R. N., Hewstone, M., Voci, A., & Vonofakou, C. (2008). A test of the extended intergroup contact hypothesis: the mediating role of intergroup anxiety, perceived ingroup and outgroup norms, and inclusion of the outgroup in the self. *Journal of Personality and Social Psychology*, *95*, 843-860. doi: 10.1037/a0011434
- Turner, R. N., Hewstone, M., Voci, A., Paolini, S., & Christ, O. (2007). Reducing prejudice via direct and extended cross-group friendship. *European Review of Social Psychology*, *18*, 212-255. doi:10.1080/10463280701680297
- Turner, R. N., Tam, T., Hewstone, M., Kenworthy, J., & Cairns, E. (2013). Contact between Catholic and Protestant schoolchildren in Northern Ireland. *Journal of Applied Social Psychology*, *43*, E216-E228. doi: 10.1111/jasp.12018
- Van Dick, R., Wagner, U., Pettigrew, T. F., Christ, O., Wolf, C., Petzel, T., ... & Jackson, J. S. (2004). Role of perceived importance in intergroup contact. *Journal of Personality and Social Psychology*, *87*, 211-227. <http://dx.doi.org/10.1037/0022-3514.87.2.211>
- Van Laar, C., Levin, S., & Sidanius, J. (2008). Ingroup and outgroup contact: A longitudinal study of the effects of cross-ethnic friendships, dates, roommate relationships, and participation in segregated organizations. In U. Wagner, L. R. Tropp, G. Finchilescu, & C. Tredoux (Eds.), *Improving intergroup relations: Building on the legacy of Thomas F. Pettigrew* (pp. 127-142). Malden, MA: Blackwell.
- Van Laar, C., Levin, S., Sinclair, S., & Sidanius, J. (2005). The effect of university roommate contact on ethnic attitudes and behavior. *Journal of Experimental Social Psychology*, *41*, 329-345. doi:10.1016/j.jesp.2004.08.002
- Van Zomeren, M., Fischer, A. H., & Spears, R. (2007). Testing the limits of tolerance: How intergroup anxiety amplifies negative and offensive responses to outgroup-initiated contact. *Personality and Social Psychology Bulletin*, *33*, 1686-1699. doi: 10.1177/0146167207307485
- Vilchinsky, N., Findler, L., & Werner, S. (2010). Attitudes toward people with disabilities: The perspective of attachment theory. *Rehabilitation Psychology*, *55*, 298-306. doi:10.1037/a0020491

- Voci, A., & Hewstone, M. (2003). Intergroup contact and prejudice towards immigrants in Italy: The mediational role of anxiety and the moderational role of group salience. *Group Processes and Intergroup Relations*, *6*, 37–54. doi: 10.1177/1368430203006001011
- Vorauer, J. D. (2005). Miscommunications surrounding efforts to reach out across group boundaries. *Personality and Social Psychology Bulletin*, *31*, 1653-1664. doi: 10.1177/0146167205277808
- Vorauer, J. D. (2006). An information search model of evaluative concerns in intergroup interaction. *Psychological Review*, *113*, 862–886. <http://dx.doi.org/10.1037/0033-295X.113.4.862>
- Vorauer, J. D. (2013). Getting past the self: Understanding and removing evaluative concerns as an obstacle to positive intergroup contact effects. In: G. Hodson, & M. Hewstone, (Eds.). *Advances in intergroup contact* (pp. 23-48). Hove, UK: Psychology Press.
- Vorauer, J. D., & Kumhyr, S. M. (2001). Is this about you or me? Self versus other-directed judgments and feelings in response to intergroup interaction. *Personality and Social Psychology Bulletin*, *27*, 706–719. doi: 10.1177/0146167201276006
- Vorauer, J. D., & Sakamoto, Y. (2006). I thought we could be friends, but... Systematic miscommunication and defensive distancing as obstacles to cross-group friendship formation. *Psychological Science*, *17*, 326-331.
- Vorauer, J. D., & Sakamoto, Y. (2008). Who cares what the outgroup thinks? Testing an information search model of the importance individuals accord to an outgroup member's view of them during intergroup interaction. *Journal of Personality and Social Psychology*, *95*, 1467-1480. DOI: 10.1037/a0012631
- Vorauer, J. D., & Turpie, C. A. (2004). Disruptive effects of vigilance on dominant group members' treatment of outgroup members: choking versus shining under pressure. *Journal of Personality and Social Psychology*, *87*, 384-399. <http://dx.doi.org/10.1037/0022-3514.87.3.384>
- Vorauer, J. D., Cameron, J. J., Holmes, J. G., & Pearce, D. G. (2003). Invisible overtures: fears of rejection and the signal amplification bias. *Journal of Personality and Social Psychology*, *84*, 793-812. <http://dx.doi.org/10.1037/0022-3514.84.4.793>
- Wagner, U., & Machleit, U. (1986). Gastarbeiter in the federal republic of Germany: contact between Germans and migrant populations. In M. Hewstone & R. Brown (Eds.), *Contact and conflict in intergroup encounters* (pp. 59–78). New York: Blackwell.

- Wagner, U., Van Dick, R., Pettigrew, T. F., & Christ, O. (2003). Ethnic prejudice in East and West Germany: The explanatory power of intergroup contact. *Group Processes and Intergroup Relations*, 6, 22 – 36. doi: 10.1177/1368430203006001010
- Walker, I., & Crogan, M. (1998). Academic performance, prejudice, and the jigsaw classroom: New pieces to the puzzle. *Journal of Community & Applied Social Psychology*, 8, 381-393. doi: 10.1002/(SICI)1099-1298(199811/12)8:6<381::AID-CASP457>3.0.CO;2-6
- Watson, N. (2002). Well, I know this is going to sound very strange to you, but I don't see myself as a disabled person: Identity and disability. *Disability & Society*, 17, 509-527. doi: 10.1080/09687590220148496
- Weed, M. E. & Dowse, S. (2009). A missed opportunity waiting to happen? The social legacy potential of the London 2012 Paralympic Games. *Journal of Policy Research in Tourism, Leisure and Events*, 1, 170-174.
- West, K., & Turner, R. (2014). Using extended contact to improve physiological responses and behavior toward people with schizophrenia. *Journal of Experimental Social Psychology*, 50, 57-64. doi:10.1016/j.jesp.2013.06.009
- West, K., Holmes, E., & Hewstone, M. (2011). Enhancing imagined contact to reduce prejudice against people with schizophrenia. *Group Processes & Intergroup Relations*, 14, 407-248. doi: 10.1177/1368430210387805
- West, T. V., & Dovidio, J. F. (2013). Intergroup contact across time: beyond initial contact. . In G. Hodson, & M. Hewstone, (Eds.). *Advances in intergroup contact* (pp. 151-175). Hove, UK: Psychology Press.
- World Health Organisation (2011). *World report on disability*. Geneva: WHO Press. Retrieved from: http://www.who.int/disabilities/world_report/2011/report/en/.
- Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10, 00-00. doi: 10.1111/j.1083-6101.2005.tb00259.x
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73-90. <http://dx.doi.org/10.1037/0022-3514.73.1.73>
- Yuker, H. (1994). Variables that influence attitudes toward people with disabilities: Conclusions from the data. *Journal of Social Behavior and Personality*, 9, 3-22.
- Yuker, H., Block, J., & Young, J. (1970). *The measurement of attitudes toward disabled persons*. Albertson, NY: Human Resources Center.

Zebrowitz-McArthur, L. (1982). Judging a book by its cover: A cognitive analysis of the relationship between physical appearance and stereotyping. In A. Hastorf & A. Isen (Eds.), *Cognitive social psychology* (pp. 149-211), New York: Elsevier.

Appendices

Appendix A: Example consent forms and information sheets

Example consent form (all studies):

CONSENT TO PARTICIPATE IN RESEARCH *(please circle)*

I confirm that I have read and understand the information provided for the current study.

Yes

I understand that my participation is voluntary and that I am free to withdraw at any time without having to give a reason.

Yes

I understand that my information will remain confidential and completely anonymous.

Yes

I agree to take part in the above study

Yes

Please leave a contact email address. This will be used to identify your data should you wish for it to be removed from the study.

Example information sheet (non-disabled, [Study 3]):

PARTICIPANT INFORMATION SHEET

Dear Participant,

You are invited to participate in a research study that investigates your attitudes and opinions towards interacting with physically disabled people. The study is being conducted by Mr Mark Carew and Dr Masi Noor of Canterbury Christ Church University.

The survey will ask about your attitudes towards people **under 65 years old** who possess a visible **physical disability**. By "**physical disability**" we mean a physical impairment that has a substantial and long term adverse effect on the person's ability to perform normal day to day activities e.g., walking, eating, going shopping. Note that this specific study is NOT focusing on your attitudes towards people who possess a mental disability.

In the survey you will be given the opportunity to read two scenarios which will ask you to imagine interacting with physically disabled people in two different situations. After each scenario you will be given questions to answer based on how you would feel and act in each situation. Finally, you will be asked to respond to a series of statements concerning your own personality and the things you often do.

Additionally, some participants will be randomly chosen to read extra information prior to the main survey and may be required to provide feedback on these materials. The remaining participants will go straight to the main survey.

The survey is confidential and takes around 15 minutes to complete. A written debriefing will be shown to you at the end of the survey fully explaining the nature and purpose of the study.

All data and personal information will be stored securely in accordance with the Data Protection Act 1998 and the University's own data protection requirements. Findings will be used as part of a thesis and may contribute to academic articles in the future.

If you have any questions about the study, please contact the lead researcher (Mark Carew) on this project at: **mark.carew@canterbury.ac.uk**.

Should you decide to participate you will be free to withdraw at any time without having to give a reason.

Example information sheet (physically disabled, [Study 2]):

PARTICIPANT INFORMATION SHEET

Dear Participant,

You are invited to participate in a research study that investigates your attitudes and opinions towards interacting with non-disabled people. The study is being conducted by Mr Mark Carew and Dr Masi Noor of Canterbury Christ Church University.

In the survey you will be given the opportunity to read two scenarios which will ask you to imagine interacting with non-disabled people in two different situations. After each scenario you will be given questions to answer based on how you would feel and act in each situation. Finally, you will be asked to respond to a series of statements concerning your own personality and the things you often do.

Additionally, some participants will be randomly chosen to read extra information prior to the main survey and may be required to provide feedback on these materials. The remaining participants will go straight to the main survey.

The survey is confidential and takes around 15 minutes to complete. A written debriefing will be shown to you at the end of the survey fully explaining the nature and purpose of the study.

All data and personal information will be stored securely in accordance with the Data Protection Act 1998 and the University's own data protection requirements. Findings will be used as part of a thesis and may contribute to academic articles in the future.

If you have any questions about the study, please contact the lead researcher (Mark Carew) on this project at: **mark.carew@canterbury.ac.uk**.

Should you decide to participate you will be free to withdraw at any time without having to give a reason.

Example debriefing sheet (non-disabled, [Study 3]):

DEBRIEFING

Dear Participant,

The purpose of this study was to investigate the effects that priming non-disabled people's psychological concerns might have on their self-conscious emotions and interaction quality with physically disabled people across a range of common scenarios where intergroup contact is likely.

At the beginning of the study, each participant was randomly allocated to one of three experimental conditions. In two of these conditions participants were given a research article to read at the start of this study. Please note that this article was **fake** and does not represent real research conducted at the University of Manchester nor the names of real academic researchers.

The purpose of presenting a fake article was to prime psychological concerns in regards to interacting with a physically disabled person. Participants in the **low** concerns condition received an article stating that non-disabled people were able to accurately identify offensive and inoffensive disability-related words. Conversely, those in the **high** concerns condition received an article stating that non-disabled people were unable to accurately identify offensive and inoffensive disability related words. Additionally, participants in the **control** condition received no article to read.

It was hypothesized that those in the high concerns condition would rate their contact quality with physically disabled people more negatively in response to each scenario than those in the low concerns and control conditions. Additionally, it is thought that this relationship between psychological concerns and contact quality will be mediated by the presence of self-conscious emotions (e.g., embarrassment).

The purpose of conducting this research is to better understand how non-disabled and physically disabled people interact. Results have potential to inform charities, policy makers and the wider community.

If you have any questions about this study, feel free to contact me at mark.carew@canterbury.ac.uk

Your generosity and willingness to participate in this study is greatly appreciated.

Thank you!

Example debriefing sheet (physically disabled, [Study 2]):

DEBRIEFING

Dear Participant,

The purpose of this study was to investigate the effects that priming physically disabled people's psychological concerns might have on their self-conscious emotions and interaction quality with non-disabled people across a range of common scenarios where intergroup contact is likely.

At the beginning of the study, each participant was randomly allocated to one of three experimental conditions. In two of these conditions participants were given a research article to read at the start of this study. Please note that this article was **fake** and does not represent real research conducted at the University of Manchester nor the names of real academic researchers.

The purpose of presenting this fake article was to prime psychological concerns in regards to interacting with a non-disabled person. Participants in the **low** concerns condition received an article stating non-disabled people were able to see past physical disability (i.e. that people base their responses to others on attitudes and personality). Conversely, those in the **high** concerns condition received an article stating that non-disabled people could not see past physical disability (i.e. that people base their responses to others on physical appearances). Additionally, participants who were in the **control** condition received no article to read.

It was hypothesized that those in the high concerns condition would rate their contact quality with non-disabled people more negatively in response to each scenario than those in the low concerns and control conditions. Additionally, it is thought that this relationship between psychological concerns and contact quality will be mediated by the presence of self-conscious emotions (e.g., embarrassment).

The purpose of conducting this research is to better understand how non-disabled and physically disabled people interact. Results have potential to inform charities, policy makers and the wider community.

If you have any questions about this study, feel free to contact me at mark.carew@canterbury.ac.uk

Your generosity and willingness to participate in this study is greatly appreciated.

Thank you!

Appendix B: Confirmation of ethical approval

Study 1:



22 August 2012

Ref: 12/SAS/119C

Mr Mark Carew
7 Worthgate Place
Canterbury
CT1 2QX

Dear Mark

Confirmation of ethics compliance for your study *"Qualitative investigation into the psychological antecedents and outcomes of interactions between physically disabled and non-disabled people."*

I have received a completed and countersigned Ethics Review Checklist dated 9 August 2012 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre
Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Professor Robin Baker CMG, Vice Chancellor

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1098136

Studies 2 & 3:



27 March 2013

Ref: 13/SAS/134C

Mr Mark Carew
10 The Paddock
Vigo Village
Meopham
DA13 0TE

Dear Mark

Confirmation of ethics compliance for your study *"Investigating the effects of priming non-disabled & physically disabled people's psychological concerns on self-conscious emotions and interaction quality."*

I have received a completed and countersigned Ethics Review Checklist dated 26 March 2013 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the **Research Office**, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre
Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1098136

Study 4:



6 April 2014

Ref: 14/SAS/176C

Mr Mark Carew
10 The Paddock
Vigo Village
Meopham
DA13 0TE

Dear Mark

Confirmation of ethics compliance for your study *"Investigating how priming (mild) embarrassment among non-disabled people affects contact quality with physically disabled people (Study 11)."*

I have received an Ethics Review Checklist and appropriate supporting documentation for proportionate review of the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre

Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Professor Rama Thirunamachandran, Vice Chancellor and Principal

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1098136

Study 5:



27 November 2012

Ref: 12/SAS/123C

Mr Mark Carew
7 Worthgate Place
Canterbury
CT1 2QX

Dear Mark

Confirmation of ethics compliance for your study *"Investigating the effects of non-disabled people's psychological concerns on self-conscious emotions and interaction quality with a physically disabled person."*

I have received a completed and countersigned Ethics Review Checklist dated 23 November 2012 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre

Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1098136

Study 6:



16 September 2013

Ref: 13/SAS/148C

Mr Mark Carew
10 The Paddock
Vigo Village
Meopham
DA13 0TE

Dear Mark

Confirmation of ethics compliance for your study *"Investigating the extent that feedback can ameliorate or exasperate negative consequences of mild embarrassment experienced during interactions with physically disabled people (Study 9)."*

I have received a completed and countersigned Ethics Review Checklist dated 4 September 2013 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre
Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1096136

Study 7:



16 September 2013

Ref: 13/SAS/149C

Mr Mark Carew
10 The Paddock
Vigo Village
Meopham
DA13 0TE

Dear Mark

Confirmation of ethics compliance for your study *"Investigating the extent that different types of responses to non-disabled discrimination can ameliorate the negative consequences of embarrassment (Study 10)."*

I have received a completed and countersigned Ethics Review Checklist dated 12 September 2013 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. You are also required to inform me once your research has been completed.

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre
Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1096136

Study 8:



22 May 2012

Ref: 12/SAS/110C

Mr Mark Carew
10 The Paddock
Vigo Village
Meopham
Kent DA13 0TE

Dear Mark

Confirmation of ethics compliance for your study *"A 2-wave longitudinal study investigating the extent which natural exposure to the Paralympics can promote positive attitudes towards physical disability."*

I have received a completed and countersigned Ethics Review Checklist dated 16 April 2012 for the above project. Because you have answered "No" to all of the questions in Section B, no further ethical review will be required under the terms of this University's Research Ethics and Governance Procedures.

In confirming compliance for your study, I must remind you that it is your responsibility to follow, as appropriate, the policies and procedures set out in the *Research Governance Handbook* (<http://www.canterbury.ac.uk/Research/GovernanceandEthics/GovernanceAndEthics.aspx>) and any relevant academic or professional guidelines. This includes providing, if appropriate, information sheets and consent forms, and ensuring confidentiality in the storage and use of data. Any significant change in the question, design or conduct of the study over its course should be notified to the Research Office, and may require a new application for ethics approval. [You are also required to inform me once your research has been completed.](#)

Wishing you every success with your research.

Yours sincerely

A handwritten signature in black ink that reads "Roger Bone".

Roger Bone
Research Governance Manager
Tel: +44 (0)1227 782940 ext 3272 (enter at prompt)
Email: roger.bone@canterbury.ac.uk

cc: Dr Masi Noor

Research Office
Research and Enterprise Development Centre
Canterbury Christ Church University
North Holmes Campus, Canterbury, Kent, CT1 1QU
Tel +44 (0)1227 767700 Fax +44 (0)1227 470442
www.canterbury.ac.uk

Professor Robin Baker CMG, Vice Chancellor

Registered Company No: 4793659
A Company limited by guarantee
Registered Charity No: 1098136

Appendix C: Study materials (surveys and stimuli)

Study 2:

In this section of the study you are asked to read an article that summarizes the findings of a recent research study conducted by scientists at Manchester University. Please read the following article carefully as you will be required to answer questions on it later.

Disability-focused condition:

Does physical appearance count?

Over a sixth of the population of the world is physically disabled, yet statistics suggest that the average non-disabled person rarely meets someone with a physical impairment. What do non-disabled people think of physically disabled people if they do interact?

This is exactly what researchers at the University of Manchester wanted to find out. Specifically, they wanted to answer the question of whether non-disabled people judge physically disabled individuals on the basis of their physical impairments or on their personalities and social interests.

In a series of experiments, non-disabled participants were paired up randomly with physically disabled participants. Each pair was asked to have a conversation about their personalities and interests. When asked to recall the experience 2 weeks later, it was found that non-disabled participants remembered several details about the physical impairment of the physically disabled participants (e.g., abnormal posture, a wheelchair, amputation) but could recall little or nothing of the actual conversation.

In a second study, the researchers showed non-disabled participants a selection of photographs of physically disabled individuals and non-disabled individuals. Additionally, participants received short descriptions of three social interests (e.g., hobbies, political orientations etc.) for each photographed individual.

Participants were then asked to match the individuals into pairs that would best get along. The results revealed that participants matched more pairs based on physical disability rather than the available information concerning the social interests of the individuals.

Researchers suggest these results show how reluctant non-disabled people may be to ignore physical impairment. Lead researcher Dr Tom Lange commented 'The upshot of this research is that, when meeting new people, physically disabled people are likely to experience situations where they are defined by their disability rather than other aspects of their personality'.

Personality-focused condition:

Does physical appearance count?

Over a sixth of the population of the world is physically disabled, yet statistics suggest that the average non-disabled person rarely meets someone with a physical impairment. What do non-disabled people think of physically disabled people if they do interact?

This is exactly what researchers at the University of Manchester wanted to find out. Specifically, they wanted to answer the question of whether non-disabled people judge physically disabled individuals on the basis of their physical impairments or on their personalities and social interests.

In a series of experiments, non-disabled participants were paired up randomly with physically disabled participants. Each pair was asked to have a conversation about their personalities and interests. When asked to recall the experience 2 weeks later, it was found that non-disabled participants remembered several details of the conversation they had with the physically disabled participants but could recall little or nothing of their actual physical impairment.

In a second study, the researchers showed non-disabled participants a selection of photographs of physically disabled individuals and non-disabled individuals. Additionally, participants received short descriptions of three social interests (e.g., hobbies, political orientations etc.) for each photographed individual. Participants were then asked to match the individuals into pairs that would best get along. The results revealed that participants matched more pairs based on the available information concerning the social interests of the individuals rather than their physical disability.

Researchers suggest these results show how easy non-disabled people may find ignoring physical impairment. Lead researcher Dr Tom Lange commented 'The upshot of this research is that, when meeting new people, physically disabled people are unlikely to experience situations where they are defined by their disability rather than other aspects of their personality'.

Next, we would like to ensure that you have read and understood the details of the above article. Please answer the following questions by selecting the number between 1 and 9 that best matches your view. You may wish to re-read the article if you have difficulty with any of the questions.

The research mentioned in the article found that...

...non-disabled people tend to judge physically disabled people based on their physical disability
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people tend to judge physically disabled people based on their personality and interests
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people find it difficult to ignore the impairments of physically disabled people.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people find it easy to ignore the impairments of physically disabled people.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How much do you agree with the findings of the research article?
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Now we would like to see how you would think, feel and act if you had to interact with non-disabled people in certain situations. Try to imagine yourself in the following TWO scenarios and answer each question by selecting the number between 1 and 9 that best matches your view. You may not have had these experiences, but please try your best to imagine how you would think, feel and act in each situation

SCENARIO 1

Imagine you were to start a new job and on your way to the office you are thinking about meeting your new non-disabled colleagues for the first time.

I would be...

...worried that my new colleagues will not be able to see past my physical disability.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that my new colleagues will treat me differently because of my physical disability.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that my physical disability is the only thing my new colleagues will notice about me.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that my new colleagues will judge me because of my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

When you arrive at the office you realise that the lift is broken. This means that you will be late at work because it will take you a long time to climb the stairs to your office floor due to your physical disability. As a result of this, you arrive late in front of your new non-disabled colleagues who have been waiting for you.

On arriving late at my office floor and meeting my new non-disabled colleagues, I would feel...

...uncomfortable because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...embarrassed by this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...incompetent in this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...awkward because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Throughout my first day at work and the coming weeks, I would...

...be relaxed in the presence of my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be motivated to get to know my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to talk freely to my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...enjoy the company of my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to share details of my physical disability with my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to openly discuss the limitations of my physical disability with my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to share details about my personal life with my new colleagues.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Imagine that it is a couple of days later and the lift has still not been fixed.

I would...

...try to avoid raising the subject again.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...try to arrive earlier to get to the office on time.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...confront the management about the broken lift.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...ask the management to explain the delay in fixing the lift.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Have you personally experienced a similar situation to the one described by SCENARIO 1?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Now please read the following scenario and try to imagine how you would think, feel and act in the following situation. You may not have had these experiences, but please try your best to imagine how you would think, feel and act in each situation. Please respond to each question by selecting the number between 1 and 9 that best matches your view.

SCENARIO 2

Imagine you are sitting in a cafe and get into a conversation with someone non-disabled whom you find very attractive. They seem to like you a lot, but it is unclear whether they have noticed your physical disability.

I would be...

...worried that the attractive person will not see past my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that the attractive person will treat me differently because of my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that my physical disability is the only thing the attractive person will notice about me.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried that the attractive person will judge me because of my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

At some point in the conversation you need to visit the bathroom and you know that the attractive person will see the extent of your physical disability when you leave the table.

When leaving the table, I would feel...

...uncomfortable because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...embarrassed by this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...incompetent in this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...awkward because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

When I return to the table, I would...

...be relaxed in the presence of the attractive person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be motivated to get to know the attractive person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to talk freely with the attractive person.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...enjoy the company of the attractive person.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to share details of my physical disability with the attractive person.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to openly discuss the limitations of my physical disability with the attractive person.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to share details about my personal life with the attractive person
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Imagine you see the same attractive person a week later in the supermarket, but you are not sure if they ignore you or fail to see you.

I would...

...try to avoid them.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...try to keep your distance from them.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...confront them over their behaviour.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...ask them to explain their behaviour.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Have you personally experienced a similar situation to the one described in SCENARIO 2?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

The following statements invite you to consider the previous contact you have had with non-disabled people. Please respond to each question as best you can by selecting the number between 1 and 9 that best matches your view.

Please indicate the extent to which you mix with non-disabled people...

...in the area that you live in.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when socialising.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when engaging in leisure activities.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

PERSONAL DATA

Please circle the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

How severe is your physical disability?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Study 3:

In this section of the study you are asked to read an article that summarizes the findings of a recent research study conducted by scientists at Manchester University. Please read the following article carefully as you will be required to answer questions on it later.

No knowledge condition:

Do non-disabled people know enough about physical disability?

Statistics show that over a sixth of the population of the world is physically disabled. This means that the average non-disabled person is guaranteed to interact with a physically disabled person at some stage in their daily life (e.g., at work or the shops).

But are non-disabled people aware of how to talk and behave around someone who has a physical disability?

This is exactly what researchers at the University of Manchester wanted to find out. Specifically, they wanted to answer the question of whether non-disabled people are aware of the appropriate words to use when referring to physically disabled people.

Firstly, they asked a group of non-disabled participants to generate a list of inoffensive words that could be used to describe physical disabled people (e.g., person with an impairment). Participants were also asked to provide a summary of reasons behind their selections.

Subsequently, a group of physically disabled participants rated the appropriateness of each word in the list. Researchers were surprised to find that the majority of words generated by the non-disabled participants were considered offensive.

Given these results, researchers then presented the physically disabled participants with the reasons for the non-disabled participants' choice of words. These reasons triggered further strong negative feelings among the physically disabled participants. They perceived the majority of choices to be based on prejudice and misconceptions of physically disabled people.

Researchers suggest this indicates clear communication obstacles between non-disabled and physically disabled people. Lead researcher Dr Tom Lange commented: 'Even today, there are major gaps in the understanding of non-disabled people regarding the socially appropriate ways to refer to physically disabled people. The key message of our findings is that there is a very fine line between what is offensive and what is appropriate'.

Knowledge condition:

Do non-disabled people know enough about physical disability?

Statistics show that over a sixth of the population of the world is physically disabled. This means that the average non-disabled person is guaranteed to interact with a physically disabled person at some stage in their daily life (e.g., at work or the shops).

But are non-disabled people aware of how to talk and behave around someone who has a physical disability?

This is exactly what researchers at the University of Manchester wanted to find out. Specifically, they wanted to answer the question of whether non-disabled people are aware of the appropriate words to use when referring to physically disabled people.

Firstly, they asked a group of non-disabled participants to generate a list of inoffensive words that could be used to describe physical disabled people (e.g., person with an impairment). Participants were also asked to provide a summary of reasons behind their selections.

Subsequently, a group of physically disabled participants rated the appropriateness of each word in the list. Researchers found that the majority of words generated by the non-disabled participants were considered inoffensive.

Given these results, researchers then presented the physically disabled participants with the reasons for the non-disabled participants' choice of words. These reasons triggered no negative feelings among the physically disabled participants. They perceived the majority of choices to be based on a good understanding of physically disabled people.

Researchers suggest this indicates there are no communication obstacles between non-disabled and physically disabled people. Lead researcher Dr Tom Lange commented: 'Today, there are no major gaps in the understanding of non-disabled people regarding the socially appropriate ways to refer to physically disabled people'.

Next, we would like to ensure that you have read and understood the details of the above article. Please answer the following questions by selecting the number between 1 and 9 that best matches your view.

The research mentioned in the article found that...

...non-disabled people are unaware of appropriate ways to refer to physically disabled people.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people do not have a good idea of what physically disabled people consider offensive.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people are aware of appropriate ways to refer to physically disabled people.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...non-disabled people have a good idea of what physically disabled people consider offensive.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

How much do you agree with the findings of the research article?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Now we would like to see how you would think, feel and act if you had to interact with a physically disabled person in certain situations. Try to imagine yourself in the following TWO scenarios and answer each question by selecting the number between 1 and 9 that best matches your view. You may not have had these experiences, but please try your best to imagine how you would think, feel and act in each situation.

SCENARIO 1

Imagine a physically disabled person is starting a new job in the place where you work and that you will meet them later today.

Before meeting my new physically disabled colleague, I would be...

...worried about offending my new colleague by accident.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about not knowing how to correctly behave towards my new colleague.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about appearing prejudiced towards my new colleague.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about unintentionally treating my new colleague differently because of their disability.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

The day your new physically disabled colleague starts work is a Thursday and on this day every week the office team always goes to your favourite pub for the evening. However, this pub is a long walk away and there is no parking nearby. When you meet the physically disabled person you decide to ask them about the severity of their disability in order to decide whether to go to a nearer pub, but one that is not as nice.

While asking the physically disabled person about the severity of their disability, I would feel...

...uncomfortable because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...embarrassed by this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...incompetent in this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...awkward because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Although your physically disabled colleague reassured you that they would join the rest of the team at your favourite pub that is quite far away, they do not come.

The following day at a daily work meeting with my physically disabled colleague, I would...

...be relaxed in the presence of my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be motivated to get to know my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to talk freely to my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...enjoy the company of my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be happy to find out more about my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to openly discuss the limitations of my new colleague's physical disability with them.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be able to find out more about the personal life of my new colleague.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

During the daily meeting, something about the behaviour of your physically disabled colleague makes you wonder whether you offended them when asking about the severity of their disability. However, you are not 100% certain of this.

I would...

...try to avoid the subject.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...try to think of an excuse to leave the meeting early.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...confront them over their behaviour.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...ask them to explain their behaviour.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Have you personally experienced a similar situation to the one described by SCENARIO 1?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Now please read the following scenario and try to imagine how you would think, feel and act in the following situation. You may not have had these experiences, but please try your best to imagine how you would think, feel and act in each situation.

SCENARIO 2

Imagine you are in a cafe and you get into a conversation with a physically disabled person.

I would be...

...worried about offending the physically disabled person by accident.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about not knowing how to correctly behave towards the physically disabled person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about appearing prejudiced towards the physically disabled person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worried about unintentionally treating the physically disabled person differently because of their disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

During the course of the conversation the behaviour of the physically disabled person suggests that they are attracted to you. They invite you to have coffee again, but you are not attracted to them and do not want to give the wrong impression.

While responding to the invitation from the physically disabled person, I would feel...

...uncomfortable because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...embarrassed by this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...incompetent in this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...awkward because of this situation.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

After responding to the invitation from the physically disabled person, I would...

...be relaxed in the presence of the physically disabled person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be motivated to get to know the physically disabled person.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...be able to talk freely to the physically disabled person.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...enjoy the company of the physically disabled person.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...be happy to find out more about the person's physical disability										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...be able to openly discuss the limitations of the person's physical disability with them.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...be able to find out more about the personal life of the physically disabled person.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

As the conversation continues, something about the behaviour of the physically disabled person makes you wonder whether you offended them when responding to their earlier invitation. However, you are not 100% certain of this.

I would...

...try to avoid the subject.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...try to end the conversation as soon as possible.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...confront them over their behaviour.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...ask them to explain their behaviour.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

Have you personally experienced a similar situation to the one described in SCENARIO 2?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

The following statements invite you to consider the previous contact you have had with physically disabled people as well as your own personality. Please respond to each question as best you can by selecting the number between 1 and 9 that best matches your view.

Please indicate the extent to which you mix with physically disabled people...

...in the area that you live in.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...when socialising.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...when engaging in leisure activities.										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

Thinking about my personality and the things I do, I would say that...

...I am easily embarrassed regardless of where I am and what I do.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...I am anxious to make a positive impression on others.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...I feel mortified over making minor embarrassing mistakes.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

PERSONAL DATA

Please circle the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

Do you consider yourself to have a physical disability? Yes No

Do you consider yourself to have a close relationship with a physically disabled person? Yes No

If so, what relation is this person to you (e.g., mother, father, friend)?

Research article layout (Studies 2 & 3 [example taken from Study 3, no knowledge condition]):

theguardian

[News](#) | [Sport](#) | [Comment](#) | [Culture](#) | [Business](#) | [Money](#) | [Life & style](#) | [T](#)

[News](#) > [Society](#)

**NEWS
BLOG**

[Previous](#)

[Blog home](#)

Do non-disabled people know enough about physical disability?

Statistics show that over a sixth of the population of the world is physically disabled. This means that the average non-disabled person is guaranteed to interact with a physically disabled person at some stage in their daily life (e.g. at work or the shops).

But are non-disabled people aware of how to talk and behave around someone who has a physical disability?

This is exactly what researchers at the University of Manchester wanted to find out. Specifically, they wanted to answer the question of whether non-disabled people are aware of the appropriate words to use when referring to physically disabled people.

Firstly, they asked a group of non-disabled participants to generate a list of inoffensive words that could be used to describe physically disabled people (e.g. person with an impairment). Participants were also asked to provide a summary of reasons behind their selections.

Subsequently a group of physically disabled people rated the appropriateness of each word in the list. Researchers were surprised to find that the majority of words generated by the non-disabled participants were considered offensive.

Given these results, researchers then presented the physically disabled participants with the reasons for the non-disabled participants' choice of words. These reasons triggered further strong negative feelings among the physically disabled participants. They perceived the majority of choices to be based on prejudice and misconceptions of physically disabled people.

Researchers suggest this indicates clear communication obstacles between non-disabled people and physically disabled people. Lead researcher Dr Tom Lange commented: 'Even today, there are major gaps in the understanding of non-disabled people regarding the socially appropriate ways to refer to physically disabled people. The key message of our findings is that there is a very fine line between what is offensive and what is appropriate'.

Study 4:

Pilot study:

In this section you are asked to take part in a short task.

TASK

Negative affect condition:

Recall or imagine spending a whole day with someone who is physically disabled. Write down all the things that could happen that you might find especially awkward.

Positive affect condition:

Recall or imagine spending a whole day with someone who is physically disabled. Write down all the things that could happen that you might find especially interesting.

Control condition:

Recall or imagine spending a whole day with someone who is physically disabled. When you go for a walk in the local park, you will find a £20 note. What would you spend the money on and why?

Main experiment:

This is the beginning of the survey.

On the next page you will be asked to complete an imagination exercise lasting approximately 5 minutes. After this time is elapsed you will be able to press the >> button to continue with the survey. You will not be able to continue until this time has elapsed.

You are ready to begin the imagination exercise.

Please note that the imagination exercise is an important part of this study. **Please do spend time thinking and writing your thoughts down as instructed.** You may take longer than 5 minutes if you wish.

We would like you to take 5 minutes to imagine the following scenario:

Negative affect condition:

You are waiting to catch a train at the train station. While you are waiting, a physically disabled person arrives on the platform and sits down next to you.

Imagine yourself having a conversation with this physically disabled person at the train station. Imagine that the interaction is difficult, tense and uncomfortable.

We would like you to spend the time thinking about the things you talk about, do or say to this person. Please write down, from time to time, the things that you imagine. Feel free to write whatever springs to mind.

Positive affect condition:

You are waiting to catch a train at the train station. While you are waiting, a physically disabled person arrives on the platform and sits down next to you.

Imagine yourself having a conversation with this physically disabled person at the train station. Imagine that the interaction with this person is easy, relaxed and comfortable.

We would like you to spend the time thinking about the things you talk about, do or say to this person. Please write down, from time to time, the things that you imagine. Feel free to write whatever springs to mind.

Control condition:

You are waiting to catch a train at the train station. While you are waiting, a physically disabled person arrives on the platform and sits down next to you.

Imagine yourself having a conversation with this physically disabled person at the train station.

We would like you to spend the time thinking about the things you talk about, do or say to this person. Please write down, from time to time, the things that you imagine. Feel free to write whatever springs to mind.

In this section you are asked to give your responses to a number of questions about the interaction you just imagined.

Instructions:

For the following questions please select the number that best reflects your opinion on a scale from 1 to 9 (1 = Not at all, 9 = Very much so) or write in the box provided.

The following two questions are just to check you read the scenario information given:

Was the person you imagined interacting with:
 Physically disabled Non-disabled

Where did this interaction take place?

In the interaction you imagined, to what extent did you feel...

...uncomfortable?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...embarrassed?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...incompetent?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...awkward?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...foolish?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

To what extent was the interaction you imagined...

...positive?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...personal?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

...enjoyable?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worthwhile?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...genuine?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...close?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

In this section you are asked to give your responses to a number of questions regarding your attitudes to physically disabled people.

Instructions:

For the following questions please select the number that best reflects your opinion on a scale from 1 to 9 (1 = Not at all, 9 = Very much so).

When thinking of physically disabled people, to what extent do you feel the following:

Negative	1	2	3	4	5	6	7	8	9	Positive
Unpleasant	1	2	3	4	5	6	7	8	9	Pleasant
Hostile	1	2	3	4	5	6	7	8	9	Friendly
Contempt	1	2	3	4	5	6	7	8	9	Respect
Suspicious	1	2	3	4	5	6	7	8	9	Trusting

When interacting with physically disabled people, I often...

...worry about offending them.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing how to correctly behave towards them.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about appearing prejudiced towards them.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about unintentionally treating them differently because of their disability.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Please indicate the extent to which you mix with physically disabled people...

...in the area that you live in.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when socialising.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when engaging in leisure activities.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Thinking about my personality, I would say that...

...I am easily embarrassed regardless of where I am and what I do.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...I am anxious to make a positive impression on others.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...I feel mortified over making minor embarrassing mistakes.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Thinking about the things I often do, I would say that...

...I sometimes litter.
True False

...I always eat a healthy diet.
True False

...when I have made a promise I keep it- no if's, and's or buts.
True False

...I am always very polite to others.
True False

...I never take advantage of others.
True False

PERSONAL DATA

Please select the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

Do you consider yourself to have a physical disability? Yes No

Do you consider yourself to have a close relationship with a physically disabled person? Yes No

If so, what relation is this person to you (e.g., mother, father, friend)?

Study 5:

Term list (generated by pilot study):

Differently abled, Disabled, Physically disabled, Handicapped, Person with a physical disability, Person with mobility difficulties, Physically challenged, Physically unable, Special needs, Impeded, Incapable, Incapacitated, Infirm, Crippled, Spastic, Lame, Less abled, Retard, Unfit, Wheelchair bound, Weird, Para, Person with an impairment, Immobile, Dis ABLED, Different, Invalid, Mobility impaired, Deformed, Damaged.

Main experiment:

Instructions

In the following task you are asked to decide if a word is APPROPRIATE or NOT APPROPRIATE to refer to physically disabled people. You should decide this as quickly and accurately as possible. To indicate if a word is appropriate press the Green Button. But if you think the word is not appropriate then press the Red Button. If you do not make a selection for 3 seconds, the next word in the sequence will be presented.

Before you begin the main Task there is a practice session. In this practice session you have to decide if a word is APPROPRIATE or NOT APPROPRIATE to refer to fruit.

You are now ready to begin the main task. Remember that you have to decide if a word is APPROPRIATE or NOT APPROPRIATE to refer to physically disabled people.

High concerns condition:

Thank you for completing this Task. Your feedback is presented below:

Your average Reaction Time was: 1.6 seconds. This time is considered: SLOW.

23% of your answers were accurate. Your overall performance on this Task was: VERY BAD.

These results suggest that you do not have a clear understanding of issues important to physically disabled people. Lack of awareness of appropriate words to use when referring to disabled people increases the chance you will cause them offence and that you will be considered prejudiced.

The word-sorting task is a standard task developed by a national charity Scope that aims to raise awareness of stigma and prejudice against the physically disabled.

Low concerns condition:

Thank you for completing this Task. Your feedback is presented below:

Your average Reaction Time was: 0.8 seconds. This time is considered: FAST.

77% of your answers were accurate. Your overall performance on this Task was: VERY GOOD.

These results suggest that you have a clear understanding of issues important to physically disabled people. Awareness of appropriate words to use when referring to disabled people decreases the chance you will cause them offence and that you will be considered prejudiced.

The word-sorting task is a standard task developed by a national charity Scope that aims to raise awareness of stigma and prejudice against the physically disabled.

First survey (after task, before interaction):

How do you feel you did on the Task?

The following questions will invite you to reflect on how you did in the Task. Please respond to each question by selecting the number between 1 and 9 which best matches your view.

On the word sorting task, I think I did:

Not at all 1 2 3 4 5 6 7 8 9 Very well

When interacting with physically disabled people, I often...

...worry about unintentionally treating someone differently because of their physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about offending physically disabled people by accident.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about unintentionally appearing prejudiced towards physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about reminding physically disabled people of their disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not being familiar with the attitudes and beliefs that are important to physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing how to correctly behave towards physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about being unfamiliar with the things physically disabled people find important.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing if I have offended a physically disabled person.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Please indicate the extent to which you mix with physically disabled people...

...in the area that you live in.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when socialising.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when engaging with leisure activities.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Thinking about my personality and things I do, I would say that:

I am easily embarrassed regardless of where I am and what I do.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

I am anxious to make a positive impression on others.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

I feel mortified over making minor embarrassing mistakes.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

PERSONAL DATA

Please select the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

Do you consider yourself to have a physical disability? Yes No

Do you consider yourself to have a close relationship with a physically disabled person? Yes No

If so, what relation is this person to you (e.g., mother, father, friend)?

Second survey (after interaction):

How do you feel about your interaction with the other participant?

The following questions will invite you to consider how you found your interaction. Please respond to each question by selecting the number between 1 and 9 which best matches your view.

Did you feel any of the following during the interaction?

Uncomfortable
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Embarrassed
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Incompetent
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Foolish
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Awkward
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Please indicate:

How positive your interaction with the other participant was.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How personal your interaction with the other participant was.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How superficial your interaction with the other participant was.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How enjoyable your interaction with the other participant was.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How worthwhile your interaction with the other participant was.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Please indicate:

How much you liked the other participant?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

How attractive you found the other participant?
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Study 6:

Preliminary survey [integrated into a wider batch of measures from other projects] :

PERSONAL DATA

Please select the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

Do you consider yourself to have a physical disability? Yes No

Do you consider yourself to have a close relationship with a physically disabled person? Yes No

If so, what relation is this person to you (e.g., mother, father, friend)?

The following statements will ask about how you generally interact with physically disabled people. Please respond to each statement by selecting the number between 1 and 9 that best matches your viewpoint. If you have little previous experience of interacting with physically disabled people then please try to imagine as best you can how you would think, feel and behave towards them. Remember, there are no right or wrong answers.

Please indicate the extent to which you mix with physically disabled people...

...in the area that you live in.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when socialising.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...when engaging in leisure activities.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

When interacting with physically disabled people, I...

...worry about unintentionally treating someone differently because of their physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about offending physically disabled people by accident.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about unintentionally appearing prejudiced towards physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about reminding physically disabled people of their disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing how to correctly behave towards physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about being unfamiliar with the things physically disabled people find important.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing if I have offended a physically disabled person by accident.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Main experiment:

Welcome to the first stage of the national UKAA competition to find young advertising talent. In this stage you will both be asked to complete a task that is designed to test your creativity. You each must produce ten slogans to describe ten products that will be presented to you on the screen. Please note that some basic information will be provided about each product to help you, but that some products will be more challenging than others. Throughout the task, please both remain silent and concentrate on being creative.

Please write your slogans on the two UKAA Slogan Sheets provided. Each slogan sheet contains space for five products.

Note that we are interested only in your initial creative thoughts and ideas. It is intended that you do not spend too long working on each product. To help you focus, each product will only be displayed on the screen for 45 seconds. You will then have a further 15 seconds for each product to finalise your slogan. Please note that the task will proceed automatically.

After five products, you will be instructed to pass the first slogan sheet to the other participant. You must then judge each other's slogans on a 1-10 scale (1 = Not a creative slogan; 10 = A very creative slogan). You must then do exactly the same for the next set of five products.

Scoring will be confidential, meaning that you must not show each other the scores that you allocate. Please try to be as creative as possible when making a slogan. When judging, evaluate the slogans of the other participant honestly and according to real life standards. Your work, that is your degree of creativity but also your accurate assessment of the other participant's creativity will be used by the UKAA's judges to determine who can go the second stage of the competition.

Those participants who score highly enough will each win entry into the second stage of the UKAA competition, to be held in London. Here, you will compete against winning participants from universities across the country.

Please pay attention to the following: After the task, you can also decide to submit your slogans and those produced by the other participant as a joint project. Alternatively, you can choose to submit your work (i.e. your slogans) to the panel individually.

Each strategy has some advantages and disadvantages. For example, the advantage of submitting individually is that the assessment of your work will be not affected by the performance of the other participant. The advantage of submitting jointly with the other participant is that if he/she performs well, you both will come through to the second round regardless how poor your individual performance was.

It is totally up to you how you decide. But your decision will be confidential.

Please take this opportunity to ask the study coordinator if you have any questions.

When you are both ready, please press >> to begin the task.

Product 1: Fountain Pen

- **Product is aimed at teenagers at school and college.**
- **Product is a luxury item that is now used rarely.**

Product 2: Children's Watch

- **Product is aimed at very young children.**
- **Product is educational and colourful.**

Product 3: Beanbag

- **Product is comfortable and can be used for sitting, lying, or as a footrest.**
- **Product is made from high quality, durable material.**

Product 4: Sandwich Maker

- **Product is aimed at students.**
- **Product can make the traditional sandwich more exciting and tasty.**

Product 5: Laptop Travel Bag

- **Product is aimed at business professionals and frequent flyers.**
- **Product has a lot of storage space and is durable.**

Now please pass Slogan Sheet 1 to the other participant. When you receive their Slogan Sheet, take a few moments to read through their slogans and award each a mark out of 10. Remember not to talk about your scores. In addition, do not spend too long thinking about what scores to award- we are interested in your initial thoughts.

When you have finished grading all slogans, place Slogan Sheet 1 in the folder in front of you.

For the next five slogans, you will use Slogan Sheet 2. When you are ready please press >> to continue.

Product 6: Family Tent

- **Product is aimed at families.**
- **Product is easy to set up and spacious inside.**

Product 7: Abacus

- **A great way to teach young children how to count.**
- **Unique, more enjoyable alternative to a calculator.**

Product 8: Roomba (Automatic Robot Vacuum Cleaner)

- **Battery operated and efficient.**
- **Requires little time and effort to use.**

Product 9: Onesie

- **Comfortable.**
- **Aimed at students who enjoy lazy days.**

Product 10: Cocktail shaker set

- **Affordable.**
- **Aimed at beginners to cocktail making.**

Now please pass Slogan Sheet 2 to the other participant. When you receive their Slogan Sheet, take a few moments to read through their slogans and award each a mark out of 10. Remember not to talk about your scores. In addition, do not spend too long thinking about what scores to award- we are interested in your initial thoughts.

When you have finished grading all slogans, place Slogan Sheet 2 in the folder in front of you. When you are ready please press >> to continue.

Thank you. Your work will be judged by a UKAA accredited representative at a later date and you will be informed of the result.

Please now call the study coordinator back into the room.

First survey (after task, before feedback):

Please answer the following questions for the UKAA by selecting the number between 1 and 9 that best matches your how you think or feel or by writing in the box provided.

During the task to what extent did you personally feel...

...uncomfortable										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...embarrassed										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...incompetent										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...foolish										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...awkward										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...competitive										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

Please indicate the extent to which your interactions with the other participant have been...

...positive?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...personal?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...enjoyable?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...worthwhile?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...genuine?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...close?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

When thinking of the other participant to what extent do you feel the following:

Negative	1	2	3	4	5	6	7	8	9	Positive
Unpleasant	1	2	3	4	5	6	7	8	9	Pleasant
Hostile	1	2	3	4	5	6	7	8	9	Friendly
Contempt	1	2	3	4	5	6	7	8	9	Respect
Suspicious	1	2	3	4	5	6	7	8	9	Trusting

How eager would you be to work with the same participant again?
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

To what extent do you think the other participant...

...is physically attractive.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...has an attractive personality.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...is likeable.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...is boring.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Receipt of feedback confirmation sheet:

The CCCU university ethics committee would like to give you the opportunity to provide feedback to the other participant regarding how you found working with them on the task. This is standard procedure for research involving two or more participants. Please note that leaving feedback for the other participant is optional and not a required part of the UKAA study.

If you wish to leave some feedback please use the lined paper on the desk. When you are done, place the lined paper inside the envelope provided.

When you are finished with everything, please call the study coordinator back into the room.

The CCCU ethics committee would just like to confirm that you have received feedback from another participant during this research study. Please answer the following:

I confirm that I have received feedback from another participant (**please tick**).

Was this feedback written or electronic? (**please tick the appropriate**)

- Written
- Electronic

Was this feedback positive or negative overall?

Negative 1 2 3 4 5 6 7 8 9 Positive

Second survey (after feedback):

Please turn the page to answer some questions on how you found the task.

Please indicate the extent to which your interactions with the other participant have been...

...positive.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...enjoyable.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worthwhile.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

During the task, to what extent did you feel...

...embarrassed.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...awkward.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...foolish.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

When thinking of your experience of the other participant on the task, to what extent do you feel the following:

Negative 1 2 3 4 5 6 7 8 9 Positive

Unpleasant 1 2 3 4 5 6 7 8 9 Pleasant

Hostile 1 2 3 4 5 6 7 8 9 Friendly

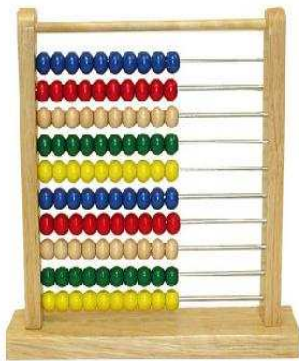
Contempt 1 2 3 4 5 6 7 8 9 Respect

Suspicious 1 2 3 4 5 6 7 8 9 Trusting

To what extent do you think the other participant is likeable?
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

How eager would you be to work with the same participant again?
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Pictures used in creativity task (Study 6):



Example slogan sheet (Study 6, Slogan sheet 1):

Please write your slogan in the corresponding box below when prompted to do so on the screen. Then, when prompted, pass your sheet to the other participant. Please **do not** talk during the task.

If you have just received the other participant's sheet, give each of their slogans a mark out of 10 using the right hand column (1 = Not at all creative, 10= Very creative).

	Write <u>your</u> slogan for each product in this column.	Mark given out of 10:
Product 1:		
Product 2:		
Product 3:		
Product 4:		
Product 5:		

You can write any additional thoughts or ideas you have in the box below:

Study 7:

Imagine that you have popped into the supermarket to buy lunch with a non-disabled friend. You decide to pay for all the food that you get as a treat for your friend. When you get to the checkout you notice that the (non-disabled) cashier is mainly looking at and speaking to your friend, even though you are the one paying for the items. After receiving the money from you, the cashier then hands the change back to your friend. It is obvious from this behaviour that the cashier has assumed your non-disabled friend is your carer.

How would you personally feel in this situation?

Uncomfortable
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Embarrassed
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Incompetent
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Foolish
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Awkward
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Have you had personal experience of a similar situation to the one described above?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Avoidance vignette:

Now please take a moment to imagine that you do not react in this situation. You decide not to highlight the cashier's ignorance or discriminatory behaviour. You just pick up your items and leave the supermarket without doing anything about what just happened.

Clarification vignette:

Now please take a moment to imagine that you react to this situation. In particular, you decide to highlight the cashier's behaviour. You tell the cashier how offensive you found their behaviour and that more thought should be given in the future when they interact with physically disabled people to avoid discrimination. You then pick up your items and leave the supermarket without taking the incident any further.

This question is just to check you understood the response on the previous page. Please answer the following: In the response described on the previous page, I...

...ignored the behaviour of the non-disabled cashier and left without doing anything about what happened.

...highlighted the behaviour of the non-disabled cashier and explained that their actions were offensive.

How likely would you be to behave like this in the described situation?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Imagine that you did behave like this in the described situation. To what extent does the described interaction with the non-disabled cashier make you feel that your contact with non-disabled cashiers in the future will be...

...positive?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...personal?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...enjoyable?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...worthwhile?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...genuine?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so
...close?										
Not at all	1	2	3	4	5	6	7	8	9	Very much so

To what extent would the described interaction with the non-disabled cashier make you feel...

...more positive about dealing with disability discrimination from non-disabled people in the future
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...like you can handle disability discrimination from non-disabled people should it arise.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...that you can deal with disability discrimination from non-disabled people if it occurs.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...that you do not have to put up with disability discrimination from non-disabled people.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

Due to the described interaction with the non-disabled cashier, to what extent would you...

...avoid being served by that particular cashier in the future.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...avoid visiting that particular supermarket in the future.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...avoid visiting supermarkets whenever possible.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be more likely to do your shopping online in the future.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

...be more likely to use the self-checkout machines in the future.
 Not at all 1 2 3 4 5 6 7 8 9 Very much so

PERSONAL DATA

Please circle the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

How severe is your physical disability?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Study 8 (Time 1 and Time 2 [*italicised words reflect different wording between samples*]):

The following statements will invite you to consider various issues about physical disability. Sometimes you might find it difficult to respond but please do have a go – there are no right or wrong answers. Please respond to each statement by circling the number between 1 and 9 which best matches your view

How do you personally feel when interacting with a *physically disabled/non-disabled* person?

Uncomfortable
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Embarrassed
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Incompetent
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Foolish
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Awkward
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Nervous
Not at all 1 2 3 4 5 6 7 8 9 Very much so

Non-disabled sample only:

When interacting with physically disabled people, I often...

...worry about unintentionally treating someone differently because of their physical disability.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about offending physically disabled people by accident.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about unintentionally appearing prejudiced towards physically disabled people.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about reminding physically disabled people of their disability.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not being familiar with the attitudes and beliefs that are important to physically disabled people
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing how to correctly behave towards physically disabled people.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about being unfamiliar with the things physically disabled people find important.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry about not knowing if I have offended a physically disabled person.
Not at all 1 2 3 4 5 6 7 8 9 Very much so

If I am accused by physically disabled people of treating them unfairly, I tend to:

Avoid them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Keep them at a distance

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Confront them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Argue with them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Physically disabled sample only:

When interacting with non-disabled people I often.....

...worry that non-disabled people will not see past my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry that non-disabled people will make a big deal of my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry that non-disabled people will associate me with other physically disabled people.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry that non-disabled people will treat me differently because of their disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

...worry that non-disabled people will not accept me because of my physical disability.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

If I feel that I am treated unfairly by a non-disabled person, I tend to:

Avoid them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Keep them at a distance

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Confront them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Argue with them

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Both:

Please indicate the extent to which you mix with *non-disabled/physically disabled* people...

...in the area that you live in.

Not at all 1 2 3 4 5 6 7 8 9 A lot

...when socialising.

Not at all 1 2 3 4 5 6 7 8 9 A lot

...when engaging with leisure activities.

Not at all 1 2 3 4 5 6 7 8 9 A lot

Please indicate:

How pleasant your contact with *non-disabled/physically disabled* people has been.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

How positive your contact with *non-disabled/physically disabled* people has been.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

How intimate your contact with *non-disabled/physically disabled* people has been.

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Please indicate:

The amount of interest you have in the 2012 Paralympics.

Not at all 1 2 3 4 5 6 7 8 9 A lot

The amount you know about the physically disabled athletes in the 2012 Paralympics.

Not at all 1 2 3 4 5 6 7 8 9 A lot

The amount of exposure you have had to pre-coverage of the 2012 Paralympics.

Not at all 1 2 3 4 5 6 7 8 9 A lot

PERSONAL DATA

Please circle the appropriate answer or use the box provided.

How old are you?

Are you: Male female

What is your nationality?

Non-disabled sample only:

Do you consider yourself to have a physical disability? Yes No

Physically disabled sample only:

How severe is your physical disability?

Not at all 1 2 3 4 5 6 7 8 9 Very much so

Additional measures:

Some studies had additional measures that were not used in the final thesis. These are summarized below and referenced where adapted from published work.

Collective self-esteem (Study 8 [physically disabled people]):

Adapted from: Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18, 302-318.

Cognitive depletion (Studies 2, 3 & 7):

Adapted from: Ciarocco, N. J., Twenge, J. M., Muraven, M., & Tice, D. M. (2013). The State Self-Control Capacity Scale: Reliability, Validity, and Correlations with Physical and Psychological Stress. Manuscript under revision.

Helping behaviour (Study 5 & 8 [non-disabled sample only]).

Partner perceptions of contact (Study 4 & 6).

Personal self-esteem (Study 2 & 8 [physically-disabled sample only]):

Adapted from: Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Power (Self and partner perceptions, Study 7):

Adapted from: Shnabel, N., & Nadler, A. (2008). A needs-based model of reconciliation: satisfying the differential emotional needs of victim and perpetrator as a key to promoting reconciliation. *Journal of Personality and Social Psychology*, 94, 116-132.

Resilience (Study 2).

Adapted from: Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: assessing the ability to bounce back. *International Journal of Behavioral Medicine*, 15, 194-200.

Stereotypes (Warmth & competence; Studies 2, 3, 6, 7, 8).

Adapted from: 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, 878-902.

Trust (Study 4).

Worry about becoming disabled (Study 8 [non-disabled sample only]).

Appendix D: Interview transcripts and additional qualitative questionnaire data (Study 1)

Interviews:

Interview Number: 1

Participants involved: INT1, INT2

Transcriber: Mark Carew (RES)

BEGIN TRANSCRIPT:

RES: Ok this is the beginning of interview 1 (.) um, and this is with two, um, participants. Ahm, ok so thanks for agreeing to do this interview, (.) very kind of you both. um, so to kick things off, ahm, I wondered what characteristics would you both say that society associates with physically disabled people?

INT1: Hmm, that's a hard question really because um, (2.0) mmm I think that as I've said before <referring to RES asking participant if he classes himself as physically disabled prior to interview. His disability poor left side co-ordination due to stroke, isn't always obvious in as many contexts as INT2> (.) [INT 2: I look] <gestures to body> I'm-I'm normal (.), y'know (.) u-yeah I'm normal. Um, so people will just say yeah, cause I'm normal why aren't you doing things, (.) but certainly she <referring to INT2> she uses crutches and has got a limp (.) and (1.0).

INT 2: I also- I also use a wheelchair um, whilst out because I can't walk very far. (1.0) Um, (1.0) [INT 1: Errr] Sometimes we feel- I feel as though people (1.0) think of us um-.

INT1: Staring is one thing isn't it [INT 2: mmm] disabled people get a lot of staring (.) [RES: hmm] y'know doesn't matter if (.) but I keep telling you certainly (.) that uh, she's different because she might have just broken her leg, (.) but when she's in a wheelchair, it's different (1.0) when she's walking it looks like she might have just broken her leg, when she's in a wheelchair it's a totally different thing.

RES: Do you feel-

INT1: It's quite sad (.)

RES: Sad?

INT1: We're all humans after all, doesn't matter whether we've got disabilities or not, we're all humans (.)

INT2: I think what INT1 is trying to say [INT1: It's (.) it's] (.) erm, because I'm, if I sit in a wheelchair I get ignored (1.0) um if I'm standing up than people will see that um I have a disability, but it might be a temporary disability like I've broken my leg because I use crutches [INT 1: mmm] sitting in a wheelchair they tend to ignore me um-.

INT1: It's the old thing isn't it, y'know, talk to the person [INT2: yeah] if a person's in a wheelchair they think they can't, can't hear them at all so they talk to you instead.

RES: yeah.

INT1: cause I push INT2 and lots of people ignore her (2.0) so that's that's (.) ah, it's strange isn't it mmph (1.0)

RES yeah (.) you find (.) you find very different reactions [INT 1: yeah, yeah] between you both [INT1: yeah]. Ok, um, what are you most concerned about when you interact with non-disabled people (.) ahm, that don't know you personally <background noise from cat> y'know like shopkeepers or [INT1: hmm, hmm].

INT2: That wheelchair thing was how he sees it, [INT1: mmm] I personally feel worse when I'm using my crutches (.). ah, the way people look at me is worse, that's how I feel. (1.0). Sitting in a wheelchair, people talk to me much gentler much nicer, when I'm walking with a limp or with my crutches, then I feel there's more (2.0) dunno whether it's animosity or (.). ch- you shouldn't be around y'know that's how that sort of attitude.

INT1: Y'know like shopkeepers, if you talk about big shopkeeping like Tesco's, Asda they're all nice- well not all of them, I get annoyed sometimes because of the (.), um, um, but they're all been taught (.) to be nice to disabled people now, (.) cause the- the- they're like normal, no, tsk er, they're money basically as well. [RES: mmm]. But the little shopkeepers, mmm, I think sometimes it's like a hindrance, s- (.) if you're in a wheelchair they have to get the ramp out, if they haven't got the step, so it's a bit of a hindrance and uhhh, that's my thoughts.

RES: <looking at INT2> what would you think about that?

INT2: Some people can be very very nice and some people not so nice [RES: mmm].

RES: An interesting thing you said just now was that people have been taught to be nice, (.) [INT1: yeah] ahm, do you feel that, ahm, (2.0) can you expand upon that?

INT1: Um, d- it's not that they think disabled people are normal but disabled people have money, as well, (.) ready money so you be nice to disabled people who are gonna come back and spend their money in your shop (.) [RES: yeah]. But if you make facilities for disabled people, I mean like Tesco's and Asda, just an example, if Tesco's didn't have facilities for disabled people you're not gonna shop there but if Asda does, if they've got facilities you're gonna shop there. So they've been almost, it's almost like brainwashing now (.) but as I said, it annoys me sometimes they ignore-

INT2: But isn't that because society has changed [INT1: mmm] and they are accepting more people with disabilities.

INT1: No no, like you said about the Olympics earlier [referring to INT2], if it wasn't for that (.) people- it wouldn't have changed, because of the Olympics people see that disabled people can do things (1.0) hh-now or disabled people were almost in a, in a one, like a separate group I think discriminated even when the government changed the Act for the shops to have ramps and lifts, there is still so many shops that (.) [RES: mmm] that can't- [INT 2: There is] can't facilitate them.

INT 2: There's one in Chatham high street, erm I think it's called (.) Sports Direct um (1.0) I never went in there and then they started decorating, remodeling so I thought brilliant now I can go upstairs! (laughs). I went in there and said "Where's the ladies section?" "Oh it's upstairs" they said. (2.0). I said "Where's the lift?" There is no lift there's stairs! They'd just remodeled it (.) [appears to snort derisively].

INT1: It might not answer your question I'm sorry [INT2: Sorry]

[Indistinct]

RES: Everything is um, fine don't worry, ahm, yeah, I found that interesting. You also said you often feel ignored, can you expand on more on how-

INT2: Sometimes if (.) cause I have a disability um, it could both myself and my husband and they will talk to him. (1.0) I may be a little bit shorter than him but I shouldn't be ignored just because I have a disability. They should talk to me. Cause most of the time I'll give the cash over cause I'm paying for something and they'll return the cash, give the change to my husband. It's my money [laughs]. It was me that made the purchase!

INT1: But other things, this is one example during Bluewater, um we went into Next (.) sorry and able bodied people were walking in and this girl giving catalogues or something [INT 2: Vouchers or something] vouchers or something and we came in straight after the person, able bodied person, INT2 was in her wheelchair and the girl just turned around and ignored her (2.0). So, I thought that was disgusting and I made a complaint, asked

they know “You got some problem with disabled people?” I mean she’s still gonna buy clothes, still gonna look in the shop and they, they apologised. But it happens an awful lot. They see a disabled person coming in a wheelchair or something and they just turn away.

RES: Ok (1.0) so when you have that sort of experience what is your [INT 2: Emotion?] reaction?

INT 1: I, I sometimes swear.

RES: At the?-

INT1: As I’m walking past I sometimes swear. It annoys me so much because INT2 is still a human being she’s no different from you, from the person next door, she’s still a human and (1.0) it annoys me sometimes - I don’t mean to but because it annoys me I swear.

INT2: Under his-he means he swears under his breath [INT 1: yeah, not-.] he doesn’t actually swear at anyone in particular (.) [RES: Ok] he’s just annoyed about it whereas I, I feel more (3.0) I acc- I suppose I accept it now, I’m more, more, I won’t let it upset me so much. When I was younger I used to get extremely upset about it, being treated differently from everybody else. Now I just feel “Oh well”. That’s people [laughs] people are like that y’know?

RES: Yeah, you- I mean you [INT1] mentioned change, um (.) awhile back, you [INT2] say that people are like that. Erm (1.0) Does that reflect where you’re both coming from do you think? I mean, how do you see people’s attitudes towards disability over time?

INT2: Over time um (1.0) [INT1: I think she-] people are a lot [INT1: Sorry] more understanding of disabilities than they were before. But still needs a lot more, they still need to understand and accept us more.

INT1: It’s your generation and the generation after you that are gonna change things, cause we talk about this with our daughter sometimes, I don’t mean to be nasty but, when we were younger people used to say, (.) not black people they didn’t mention black people it wasn’t a thing [INT2: We weren’t allowed] you just used to say, (.) oh I can’t remember [INT2: Coloured]. Coloured! That’s it! Coloured or half castes.

INT2: And to us that was the polite way of calling a person of mixed race was half caste and er, a dark person was called a coloured person. We were never allowed to say black people. So when we speak we say “The coloured person over there” and our daughter will say “No Mum, it’s not coloured that’s very rude” so things have changed.

INT1: From your generation down, y’know.

RES: In regards to disability?

INT1: Yep, yep, you’ll be the ones that change things.

RES: Ahm, so, if you could describe how you would feel in a situation where you are treated differently, um, kind of the emotions you would feel or go through.

INT2: Belittled, I just get upset about it because I don’t feel they should judge me because of my disability, makes me feel very small.

INT1: I feel very upset for INT2, because she is a human being as well y’know, she’s not different, I mean anyone with a disability is not different, they are still a human being, they still breathe, talk, y’know so I’m like the next door neighbour, INT2 is like the next door neighbour, it doesn’t matter. That’s my point of view.

RES: What about if it happened to yourself directly?

INT1: (1.0) I think I’d speak up more, I think.

RES: Speak up?

INT1: Yeah, because-

INT2: I don't think you would, because you get very insecure and your speech, he's got a speech problem, his speech goes really bad, if someone offends him, he goes into himself and his speech is affected a lot.

INT1: Depends, sometimes they brush past us, knock into INT2 and I do say something, especially if it happens to INT2, not to me, but if it happens to INT2, I'd say something like they've got no bloody manners or something, you know cause it annoys me, as I say we're all the same and that is what annoys me totally.

RES: Erm, (1.0) so in some of the situations that you've been talking about would you ever feel embarrassed in those situations do you think-

INT2: Yeah, that's how you feel, if someone looks at you differently or treats you differently from everybody else then you would feel embarrassed and you sort of go into yourself and you can't speak up. Sometimes I-I'm quite a confident person but I lose it. I lose my confidence because of the way someone may look at me or if someone whispers something then I feel they are talking about me and it makes me feel a bit paranoid I suppose.

RES: Even though (1.0), in that situation you mentioned when somebody whispers, are you always sure that somebody is talking about you or-

INT2: Hmm, I think 70%-80% of the time they probably are talking about me and not necessarily in a nice way but er, the way I cope with that is to say I am as good as you are, I try to push the negative side of it away and think positively about myself because I know I haven't done anything bad or I'm as good as they are. So (.) I try to push the negative thoughts away [RES: Ok] Otherwise I'd feel really down about things.

RES: [To INT1] Is that how you see things?

INT1: Yeah yeah basically yeah. Erm, [INT2: As a disabled person is that how you feel?] Lots of things haven't happened to me because as I keep saying I'm normal, I'm normal [INT2: So he gets treated quite normally]. My façade.

INT2: Because he looks normal, he gets treated as a normal. [Indistinguishable]. As normal as you get, rather than a disabled person, he gets treated as a normal person because you can't see his disabilities as much. Mine is more evident so people, um, I've experienced a lot more [RES: mmm] and when he notices it, it really angers him.

RES: So yeah, when you do experience something like that, how do you react?

INT2: Mmm, if I can't, if I can't think positively because I've felt that bad then obviously I'll cry and try not to erm, put myself in that position again because it's all made me feel bad maybe cry or feel shy about things, insecure. [INT1: Knocks her confidence]. That's the one, my confidence goes so I don't want to put myself in that position again, I don't want to go to that same, perhaps a shop or a restaurant, I don't want to put myself in that position again so I try not to do that again.

RES: And to what extent do you think non-disabled people can understand what it's like to live with a disability?

INT2: I don't think they can. [INT1: Mmm]. I don't- unless they have a sibling or a child with a disability I don't think other people seem to understand. In fact, erm, my sister and my brother although they lived with me whilst we were at home with my parents, I was involved in, uh, sports, disabled sports, Olympic sports, all sorts of things. And just recently my sister surprised me when the Paralympics was on um (.) she made a comment about wheelchair basketball. I used to play wheelchair basketball, I've won lots of medals and things and my sister said "Oh it's amazing what some people with disabilities can do you know, all these people with disabilities". And I said, "well don't you remember I was in basketball, disabled basketball, wheelchair basketball, Olympics,

swimming, I had loads of medals.” She said “Oh, I remember you saying something about that.” (.). But it was a nothing y know, and I thought “Wow that’s my sister y’know” (.). [RES: Mmm, so-] So how would someone that’s able-bodied outsiders- y’know.

RES: So you feel that close contact is important to understanding. Would you say that close contact enables you to understand?

INT2: It helps, it enables you to understand, but not to the extent that another disabled person can understand. For instance, I can say anything to a person with a disability regarding how I feel and they would understand that but an able-bodied person I don’t think understands. I don’t think they totally understand.

RES: Ok.

INT1: Its true, its true. Erm, (1.0)

INT2: They can’t relate [INT1: They can’t relate that’s it yet] they can’t relate um, what you re feeling because they re not in that situation.

RES: Ok, that’s actually all the questions I have [INT2: Is it? Wow!] I don’t know if you want to go back to any point?

[Indistinguishable]

RES: Ok, I will stop the interview here and debrief the participants.

END.

Interview Number: 2

Participants involved: INT3

Transcriber: Mark Carew (RES)

BEGIN TRANSCRIPT:

RES: Okay, this is the beginning of interview two. So, to start with, I would like to thank you for agreeing to do this interview [INT 3: That’s alright] and um, my first question is what characteristics would you say that society associates with physically disabled people?

INT 3: Um, I think (.) they’re not too sure about you. They are very judgemental maybe. Um <laughs>

RES: Can you expand more on what way that they judge?

INT 3: Um, I don’t think that they understand the differences so (.) they sort of think that cause you’re disabled you’re all the same, um (1.0), they’re quite shocked sometimes when, sort of, you talk to them, um, dunno it’s hard <laughs> [RES: <laughs>].

RES: Yeah, don’t-don’t worry, [INT 3: <laughs> Alright] you can have a think and we can always stop if you need to. Yeah, you said, um, you said that (.) they think you are all the same, I mean, in what way, um, what do they perceive are the similarities?

INT 3: Um, I don’t think they- (3.0) <laughs>. They speak above you, like, say, if you are with your Mum or your Dad, they don’t- they ask them questions rather than you cause obviously they don’t know that you

understand or um, (3.0) they don't always think that you're- (1.0) if someone is physically disabled I think they also think that someone is mentally disabled. I'm not sure, I don't wanna say anything wrong.

RES: I mean, nothing is wrong in this, there is no right or wrong answers, [INT: No?] it would be great if you could just say what, y'know, your own instincts are or y'know (1.0) your opinions. Yeah (.) another thing- interesting thing you said is that non-disabled people are not always sure. Can you expand upon that a bit more about why they might not be sure?

INT 3: Erm, maybe because they haven't been exposed to- to you- disabled people um, sometimes you get little kids ask questions because they are not used to seeing people in chairs or with a disability, they're not, they avoid you, um, (4.0) I dunno.

RES: Mmm. So, (1.0) so how far do you think somebody- a non-disabled person- can understand what it's like to be physically disabled?

INT 3: I don't- unless they know someone who is disabled I don't think that they can fully understand, unless (.) you explain to them or- see I don't mind if people come up to me and ask me, like, kids, why are you in a chair, I don't mind that because I find, it's not rude, they're asking, because they don't know so (2.0) it's better from them learn that different things rather than ignore.

RES: And so, you feel that once-once they learn, they can understand?

INT 3: Yes, they can be more accepting.

RES: Accepting. Yeah. How far do you feel that understanding goes? Y'know if there was a gauge, zero percent, 100 percent?

INT 3: I don't think there would be 100 percent, but it might- (4.0) they are learning, so it might- (.) they might not label you, everyone, as the same thing. [RES: mmm] So, they would-, this is so hard to explain-, um, maybe (4.0) they wouldn't be so scared to be around someone else, they wouldn't avoid you. I dunno, if it was on a scale 1 to 10, it would be 3.

RES: Three [INT 3: Yes] Starting at zero?

INT 3: Yeah, zero is like avoidance, they totally don't understand [RES: Yeah]. Ten is, like when, you- you aren't bothered by someone's disability. A three, sort of, they wouldn't be shocked.

RES: Mmm. And you mentioned the feeling of scared, that, um, non-disabled people might experience? [INT 3: Yeah]. Can you expand more on upon that, why they might, um, be scared?

INT 3: Because- because they are not sure of your actions. Um, because someone that's perfectly able kind of knows actions of perfectly able whereas if they've got a disability, they're not sure how they're going to react when they talk to them. Gonna sort of, answer the right way or, they're not- they don't know-, they're (2.0) reactions, I can't, yeah <laughs>.

RES: Yeah, I understand. Um, so, these-these perceptions that non-disabled people, uh, have, how accurate would you say they are of physically disabled people?

INT 3: I don't think they are very accurate because (.) we're all different and (4.0) we're-it's <laughs> although we're disabled we're like only humans. They're different, they're not the same, so why is it us differently? [RES: mmm] I don't know.

RES: So, um, (1.0) do you have an idea about (.) what the root cause might be that why non-disabled people may think disabled people are all the same?

INT 3: I think it is knowledge. Then, that they are not brought up- see I was brought up in a normal primary school where (.) the kids didn't realise that I was any different, um, but then when I went to secondary school, I went to school where they- there was a physically disabled department, but because the kids (1.0) were from different areas, they weren't used to- like people with disabilities and stuff, so they were a bit wary of you, even though you were in a normal school, they're wary because it is something different they don't- they don't know (1.0), um.

RES: And so, these-these perceptions that non-disabled people have, how conscious are you of them in your daily life?

INT 3: Um, (1.0) very conscious. Um, my confidence is growing but it's talking to strangers, but I find it very- (.), I'm very worried that (.) I'm gonna be an annoyance to them. Um, which is (1.0) again, they don't understand that really I'm normal. I shouldn't really say normal but (4.0) yeah, just an annoyance.

RES: Can you expand upon more on why you think they might see you as an annoyance?

INT 3: Um (2.0) Again, it's because I think they all think disabled people are the same so (2.0) like- like when we got to work in groups and we had to put ourselves in groups and I didn't want to pick my own because I felt I might not fit in. Why have they got to have me? <laughs> Which is because, um, I'm not very confident so I was- I was scared.

RES: So, is there a particular group of people that, um, that you're concerned about interacting with for the reasons that you mentioned?

INT 3: Uh, (5.0) not really, it's just strangers. It's because I'm not sure how they're gonna react to me. I think I have the same, sort of, feelings as they do, they're not sure how I'm going to react with them, so- and I'm not sure how they are going to react to me.

RES: Can you- this might be difficult- expand on, what the source of that uncertainty is?

INT 3: My uncertainty?

RES: Yeah. Your uncertainty.

INT 3: Um, (7.0) that's, uh (5.0), I don't know whether it is confidence. I'm not sure. I don't know.

RES: Okay. Um, so, if you- if you were to imagine yourself in a situation, where a non-disabled treated you differently because of your disability, how would you feel in that situation?

INT 3: Upset. Um, if I'd probably find out, try and speak to them about why (.) they were treating me differently, um, (1.0), uh, and then if it was just cause they didn't know about my disability then I would probably try and sort of explain to them about it, um, (1.0) but yeah probably I'd probably feel upset, probably feel like, kind of like being bullied.

RES: How, um, how far would you say the other person's intention would affect the way that you feel?

INT 3: Um, (3.0) I'm not sure.

RES: Not sure?

INT 3: No.

RES: That's okay. We can [INT 3: Sorry] move on. No, don't be sorry, it's okay. Can you- can you expand more upon the source of why you might feel upset? And I think you mentioned- compared it to being bullied?

INT 3: Um, (2.0) I think (2.0) I think it depends on the situation of how- how they've uh, sort of, treated you differently. Um, (7.0), I don't know <laughs>.

RES: <laughs> Well, can you give an example of, different situations?

INT 3: Being singled out, like, if-if there was several, um-, yeah, if you were put into groups but there was several people that were disabled, and they were put all in the same group. I'd feel like I'd been singled out (.) which is -they'd put you all together, whereas you might all have worked with them. So, it's kind of like they're singling you out.

RES: And that would make you feel, um, upset [INT 3: Yeah]? That sort of situation. Um, (2.0) in these sorts of situations, um, would you ever feel embarrassed?

INT 3: Yeah. Cause I was different. Because they were almost, um, pointing out the fact that you're different so (1.0) they still put you together.

RES: And- this might sound like a strange question- but, why would the fact that you're different make you feel embarrassed?

INT 3: Um, I think because it's highlighting the fact, whereas if you were just put into any other group, you're kind of- it's not highlighting the fact that you're different, so, it's sort of maybe embarrassment and upsetting.

RES: S-so, who does it highlight the difference to? (.) Is it yourself, is it somebody else?

INT 3: A bit of both. Because- <laughs> this probably sounds really stupid but, although I'm in a chair, I don't actually see myself in a chair, it's kind of odd. I don't know, I think because I've been in it all my life, it's sort of- it's no different to me. Um, so when someone sort of singles you out because you're in a chair it kind of reinforces that fact and yeah, it's upsetting.

RES: So, yeah, you mentioned that phrase "the chair", is that something that, uh, you find non-disabled people do do, single out "the chair"?

INT 3: They see the chair, not you. That's a barrier (.) to them. It's- whereas I think if you remove the chair there would be no problem.

RES: So, (1.0) how far are you equating the chair to disability, are you perceiving as a separate thing- in the minds of non-disabled people?

INT 3: Um, (7.0) I think it is the disability, I don't know.

RES: Okay. Th-these perceptions and stuff, um, how far do you think they can change over time?

INT 3: Um, (.) I think they could change over time. But, in my eyes society doesn't help with its changing people's perceptions.

RES: In what way does it?

INT 3: Because, they've, from what I can sort of tell myself, from like looking at news and media and stuff, that they've-like with schooling, they are putting you all in one place. Whereas you're not being integrated, so people aren't (.) getting used to (1.0) being around disabled people, so they're being put in to, sort of, their own schools, so they're not being integrated, so it doesn't-doesn't help either side. Doesn't help people in chairs to get used to (2.0) interacting with able-bodied people and it doesn't help the other way around either.

RES: And, would you say, this is a factor, in the kind of interactions that you mentioned?

INT 3: Yeah.

RES: So (1.0), in the type of way you mentioned feeling during an interaction, how, um, far do you feel you share that with other disabled people?

INT 3: Um, (3.0) I think that they do in a way. Um, (2.0), well all the disabled people I know sort of feel the same in a sense I think.

RES: Have you ever spoken about it with them?

INT 3: Yeah. Um, (3.0) I think they would agree that they're not integrated enough in-within, sort of, society I think.

RES: Um (1.0) and you mentioned you would try to explain, to people- or rather you would ask why they were treating you differently [INT 3: Yeah]. Um, how common would you say it is for you to react like this, uh, after a situation like that?

INT 3: Um (4.0), not very common, because (3.0), uh, it's- I try and push myself so I'm not put into that situation. So I try and sort of (4.0), um, (4.0), yeah, trying to show that I shouldn't be sort of singled out, that I want to be with everybody else rather than- (3.0).

RES: So, can you give an example of how you might push for that?

INT 3: Um, I can't think of anything.

RES: Okay. And, so (3.0), your reaction roughly stays the same, in these situations, if it does arise then it stays constant-you do go to explain or ask why?

INT 3: Yeah, I would. Um, (3.0) I'm just trying to think of a time when I might have been singled out but it's, um- (14.0), I can't really think of any.

RES: That's okay! Um, so, (1.0) why do you think you would react, um, in the way that you do, rather than, uh, behaving a different way? What do you think the, kind of, source of that is? What's going through your head when you react like that?

INT 3: If I'm treated differently.

RES: Yeah.

INT 3: Because, I don't see myself as different. Um, (6.0) I don't (.), yeah, I just don't see myself as different so why should I be treated differently? It's- uh, (6.0).

RES: In-, you mentioned feeling upset upon being treated differently. Once you have asked people why and explained to people, does that then change the way that you feel?

INT 3: Yes, it probably makes me feel a bit happier that, I'd almost (4.0) perhaps enlightened is sort of the right word, that I'd almost (.) opened up their minds, to possibilities that, not everybody is the same.

RES: And (2.0), do you feel that that opening of the mind, has a lasting effect?

INT 3: I'd hope so. I hope that they would perhaps, learn from it and not treat everybody with the same sort of attitude.

RES: Okay. That's all the questions that I have. Um, I don't know if you wanted to go back (.) to any of the things that we talked about?

INT 3: I don't mind, do you want me to?

RES: Um, I would quite like to hear an example about when you've been treated differently but, obviously, if you find that too hard we can completely leave that.

INT 3: I don't know if this is along the right lines, but, um, I went to Florida, um, in August last year and I was allowed on all the rides, even in my chair, um, and then I went back in April, and because (1.0), s-I don't know, something to do with health and safety I think, it was a Harry Potter ride, um, and people had been put in hospital, th-I wasn't even allowed on the kids rides, even if I sat in my chair, because I had a head rest. But it was - they were like rides for toddlers. So, I wasn't even allowed on them, because I had a headrest and it was -, I don't know if that's along the right lines?

RES: No, no, everything is good, there is no right or wrong [INT 3: <laughs>]. So, that situation made you feel?

INT 3: Upset. Um, (2.0) annoyed, um, (1.0) it was - they didn't give you any straight answer, um, and (1.0) but it was because I had a headrest, because they said "Well, obviously you can't enjoy", (1.0) but you have to have a headrest, so it's like (1.0), that's sort of (2.0).

RES: So, they had assumed something? [INT 3: Yeah!] Is that right?

INT 3: Yeah, they all treated - because every - because you're in a chair, they assumed that (3.0) you were like (2.0) really (1.0) physically disabled. Yeah.

RES: So, how did you react to that?

INT 3: We tried to explain to them. But they wouldn't. They were just like "No". And it was upsetting because it kind of ruined the whole <laughs> day and, (2.0) there was no real answer. If, perhaps - perhaps they would allow you to explain then (1.0) things might have been different. But they didn't.

RES: But it had a long lasting effect? Something you've thought about the rest of the day?

INT 3: Yeah. Yep. It ruined the day basically. Then, you sort of felt they you didn't wanna be there, cause obviously they don't want you on the ride, so -.

RES: Is that a common feeling if you do encounter situations, that it has a long lasting effect for the rest of the day?

INT 3: Yeah, I would say so. It ruins it. It's - again, it brings to the forefront that you are different.

RES: Would it affect the way you behave in future, similar situations do you think?

INT 3: Um, (4.0), I don't know, because I wouldn't go back.

RES: Okay. I think that's okay, what I wanted, thanks, that's great, thank you for giving me an example. So, um, I am happy to call time on the interview unless there is anything else you want to discuss?

INT 3: Not that I can think of.

RES: So, um, I will now stop the recording and debrief the participant.

END.

Interview Number: 3

Participants involved: INT4

Transcriber: Mark Carew (RES)

BEGIN TRANSCRIPT:

RES: This is the beginning of the interview. Firstly, thank you for agreeing to do the this-this interview [INT 4: That's alright]. So the first question I would like to ask you is what characteristics do you, um, do you feel that society normally associates with physically disabled people?

INT 4: I think it's very, um, (2.0) I've been in some awkward positions (1.0) and ironically by other disabled people. Um, and I think also there's a feeling, um, with physical- with um, so called able-bodied people, they must help-help you, when in fact you are pretty able to things (.) by themselves-by yourself. They can also sometimes (3.0) um, want to take over, um, want to make decisions for you, (.) and in fact I don't want people to make decisions for me.

RES: Um, do you that they make decisions for you is connected to this helping aspect?

INT 4: Possibly, yes, possibly. Um, possibly, they hadn't come across a disabled lady who happens to be a very (.) independent lady, um, and it's a bit like the-the um, (1.0) society (1.0) culture of helping, they've got to help you.

RES: Hmm. Yeah. (1.0). And do you see these perceptions as very common across people?

INT 4: Yes. They are common, I can-can tell you about a funny story. I was up-going up to London (.) and I'm (1.0) perfectly able, I know where things were and I wanted to catch the bus (1.0). Lady said "Where are you going?" I said "I'm catching the bus" and I knew exactly where I was had to go <indistinguishable> Victoria bus station and she automatically took my hand and said "I know where you want to go" and we sort of spent half an hour trying to find this bus-bus stop which I knew where it was [RES: yeah] but I suppose I sort of wanted to see how far she (.) was going to-was going. [RES: yeah] Um, there.

RES: Um, in situations- have you had many personal experiences like that?

INT 4: Not really, not lately. [RES: Okay]. But people tend to think that because you're disabled you don't know where you are going (.) and- and- it can get quite funny in some ways [RES: mmm].

RES: In situations like that, where um, somebody has made um, an assumption how has that made you feel?

INT 4: Useless. And sort of degraded. Yeah. They- I've feel always that they-they want to always (1.0) be higher than you are and they shoot me down.

RES: And can you expand more upon that, um, what you just said about being higher?

INT 4: Yeah. They-they tend to think that you, y'know, that you definitely don't know anymore than they do sort of thing and they wanted to take.

RES: They wanted to take?

INT 4: They wanted to sort of- (1.0). I don't know whether they wanted to be power over you or whether they are just genuinely don't know how to treat you.

RES: Um, and would you ever feel embarrassed in situations like that?

INT 4: Yes. Yes, yes. Because I feel that I just (2.0) that sometimes they want to make a big thing about it and I just want to, sort of, just gently blend in.

RES: How-how far does a person's intentions, um, affect the way that you feel?

INT 4: Sometimes I get frustrated, I want to scream sometimes. But sometimes I've thought so (2.0) experienced- what's the word? Experienced. Something which happened to me a long time ago (.) I was taking part in a community programme, this was in the eighties and I came with up with the project and there was this <indistinguishable> and I came up with the idea, um, working with-working beside young people, t-the- a guide for the disabled in [local town] and just mentioned it to somebody and (.) and an information centre which we had in [town] for disabled people. And he (.) bounced off the project quite quickly (.) um, and I spoke to somebody <coughs> in um, what used to be the Spastics Society arranged a meeting and to my horror, though the project was my own idea, we had a meeting with the community programme manager and I was told to go out of the room and make the tea! [RES: mmm] And I found that really really upsetting and degrading and I feel even now disabled people can't accept other disabled people. How can we-we change society?

RES: So in this room it was-it was other physically disabled people?

INT 4: Yeah. [RES: Yes.] Yes. You know. And I spoke afterwards to the appeals officer for Scope who was involved with the guy and he just said "Oh, that was discrimination". But yeah, why didn't he follow me out? Why didn't he say "This is [INT's] idea, she can- (1.0) she should stay?"

RES: So-so in a sense you are saying that there are shared attitudes for [INT 4: yeah, yeah] non-disabled people and physically disabled people?

INT 4: This person who sent me out, ironically, he was disabled himself, [RES: mmm] y'know, and when we-we finally got the guy going I enjoyed the work going along interviewing managers about access to their shop, but again the supervisor they chose was a deaf person. He was a Glasgow regent and he actually wanted to sack me. He was actually trying to find everything (1.0) [RES: mmm] to sack me. And yet, I got on okay with the shopping managers, I wrote everything down and everybody else could understand my writing but he was ironically, he was saying that I found it difficult to communicate. But yet, when I asked shopkeepers they didn't (.) they didn't find it hard to communicate with me.

RES: Would-would you say you experiencing more discrimination from, I think you said, physically disabled people rather than non-disabled people?

INT 4: Yeah, I think it's that it's different, there's a difference there.

RES: Can you expand upon the difference?

INT 4: I think with disabled people, it's more like we don't want help or a hand, I think there's a hier-hierarchy of disabled people and unfortunately, um, (2.0) with able-bodied people um, (2.0) with particularly the young-young able-bodied people, um (2.0), I think there is generally, an ignorance, they find it difficult (2.0) they never- (1.0) particularly in my age group they- they find it difficult to know what-how to interact with disabled people [RES: mmm] or particular disabled people.

RES: Mmm. Um, so, if you had to interact with a non-disabled person who, um, did not know you personally, is there anything that you would be concerned about?

INT 4: Not really. Just that, if I am speaking properly. I know that sometimes if I am tired my speech would get worse or something but yeah.

RES: So-so these perceptions, different ways of treatment you are not worried about them in general?

INT 4: Not in general. But I suppose (1.0) that um, (2.0) there are some situations which I do find it quite, um, worrying.

RES: Would you mind giving an example?

INT 4: Yeah, um, if I'm ill and had to go and see the doctor, um, again, my experiences, I-I-are usually good experiences, and they tend to treat-, but-but I have had one who has-has not been so patient, y'know, and I usually make it known that I am a bit slow because I am generally not very well or something. [RES: Yeah] No.

RES: Um, and if say, somebody does react in a way that you don't want because of your disability [RES: Yeah] (1.0) what-what would you do? I mean, how would you react to them then?

INT 4: Um, it's difficult because I had one-one-one-um, with the GP who I had never seen before and was a bit sort of (-) I don't know whether it was <indistinguishable> or what it was but I went back to see the results of the scans on my throat and he kept on saying "There's nothing there, what do you expect?". That's the thing now y'know. And I thought "I'm in pain, I can't sleep, y'know, and I just couldn't bring myself to speak to him anymore. So luckily I made an appointment for a senior doctor and we got on okay.

RES: Yeah. And can I clarify, do y-[INT 4: Certainly] do you think he was reacting like that because you were disabled?

INT 4: Not sure whether, it was because I was disabled or not. [RES: mmm] I'm not sure.

RES: Okay, and um, how far do you think that non-disabled people can understand what it's-it's like to be physically disabled?

INT 4: I'm not sure. (4.0) That's a very hard question, really. I don't think they can really understand what it's like. I don't think-I think some able (-) -many able bodied people are tol-tol-tol-tolerant [RES: Okay] towards us. But I don't think they really understand and I'll go and say that I don't think my family really understands (-) what it's like, y'know.

RES: Do you think that non-disabled people can be helped to understand in any way?

INT 4: I think we-we try to help them to understand and (2.0) but they- I'm not sure if we can actually help them to change their perceptions towards us.

RES: Mmm. Um, do you think that the Paralympics have any effect?

INT 4: Um, I think so. But how long will it last, y'know?

RES: And just to go-bring the topic back to something you said earlier, you were talking about the hierarchy of disabled people and I just wondered if you could outline that hierarchy, like, who is at the top and who is at the bottom and how do the levels differ?

INT 4: I think there is something at the top. Um, a person who is able to, um, who is very articulate, who probably (1.0) is less (2.0), people who haven't got a speech problem. And I think they tend to use (1.0) us (1.0) and other disabled to (2.0) as <indistinguishable> as a second social class really. Um, how can I explain it? They tend to, um, (1.0) I think it's don't do what we do but we tell you what to do I think it's- it's I think.

RES: And (2.0), that- how does that hierarchy relate to non-disabled people? D-do you think they are aware of it or they respond to it?

INT 4: I'm not sure. Um, I think often that it's always the people who (1.0) which a society like Scope think there role models and the role model might be that they can drive (2.0) and so you've got to learn to drive and that (3.0) they don't-they just want (1.0) people to be um, role models so that the other disabled people should, y'know.

RES: Can I clarify that this is a role model of what a disabled [INT 4: yeah] person [INT 4: yeah] should be like?

INT 4: Yeah. Yes.

RES: So (.) in a sense (1.0) you're saying that a role model of what a disabled person should be like is somebody that can achieve (.) something?

INT 4: Yes. Can achieve something. And they don't sort of think about, um, achievements somebody got. This may have been more-more-more of a- (1.0) more opportunities, may have been to a good school, had parents who are (1.0) um, more- got more (4.0) higher class. So they could achieve these things.

RES: So n-non-disabled people's idea of a disabled role model [INT: Yeah]. How do you think that that affects things when non-disabled people interact with physically disabled people who do not meet these role model expectations?

INT 4: I think-I think sometimes- (3.0). I mean it can work the other way. It can work the other way. I've been in situations where-where it worked the other way. Sometimes you think to yourself "Oh" (2.0). Um (1.0), it can be rather silly.

RES: Sorry, can you expand on that, w-what you've just said?

INT 4: The-the-they don't see you as a person. They see you as (.) they think you should be.

RES: Right ok. So, um, your saying that this is a reaction to disabled people [INT Yeah, yeah] who meet the role models criteria?

INT: Yeah, yeah, yeah.

RES: So (2.0)

INT 4: It can make you feel really- it doesn't with me I think I am a strong person, but in the past, makes you rather inferior [RES: mmm], if that is the word [RES: mmm, mmm].

RES: So, um, is that kind of- are you aware of this every day or is it something that comes out in certain contexts?

INT 4: No, it comes out.

RES: In certain contexts?

INT 4: Yeah.

RES: And how do you feel when you become aware of that perception?

INT 4: Makes me feel, oh, sometimes upset because they think you should be like them.

RES: Yeah. (2.0) Why-it may sound like a strange question, but why-what's the underlying reason that that perception that you should be like them you upset?

INT 4: That they don't see you as a person. What they think you should be. [RES: Right, okay, okay]. People don't see you as an individual [RES: Okay] There's- there's what y'know-

RES: And do you think-do you think this is an experience shared by many disabled people?

INT 4: I am sure it has done, I am sure. [RES: Okay]. I'll take you back to, um, school, what I mean about this hierarchy of disabled people. We had like a-a-a-an, it would have been, common room, which is like a storage cupboard [RES: Yeah] and it still sinks in- I've still got this memory that, on, we've not got anybody of that class in, and I was in the low class anyway but I kept quiet but sometimes I think "Why?" y'know and sometimes when I went to school, what, 20-odd years ago, there was still this thing, I said "Hello" to somebody

and she just wheeled herself away from me y'know [RES: mmm]. I mean I used to help change her sometimes because she- I was in an intelligent class I think she didn't want to know me. [RES: mmm] I don't know why.

RES: So you're unsure of why?

INT 4: Yeah, yeah.

RES: Um, I've asked all the questions, I want to ask but would you like to go back and talk about anything that we've covered in the course of this interview? Is there any subject that you want to elaborate more on?

INT 4: Um, (2.0) I don't think so. Dumno.

RES: Okay, no problem, that's fine! We can stop the interview now [INT 4: Okay] if you're happy? [INT 4: Okay] Okay, perfect, um, this is the end of the interview.

END.

Interview Number: 4

Participants involved: INT5

Transcriber: Mark Carew (RES)

BEGIN TRANSCRIPT:

RES: Okay, so um, thanks for agreeing to do this interview [INT 5: That's alright], um, for the first question, I was wondering, what characteristics do you think society normally associates with physically disabled people?

INT 5: Kind of a lot of people have perceptions, very negative perceptions of people with physical disabilities. They don't like to think of (.) them as being different or abnormal and as soon as they find out you have something a little bit wrong with you they sort of (.) re-evaluate or take a step back, umm it can be very negative. In other ways, since the Olympics it has been quite positive and a lot of people have been more aware of what has been going on and things are more exciting.

RES: Can you expand specifically, um, on how things might be negative?

INT 5: Uh, sort of get an impression that people are looking down on you at times and like you can't do things, um, because you've got something wrong with you, when it's not the case and you-you know your own capabilities and you know how capable you are of doing things.

RES: Um, and you believe that this perception has changed since-

INT 5: I think people are more aware since the Paralympics which means people's perceptions have been noted to change and how well we did in the Paralympics and how well publicised it was, um, people's perceptions were more (.) accepting.

RES: Can you-can you expand on the change? So more accepting and...

INT 5: Yeah, so more accepting in society, more willing to know and learn about other people.

RES: Okay. Um, and how conscious would you say that you are of these perceptions in your (.) daily life?

INT 5: Uh, depends. Um, when I go into schools for my teaching practice I'm very conscious of what and when I should tell the teachers and stuff-not the children cause if they ask me questions I'm more than happy to (.) explain what's wrong or whatever but it's more [RES: Okay] an adults perceptive-perspective.

RES: Do they ever ask you questions about yourself in particular or-

INT 5: Adults or the children? [Laughs]

RES: Sorry, uh, well, both really.

INT 5: Well people ask me all the time and I am more than willing to answer and tell them what it is and anything that's wrong or [RES: Okay] different.

RES: And so, these um, perceptions, that you mentioned, um, how accurate would you say that they are, how well do you think they represent (.) physically disabled people?

INT 5: (2.0) Don't understand, sorry.

RES: The perceptions that you mentioned that society [INT 5: yeah] have (.) of physically disabled people, how accurate would you say they are of physically disabled people as a group?

INT 5: Not very. Everybody's different and everybody's unique and deals with things in a different way so (.) you can judge me and say because I am half-blind that I can't do certain things but I've just dealt with it my whole life and adapted to it and don't see it as a problem [RES: mmm] so (2.0) it depends per person. You can't lump everybody together as a group [RES: mmm].

RES: Okay. Um, and (1.0) when you interact with non-disabled people who don't know you personally [INT: mmm] is there anything that you are worried about, uh, in these interactions?

INT 5: Not always, um, some of the more physical sides of things like I'll do an assault course, I'd do scouts and guides and stuff, I would wonder how I am going to be able to cope and grab things and what not but I sort of just take it how it comes and see what's going on I don't immediately think "Oh they are judging me" for something or whatever, I just sort of (.) see what they say and what not.

RES: Can you expand (.) more upon that, on the way that you have feel that they might judge you or what they might say?

INT 5: It's annoying when people seem to pity you and they say "Oh, don't worry if you can't do it, it's fine, you-you can go do something else that's way way-. I want to go "No, I am going to do the same thing as you, just in a different way of doing it. So, this sort of (.) way that people come across almost as pitiful and sympathetic and you're like, they completely change their way of dealing with you as if "Oh it's okay you can't do it, it's fine" and you sort of come back at them and go "well, I can do it, I will just do it a different way" or it might take you a bit longer but, ahm, I'll do it just the same. It's just annoying.

RES: What do you think the root of that pity is? Why do you think people are displaying that pity?

INT 5: It's almost like a (1.0) they don't know how to- they don't-because they can't understand what you are going through and what you have got they sort of forget and get scared that they are going to offend you, or they get a bit scared that they are going to- there's things you can't do and it's almost like they are rubbing it in your face that you can't do it, whereas I'm just like "Fine, I've got my own way of dealing with it", they just get a bit worried that they're going to, um, (.) say something to upset you or say something- they sort of start to tread on eggshells around you. (1.0) It's a bit weird.

RES: Is there any particular groups of people that you, um, that you worry that when you interact this will happen?

INT 5: Not particularly. I do get a bit worried going into schools, for interviews for proper jobs, that they sort of just have a look and say “Well, you know, I’m not too sure, but (.) that’s all about displaying the information and when so... [RES: mmm].

RES: Ok. And have you- have you changed the way that you’ve dealt with these perceptions over time?

INT 5: I- (1.0) I don’t know, I’ve always been brought up to (1.0) be- I’ve always been treated normally by my parents, I’ve got two younger siblings and they treat me no differently to any of them and it’s just been brought up, yeah you’re a bit different- (.) but you do it your own way, you find your own way of doing things, (.) so I think I have just dealt with everything individually as it comes and sort of I don’t go out and say “Oh (.), I have this or something, if-if there’s a problem and it occurs I’ll mention it to someone or if I need to I’ll just adapt it as I go.

RES: Okay. And say there was, uh, a situation in which you did notice somebody was treating you differently because [INT 5: yeah] of your, uh, disability, how-how do you think that would make you feel?

INT 5: Does make you feel a bit upset sometimes that they’ve changed this whole perception of you and they’ve just changed the way they act around you. It can be a bit (.) bit upsetting, but I just carry on as I go and try and prove that can still do the same things. [RES: mmm]

RES: Would you also, um, ever feel embarrassed-[INT: Yeah!]

INT 5: Yeah, can get embarrassing sometimes (1.0) um, (2.0) not because I necessarily can’t do things or whatever, it’s just the people might look at me differently or see me in a different way. [RES: mmm].

RES: If it’s okay, would you mind giving an example of [INT: Sure!] a situation in which-

INT 5: Um, cause I’ve got incontinentia pigmenti and part of that is teeth difficulties, um, I’ve actually just been diagnosed with hypodontia, which is a severe lack of teeth, hence the braces and stuff and so with I don’t actually have sixteen- sixteen missing adult teeth, which just wouldn’t come through as they never formed, um so there is a lot of gaps in my mouth at the moment and eating is- can be a problem so eating in public can be quite embarrassing, so when I’m with my family it’s not so bad but if I’m out with other people and friends and what not it can be a bit awkward and it can be a bit “Oh, (.) can they- can they notice or who else around is noticing and it just makes you feel a bit, a little bit awkward [RES: Yeah].

RES: And do you find that people have treated differently because of that?

INT 5: Not with my family, my friends are very understanding and accepting of it, um, (1.0) and I’ve just-I don’t- I try to ignore everybody else in there so I don’t see what they’re (1.0) seeing or things [RES: mmm] so...

RES: Okay. If, um, if you did notice someone treating you differently how would you react- you mentioned ignoring-

INT 5: Yeah, just leave them to it. Let them think what they want to think.

RES: Is that a-a typical reaction?

INT 5: Yeah, let them think what they want to think. When I was younger I would have been embarrassed, and perhaps gone off somewhere else or something or just left them to it, but I just think “Well, let them think what they want, I’m nearly 22 now and well can deal with it so...

RES: This has been a change as you’ve been-

INT 5: I’ve got more confidence as I’ve gotten older, more aware of (1.0) things and more aware of myself and (.) it’s almost like you don’t care what they think anymore [RES: laughs], ah, you know, I’ve been here long enough you know, it’s fine.

RES: And how far would you ever seek to change perceptions via actually confronting?

INT 5: I'd love to make people more aware. My IP's a (.) very very rare condition and there's not many people at all with it so I'd love to make people, big strive to get everybody together and everybody to be more aware of what's going on (.) around it [RES: mmm] and- I wouldn't like to perhaps be in the public eye about it but I would like people to (1.0) have a bit more (2.0) knowledge of it at the same time.

RES: Is it something that you do in interactions, if you do notice a kind of a misperception, do you ever say, "Hey!"?

INT 5: Yeah, it's normally-it's normally the children who sort of notice or with my teaching practice it's quite interesting. I was counting my reception class, I-I was counting "One, two, three, four, five" with my hand facing forward and "five, six, seven, eight, nine (.) well, ten, with my hand facing back so my hands were facing the right way because I can't turn my my right wrist [RES: Yeah] so, the children in the class all being four-five copied me exactly [RES: Laughs] and the teacher sort of gave us a bit of a weird look "what are doing with your hands" and I explained to her afterwards and-, but they finally just adapted to it, and it was quite interesting, it was a laugh in the end I sort of said "Oh, you know, I've got this"- . You don't have to say much because they're five [RES: Yeah], "I can't do what you can do but you can still copy me.

RES: Do they still copy you?

INT 5: Yeah, they do [RES: laughs. That's cool!] they came to another teacher, the teacher took the class, so half of them went like that [INT 5 demonstrates movement] so it was quite funny [RES: That's cool!]. It was quite sweet actually. [RES: Yeah]. And d-you find the older ones have a little question, I had um, (.) sat doing some group work on a table with one lot of Year 6's and hmm hmm they get a bit angsty at that age and one goes [imitates an accusatory tone] "What's wrong with your eye?!" and I just sort of said "Well, you know, I have this, I've had this since birth and I've done this and I'm half blind as well as that but it doesn't stop me paying attention to what you do or if you've done your work, or if you've finished it!

RES: Excellent, excellent! How far do you think intention plays a part in, how you react or- whether somebody is intending to kind of be malicious or just inquisitive like?

INT 5: Um, (.) far more often than not people are inquisitive cause it's something they don't know and haven't heard of [RES: Yeah.] so I actually accept it quite well, but if somebody is trying to be malicious about it-like perhaps that little child wasn't being malicious but her form of questioning was being quite abrupt [RES: Yeah], so I just sort of keep it straight back to them- sort of say it how it is and don't like it deal with it or whatever and move on but...

RES: Um, and d-during interactions, does the intention behind somebody's treatment, uh, different treatment of yourself, would that affect the way that you feel at all?

INT 5: Yeah, sometimes, I did come away from that thinking "Oh, she noticed, she pointed it out" but (.) then I think "Well, everybody must notice, my friend's forget I've got things I can't do and what not, which is nice because I'm so close to them. I think just people-different people have different ways of dealing with it, I mean, I haven't yet had to stop a class I was teaching to say "Oh I have this". I-I wouldn't announce it to anybody because I think they would-or the ch-children would get away with it a lot more if they know that you can't see from that side over, so [RES: mmm] it's not something that I would announce in my profession [RES: mmm] to a class. It's something I would perhaps make aware from- we do a lot of talking about, um, PHSD which is physical health and social-emotional well-being sort of, like circle time (.) and you do lots of talking about yourself and feelings and things like that and it's quite nice to get uh- through that way to them that there is (.) adults have a way of dealing with these different children and there is a link between the two [RES: mmm]. Quite nice.

RES: Do you-do you see the feelings you described as arising out of interactions, uh, do you see that as something that is shared by many disable-physically disabled people?

INT 5: I'm not sure, I've never met-I've never met anyone like me [laughs] in my whole 21 years unfortunately and I don't really (1.0) know many people (.) with a physical disability. I-I have one girl on my course I'm very close to, she's got cerebral palsy, she's in a wheelchair all the time and I'm very close to her and people's perceptions of her are quite different and like I bristle at that and just because mine is hidden and why should you treat me any different from her [RES: mmm] Very (1.0) well, quite key in some of our class discussions in our seminar groups about who should be teaching and why and whatever, if-if you want to teach you need to teach and she can then why can't she? [RES: mmm] Why can't I? Someone mentioned it in the class and I turned round to her and said "Oh, did you know I've got this and I'm still here as well. Would you class me as the same as her and they went "Oh I hadn't even thought of that, hadn't even looked at you like that and didn't realise" and now (.) it's made the whole perception change and they-that girl did back down, she was like "Well, y'know, judging people by their appearances [RES: mmm] isn't the best thing to do" and she did sort of change her tune a little bit after that.

RES: So, you're kind of saying that judgements are different [INT 5: Yeah] based on (.) based on the, um, physical disability?

INT 5: Yeah.

RES: And did you think that, ahm, somebody almost with a greater degree of physical disability may experience different feelings?

INT 5: Yes, I well imagine, she gets uncomfortable around people if they are treating her in a different way. I-I could just see how it's different and it's annoying. I just treat her as normally as everybody else, you do cause y'know, what's not to [RES: mmm] why isn't everyone being treated like me.

RES: And, this may sound like a stupid question, but how far do you think physically disabled people should feel that the way that they do, um, after interactions with non-disabled people?

INT: They shouldn't be made to feel pressure or feel embarrassed or anything y'know. It's not anybody's fault the way you are the way you are (.) so they shouldn't have, mmmph, you shouldn't have that need to feel bad about something that is not your fault or feel awful or pressured in any way. It's just the way that society perceives (1.0) people as a whole really.

RES: So, two words that you mentioned that I found really interesting was pressure [INT: mmm] and need [INT: mmm]. Can you expand a bit more (.) upon that? What's the source of the pressure and the need?

INT 5: Pressure to fit in. [RES: Pressure to fit in.] and the need to belong [RES: need to belong] and need to be accepted in society as you are and the pressure of wondering how-what society and people truly think of you (.) because you have something wrong with you.

RES: Um, so, how-how much would you say embarrassment relates to that pressure and need?

INT 5: Quite a lot. I get embarrassed over certain situations, if I can't do something I feel, not as much [indistinguishable] but when I was younger and I couldn't do something (.), and I'd sort of go and let an adult know that-that knew my condition, I would sort of say "Oh, I can't do this sort of thing", they were generally very good and adapted it in different ways so I could do it without it seeming like (1.0) I couldn't. I don't have very good balance so if we were doing P.E. activities in school we had to balance across the balance beam y'know even though I was in Year 6 I was still having to hold onto an adult to get across this balance beam and no one else in my class needed to. But the teacher just went along and just didn't make any real fuss of it and just carried on as if it wasn't anything so-it's-it can be embarrassing, you can feel a pressure to need to belong a need to fit but then not everybody can do anything. I've got friends who are perfectly normally and they can't do the monkey-bars [RES: mmm], y'know for any reason, they are just as embarrassed as I am and...no real reason for it.

RES: Hmm, so, you almost see it as similar to, uh, embarrassment felt by non-disabled people when-that they can't fit in [INT 5: Yeah].

INT: Yeah. I think it's because I'm on the cusp. My disabilities are hidden, so I'm thinking what people-people-some, a lot people see me as completely normal wouldn't recognise that I had anything, other people do and it's sort of there, how much do people know about me, how embarrassed should I be around other people because (1.0) you're always aware that somebody somewhere is making a judgement of you, because that's human nature to judge someone when you meet someone, so it's...

RES: Ahm, I didn't quite understand. Are you suggesting there is somehow ambiguity or over, ahm, your perceptions of how they see you?

INT 5: Yeah, I think people... (2.0). Outwardly, I appear pretty normal, as-as you were, anyone can sort of see, but then there is always that inner voice which is saying "Oh, are they really seeing that or can they see that y'know my eye is cloudy than the other one because I can't see or can they notice that I can't turn my wrist the other way round, y'know. I speak quite a lot with my hands, my hands are quite expressive so I wonder if people do notice that sort of thing so it's just something to get your head round, you're always aware of what they are thinking, what they are judging, y'know, are they looking, are they aware and... something. [RES: Okay] That's all I can think of.

RES: And how far would you, um, say that non-disabled people can understand what it's like to be physically disabled?

INT 5: Um, to an extent, I think they think they can understand, obviously, you can't fully understand anything unless you've been in that situation yourself. So, it's quite amusing, there was an activity at my local guide pack and just-just-just by chance there was sort of, it was <indistinguishable> in teams, but you have can't-had to-can't use an arm and there was one person who can't- can't see out of one eye, one person who is completely blinded and you've got to, as a team, get these people and everybody across one side of the room to the other [RES: mmm] balancing on chairs- it's quite an amusing task [RES: Yeah!]. It generated a lot of laughter but it also provokes a lot of thought in them, like, we sort of afterwards say "Well, how did you feel not being able to see?" "Ooh, it was a bit weird y'know, a bit peculiar, how did you feel not-half being able to see?" "How did you feel if you couldn't use your arm, if you fell over what would you do?" It sort of gets them thinking more, "Oh y'know, how would I feel if I couldn't do that because they sort of... (1.0) you go along and do take a lot of what you've got for granted so when something is taken away from you, you immediately go "Ooh, (1.0) [RES: mmm] there's something missing, I never quite thought of it that way before, it's just changing perceptions and ideas.

RES: Yeah. So you think that, that kind of perspective taking allows them to-

INT 5: To a degree understand yeah. [RES: To a degree]. You will never fully understand how another person is feeling.

RES: Is there anything else that can help them(.) understand do you think or?

INT 5: I don't know. Um, talking to people seems to help. They either take, they either accept it and move on, or you can just see it and they can't understand, there's a (.) barrier they just (.) don't understand, like (1.0) for example, when people say "Oh, you're half-blind what do you see out of your blind eye, there's literally nothing, there's no colour, there's no light, there's no grayscale or anything, it's like there's nothing there at all and- first-for people to get their head round the idea of nothingness is such a hard thing to imagine [RES: mmm] that nobody can really understand the whole point of it so it's (2.0) it's just difficult.

RES: So when you say talking to people you mean talking to the person with the disability?

INT 5: Yeah, or me or t-the person with the disability talking to other [RES: Yeah, yeah] normal people or the other way round y'know.

RES: Yeah. And uh, at the start of this question you mentioned that, uh, non-disabled people think they understand [INT: Yeah! <laughs>] Are you saying that, as a baseline, without this perspective taking, that they may not actually be able to.

INT 5: Yeah, sort of in a way I think they think (2.0) “Oh I...” (1.0). They immediately empathize “Oh I know how you might feel” sort of thing and you’re sat there thinking [RES: laughs] “Well, you don’t really but I’m glad you think you do sort of thing [RES: Yeah]”.

RES: And that perception, is that something that you’re happy to let-

INT 5: Yeah, I just let them go with it, I’m like “it’s fine! <laughs> Whatever, you think it’s fine y’know.

RES: How far would you say that’s-that’s to do with intention, because their intention there can be positive.

INT 5: Yeah I think that if they go “Yeah, I know how you feel” that’s great, like, not really but at least you sort of understand it, there is a difference there and that there is, y’know (.) [RES: mmm] there is something there for them-

RES: Better than nothing?

INT 5: Yeah, better than nothing, they’ll never fully know how I feel because they haven’t got what I’ve got so, at least if they could sort of understand to a degree, or at least understand that there is a difference then that’s-that’s alright.

RES: Okay, let me just have a quick look at my question sheet to see if we’ve covered everything [INT: Yeah, okay], we can-we can also go back to anything that we’ve (.) spoken about if you- (1.0) if you want to?

INT 5: Yeah, I am happy with anything.

RES: Okay. Or is there anything you want to mention?

INT 5: No, that’s all I can think of, I’ve just been brought up to be normal and [RES: mmm] like a normal person, like my parents y’know, did take me <indistinguishable> school, but what six or seven, that’s just (.) children’s growing abilities and...

RES: So do you think upbringing plays a part in-

INT 5: Upbrining plays a big part in it. Uh, some people I’ve met, (.) over Facebook there’s, um, a webpage for my condition and a lot- it’s a lot often of the time- a lot of the time it’s a lot of parents of children with IP, it’s so rare and saying “What should I do in this situation? Help!” sort of thing and it is quite negative from- (.) I see from their point of view, they’re saying “Oh, my daughter has this and she has that and-, y’know, very negative but at the same time I like to put on positive things like I drive a car, manual normal car, and I’m-I ride horses and all sorts and I do everything anyone else would do and what not, it’s just a perception of it. And for them to say “Oh, she’s never going to be able to this and she’s never gonna be able to do that”, all the doctors thought by the age of eight and never drive a car and never drive a car and never the ability to reach primary school level and then university level- so I sort of like proved people wrong [RES: mmm], sort of saying you can do things and what’s- the only thing limiting you is you so... [RES: Okay]. By being very open about it and nurturing as a parent and sort of saying “Oh, you have this but what’s to stop you doing this?” Just different ways of getting to the same thing.

RES: Yeah, okay, cool. So I think that’s all of my questions so we stop the interview here [INT: Okay] if you’re happy to [INT: Yep.]. Okay, great.

END.

Qualitative questionnaire data (non-disabled sample):

What characteristics do you think society commonly associates with physically disabled people?:

Disabled people portray a need to prove themselves. Often very proud. Quick to judge others if they believe they may be unsympathetic.

Physically disabled people share the same emotions, thoughts, desires and feelings as physically fully able people and I think that society understands this. I think that society commonly associates physically disabled people with the difficulties they experience in everyday life to do with issues such as mobility, etc.

Burdens, liabilities ect.

I think that society commonly associates people who are in wheelchairs and on crutches with physically disabled people.

I think the sectors of society not used to contact with disabled people probably see them as less able than themselves physically and I think some people see physically disabled people as less able mentally too.

Someone who is less able to complete their role in society - i.e. as a consumer, worker or administrator. Some sections of society may view those with a physical disability as second class citizens

An element of being different, unusual. Some elements of society would associate a lower level of intelligence, although that is likely to be based on a poor understanding of differential effects of physical and mental disability. Positively speaking I think society would associate physically disabled people as fun, empowering, persevering, determined.

Slower to respond, depending on the modality (e.g., deaf people may not turn their heads if you call them) It seems you are talking of people who have things like Cerebral Palsy, Multiple Sclerosis, or Motor Neurone, or severe autism plus low IQ... I feel sorry that they have either inherited these problems, or got them through a bad birth experience, or some other way - it seems the luck of the draw as not in their favour. Of course they cannot sit in the exit row of an airplane, for example... But neither can I..

Slow

I think society assumes those with physical disabilities also to be intellectually impaired. I also think there is a tendency to label those with disabilities as 'brave'- which may be considered quite patronising. I would also suggest that society puts an emphasis on the disability at the expense of ignoring that individuals personality, opinions, intelligence or individual characteristics.

Vulnerable. Tough. Limitations. Depression.

Literally unable - can't do things for themselves. Require extra assistance in day to day life. Need special requirements to be on an even kilter with "abled" people. Sometimes I think society thinks that physically disabled people are also mentally disabled.

Mentally disabled Incapable Unsocial Unapproachable I think a lot of people fear them Old age

Impairment Less than

Difficulty accessing goods and services; discrimination and bullying; assumed co-morbid intellectual impairment; difficulty finding employment

Wheelchair use; missing limbs; co-morbidity (i.e. learning difficulties); war veterans; stroke victims; heroicism (particularly post-paralympics); receipt of benefits; variety

physically weak, incapable, challenged, motivated, unfortunate, hurt, strong willed

Either people who such the benefits system dry or people who overcome difficulties to be outstanding in their field.

Depends on the disability

Unfortunately, I think that modern society on the whole views individuals with a physical disability as being weak, incapable and I have noticed a tendency for many people to consider those with a physical disability as mentally "inferior" or unintelligent

Helpless – many people who do not have a disability view those that have disabilities as being helpless. They believe that disabled persons are incapable of undertaking and completing many ordinary tasks. Of course, some people with physical disabilities may be prevented from doing an action in the same way as people without such disabilities, but what they do not realise is that they are resourceful and will find a way of doing it even if it is different to the "standard" way.

Uneducated/not as smart – society is not well enough informed and many seem to immediately presume that if someone has a physical disability this will inevitably effect how clever they are. Non-engaging/unapproachable – I have found that many people when seeing a disabled person, will almost approach with caution or completely ignore that person. It seems that they presume that the person will want to be left alone, and not communicated with at all as though the disabled person will immediately assume that others are thinking the worst. Pity – it seems society views physically disabled people as needy. It's more than just being sympathetic or understanding that they may face difficulties, instead people view them as a charitable case that must be helped or else they will suffer.

The most commonly associated characteristic of physically disabled people is that they need help. This could be help through personal interactions (holding doors, offering to push the wheelchair, etc.) or institutional or societal (installation of ramps, conformation to the ADA, etc.). Beyond that there is an annoying trend of seeing physically disabled people as 'inspirational', which no doubt some are, but it strikes me as patronizing at times. Finally, I think some physically disabled people are seen as irritable, grouchy, or easily upset, especially when someone becomes disabled after an accident or injury, for example.

Some sort of outwardly-perceptible deformity or disability, such as a missing hand or foot, or a limp or speech impediment. Unfortunately, some of us who are disabled do not have any outwardly-visible manifestation. Diseases such as CFS and Fibromyalgia are often doubted or dismissed by many because it is not obvious that we are disabled.

I think that society commonly associates a physically disabled people with an inability to do ANY physical activities on their own. I think the public as a whole doesn't understand the particulars of certain disabilities, so they assume that when someone is "disabled" they need help with everything. I also think that in some cases, there are members of the public who that a person cannot be considered "disabled" if they can get around on their. So have they feeling that when they see someone who is considered to be "disabled" but still moves around on their own then that person is somehow lying or cheating and aren't really disabled. None of this is how I view disabled people, but I think it is a common viewpoint in society as a whole.

blindness, deafness, smell-loss, amputee, disease - polio, sciolosis, etc.

People who are unable to walk, or walk normally. People who require the use of motorized or regular wheelchair as a means of transportation.

I think society typically looks on physically disabled people in the following ways: helpless, pitiable, challenged, disadvantaged, miserable, and contemptuous.

Society commonly thinks physically disabled people are worthless, incapable of thinking for themselves, have no purpose in life, are useless, and are unable to do anything for themselves.

First off I try to put myself in their shoes, if I were physically disabled I would like to be treated like everyone else who isn't disabled. So with that being said, I treat people no different than if that person was not physically disabled. If someone is in a wheelchair I will open the door for them but unless they ask me for additional help I let them do things on their own. My main goal is that I don't want them to feel different from non-disabled people.

I don't really look at people with disability as any different. I don't think society do neither, it just certain ignorant people. Everybody got something they can bring to the table.

I think society mostly thinks that physically disabled people are somehow lesser than people of typical abilities. I believe they think they can't hold a job as well or be in relationships as well as typical people.

I think society commonly associates the inability to perform usual, physical activities as disabled people. Activities might include walking, talking, and generally, being able to perform activities of caring for one's self.

Dumb Cannot do anything Have a disease You can catch what they have

Bad things. Slow, stupid, drain on society.

Fragile, unfortunate, dependant

Not able to keep-up with society. Need to be helped and cared for. Empathy.

slow, inconveniencing, friendly, good attitude

I think society looks down upon physically disabled people. There is a sense of superiority and society may not want to befriend the disabled. There is a lot of sympathy for people with disabilities also.

A couple of the characteristics that society commonly associates with physically disabled people are a lower-IQ, laziness, slow, and retarded.

I think many people in society associate physically disabled people with being less able to complete everyday tasks and be able to many of the social experiences fully physically able people do. I, however tend to totally disagree with this stigma since I have a very close friend with impairments who is often blatantly subjected to these types of prejudices but in truth is the polar opposite and lives a full, productive life.

Having to use an unnatural object to do every day activities; i.e. a wheelchair, cane, walker, prosthetic legs/arms.

There are different levels of physical disabilities. Some walk with a limp and others are wheelchair bound. Some people are able to function with a little assistance and others need total care. I am familiar with people who are slightly disabled to severally disabled.

I think society commonly associates many characteristics with physically disabled people. While naming a few I would say that the use of a wheelchair is present many times as well as crutches and/or a seeing eye dog.

I think most people think that disabled people are slow. In society, we see them as needing help and often see them as a time investment for the people who care for them. Lastly, we see disabled people as a special person in our society who deserves respect just like anyone else.

Slower, less ability to function, should make concessions for, pitiable, can be just like able people That they are less fortunate than regular people and should be helped if possible. I also think people might think they are somewhat lesser intelligence at times.

Helplessness, incompetent, unable.

weak, not capable, incompetent, unskilled, unintelligent, unhealthy

I think that society considers physically disabled people to be a nuisance. They always hold up traffic, and in the grocery stores they take up the whole aisle in their motorized chairs.

Usually the inability to perform a task or activity as well as the average person due to some form of physical impairment. Such as walking or running or even standing up. Physically disabled people might be viewed as slower than the average person due to that disability of in one way or another, physically challenged.

I think our characteristics towards disabled people is sympathy, Its hard not to feel sympathy for someone at one point was able to be alone, go shopping, out to dinner. But now they are having to come to terms with their new life and the challenges and frustration that it will bring.

they are slower than most, they talk slow and cannot comprehend, they have physical limits

What would you be most concerned about if you had to interact with a physically disabled person who does not know you personally (e.g., on public transport, in a shop, on the street)?:

Offending them. I would worry they may misinterpret my good intentions as one human being to another as a representation of me perceiving them as needy or help less

I would be worried about misjudging their physical abilities and asking them to do something they cannot do and potentially causing embarrassment. Apart from that, I really don't see what else makes us different.

Offending them. Letting them know, that I know, that they are different or that I think they are less.

I would be concerned about upsetting or offending them by saying the wrong thing.

That I might offend them. That I might do something they will take offense to or that they might think I'm not treating them the way I would if they weren't physically disabled.

Nothing - why would I? I'm here, they're there. Why would I need to be concerned about a physically disabled individual. They're no different to any other person, except in the fact they've had to work harder to achieve the same level of acceptance physically able people have.

In terms of public transport, I would be concerned about safety and comfort of physically disabled people. E.g., Ensuring they were able to get on whatever mode of transport safely and had appropriate space - I would offer my seat for example. For shopping/social interactions I am not sure I would be concerned with anything different to the usual concern I have for people's well being in general.

Not offending the person - I am unsure about it - I don't understand the situation. I would like to be helpful if needed, and certainly I want to be cordial and welcoming just as I would with any other person... Recently I heard on the BBC a Japanese book written by a teenager with autism - this situation is a big problem, knowing how to behave so that the disabled person does not feel ostracised or left out or treated as special in ways which are not appropriate to the disability - would not have a concern as would interact the same way I do with everyone else.

I would be concerned about appearing patronising - for example, if I thought the person needed assistance I might be hesitant in case it turned out they could manage fine themselves. I would also be unsure about the appropriateness of acknowledging their disability.

Worried that the person might think I am patronising him/her.

I would want to make sure they didn't think I was discriminating against them but I wouldn't want them to think I felt superior to them or was gushingly sympathetic. Equally, I'd want to help them but wouldn't want to offer in case it offended them and they preferred to be fiercely independent.

How they want to be treated, some of them are fiercely independent whilst others like/need to be helped

That I was treating them as a fellow human being

Offending them

not being able to help; asking them to do something they are not able to due to disability;

Patronising them; trying so hard not to get in their way that I end up doing so; avoiding eye contact for fear it will be interpreted as staring and thus isolating them/appearing rude

offending / embarrassing them, either by offering too much or too little help.

Trying not to offend them by helping them!

Nothing

My main concern would be that they may find my actions or behaviour patronising if I were to offer to help them, or that they may consider me rude if I were not to offer help (if the situation called for such an offer - e.g., helping someone in a wheelchair to board a bus etc.)

As I have had personal experiences within my family of people who have physical disabilities, I hope that I tend to approach disabled people in the same way as other people that I do not know. Of course, with approaching anyone new, one cannot be sure of the other's personality so with all people you are not sure if they will appreciate you speaking to them or will welcome it. However, with my experiences, I know that small gestures of help, for example opening the door or standing and waiting for a disabled person to leave the bus or moving out of your seat for a disabled person, is more often than not met with a smile. I am sometimes concerned that I don't want to give the wrong impression and that by offering help is from an understanding, not from pity.

I would not want to offend them. On one hand, I want to be helpful to people (i.e. holding the elevator door, offering to carry something, etc.), but I also do not want to offend someone by offering to help when they in fact do not need it or wish for it to be offered. That is my main concern.

Making sure that they have whatever they need. Sometimes that's obvious (like giving a hand with their crutches or holding the door open for a wheelchair). Other times I simply have to ask, because I can't tell what would help them most.

Mostly I would be concerned that he understands that I am not looking down at him/her and I respect the person's humanness. I would also hope that the person doesn't see me as a threat and if I ask to help and the person doesn't want any help, then that's okay with me. I've seen it happen that sometimes people are overly pushy when trying to do what they see as "helping" a disabled person when the person doesn't actually want any help. Disabled people that I personally know are actually rather independent in most situations and that independence is very important to them. So, I guess what I'm saying is that I hope the disabled people that I don't know will recognize that I respect their independence.

How I could help them without putting them on the spot or offending them.

I find it most concerning making conversation without feeling awkward since you never know how comfortable the disabled people are in their own bodies and how they feel towards themselves and their disabilities. Is it OK to ask what happened to them to where they are disabled? Or would they flip a lid?

I would be concerned that any interest shown in their disability may be offensive and I may be challenged to see past their disability to really interact with them in a typical way. I'm worried that I may be overly sensitive to their disability, inhibiting my ability to fully focus on them as an individual for fear of being insensitive.

Some physically disabled people have been treated wrongly for so long that they have a chip on their shoulder and are hard to get along with. If I had to interact with a physically disabled person that did not know me personally, I would be wondering what kind of attitude that person had.

My biggest concern would be to not treat them any different than someone without a physical disability.

Nothing at all.

I have been around physically disabled people on and off my whole life so I am more than comfortable with them. My main concern would be to help if I was needed and to be polite enough to ask.

I would be concerned that I might somehow hurt their feelings in some way.

That they are safe and they know where they are going. If they need any help

How they would react to me.

I would be most concerned that when I leave this person to go do whatever I was on my way to do. That someone else will hopefully be there to help them if they need anything.

How to help them, and whether they would be insulted if I tried to help.

Offending the person

I would be most concerned about making their life more difficult. I would not want to inconvenience them in any way.

Making sure I could properly communicate with them. I am quite shy and don't like awkward moments.

My biggest concern if I met a physically disabled person that I did not know is treating them with respect the way I would want to be treated if our physical situations were reversed. I would want to be as helpful to them as possible but not to the point I would ever insult them and make them feel less independent.

I would be most concerned about offending them - but I don't think I'd say anything about their physical handicaps so I wouldn't really be concerned.

It would be helpful to approach them in a non-threatening manner so as not to alarm them. It's better so they will not be frightened.

I would be most concerned about trying to help them do things and them being offended by my help. For example, if I were to give up a seat closer to the door for them and they were to be angry that people think they cannot just sit anywhere.

My biggest concern would be if I am working with them in the right manner. I wouldn't want to hurt or upset a physically disabled person because of my inexperience with them. I want to do my best to be of assistance to them and be a source of kindness for them.

I would be most concerned about offending them with my preconceived notions.

I would be concerned that I don't offend them in any way by offering to help them.

I'd be conflicted as to whether or not I should help them or leave them be.

I would be concerned that I would do something or say something that they found offensive or personally insulting.

I would be most concerned with disabling them more.

That if they ask for assistance I may not be able to help, maybe because I'm in a rush or because they might ask me to help pick up a heavy bag or something of the sort. I can't think of any other concern really. My most concern about interacting with a disabled person is if they feel how could I help them as fast as possible and was it my fault. I would be happy to interact with and help a disabled person in any way.

nothing at all

Imagine yourself in a situation where you think you have unintentionally offended a physically disabled person. For example, you may have acted in a stereotypical way and highlighted the person's disability in some fashion. Describe how you would feel in that situation:

Embarrassed, stupid, ashamed

I would not start apologising straightaway. I would wait to see their reaction, see if they comment on the situation and how our interaction continues overall. If they seem offended, I would apologise, of course. But what if I am simply paranoid? Disabled people are aware of their own situation and probably have the necessary experience to be able to tell an offence from an unintentional reminder of their disability.

Embarrassed, uncomfortable. I would want to exit the situation as quickly as possible.

I would feel bad and embarrassed.

Incredibly embarrassed and awkward. Am cringing just thinking about it. If it was unintentional and they took offense I would probably also be annoyed that they'd taken offense. If they reacted negatively I would probably think 'being disabled doesn't mean you get to be a dick'.

Highly embarrassed. Would feel stupid and ashamed for unintentionally discriminating against a section of society. I would attempt to apologise to the person I offended in a one on one conversation.

Embarrassed, upset, ignorant, awkward.

I would feel that it was no one's fault, and I would ask the person to tell me what was the right way to behave - to educate me so I don't make the same mistake in the future with that person or with another person with a similar disability

I would feel bad about this, as it would not have been intentional.

I would feel really guilty and embarrassed. I also may feel a bit defensive and annoyed, if I genuinely did not mean to offend and had good intentions.

I would be embarrassed, and depending if the person would listen, I would apologise and just explain that it was my ignorance and, hence, was unintentional.

I would feel bad that this had happened and would wonder if I'd thought about things more if this still would have happened. I'd also feel a bit confused because sometimes disabled people like to be treated the same as everyone else and for you to not acknowledge their disability and sometimes they want you to be very aware of it.

Mortified, I would be horrified at my behaviour that I could offend anyway, especially if it is in a stereotypical way that suggests I am uneducated and ignorant.

I would feel awkward. But then I myself am disabled so this really is 'imagine'

Awful

Embarrassed; ashamed; sympathetic to the person; apologetic

I would be worried that I had caused the person upset, and also embarrassed at my conduct.
embarrassed & naive/ignorant

I would make a joke of it to laugh it off and hopefully they would laugh too.

Awkward and embarrassed

Guilty, embarrassed, ashamed, and most importantly keen to make amends and learn from the situation.

I would feel terrible if I had offended someone, regardless if they had a disability or not. Of course, if it was by acting in the stereotypical way, I would be ashamed for causing that upset through supposed ignorance. I would immediately try to rectify the situation and apologise if I had unintentionally offended them.

I might have asked someone if they wanted help, but they told me they don't need it. They're probably tired of people assuming they always need help, which I just did. If that happened I would feel horrible.

I would feel terrible, but I would hope that they would forgive me, and help me understand their situation better.

I would feel awful in that situation. I would apologise. I would hope that I wouldn't ever act that way, but if I did I would be unhappy with myself.

I would say that I'm sorry. I would reflect on my actions and decide if I was being reasonable, or if the other person had a point I hadn't considered. I would rethink my attitude.

I would probably just not talk anymore after I apologized. OR depending on how severe the reaction, I may try to explain myself.

I would feel embarrassed and ashamed. Through my inability to accept their disability I acted as if they were somehow less human or less deserving of a typical human interaction. I don't know what it is like to be physically disabled, but if it was something I had lived with my entire life, I would struggle with the fact that my tendency may be a defining characteristic.

I would feel totally awful if I had hurt a physically disabled person because that is what I would not want to do.

I would feel very embarrassed, my face would turn red for sure. It would probably bother me for the rest of the day. I would apologize for what was said.

If they felt disrespect then I'm just going to simply apologize.

I would feel completely ashamed of myself if that ever happened and would have to apologize.

I would feel very sorry for having done that.

I would feel really bad because in my job I work with a lot of students who have these disabilities and I try to teach my students to make sure that understand how to react and how to help.

I would feel terrible. I would say that I am sorry, and truly mean it. I would hope they would understand.

I would feel terrible. Obviously, someone with a physical disability or anyone for that matter wouldn't want to feel patronized and spoken to in a condescending manner.

I'd feel I didn't respect that person, and would make amends.

embarrassed, ashamed, sorry

I would feel terrible. I would likely try to apologize and admit that what I did was inappropriate. I would feel really bad and try to apologize as quickly as possible. I would also be very embarrassed.

I would feel very embarrassed for my ignorance remembering it long into the future and would want to find a solution so that I didn't do it again in future situations. I would continue to try to be friendly with the person and apologize immediately if it appeared they were getting even more upset with me.

I would feel terrible and embarrassed. I would want to apologize to the person and tell them that I didn't mean to offend them.

I would feel terrible if I offended another person because of a disability. I try to put myself in someone else's shoes and I know I wouldn't like someone disliking me or being rude to me just because of looking at me.

I have unintentionally offended a physically disabled person before by staring. Sometimes I do not realize right away that I am staring at the person's injuries because I am trying to understand what has happened to them. This is offensive and I understand why they would be angered by it but I did not realize I was doing it and I felt very bad.

I would feel very small. I would be ashamed of the way I acted and would be paranoid of what others will think of me. Lastly, I would think about how I can move forward and be a little more heads up about disabilities next time.

I would feel like a naive fool. I would try to make amends by correcting my behavior.

I would feel embarrassed and awful that I behaved in such a manner.

I would feel absolutely awful. I'd feel guilty and ashamed. I'd feel embarrassed.

I would feel really embarrassed and ashamed for not being more aware of what I was doing and saying. I would feel extremely sorry for the way that I behaved and I would feel that I needed to communicate how sorry I was to the person that I offended.

I would feel bad but knowing that I did not mean anything disrespectful I would also know that it is their mental instability that caused them to feel that way.

I would feel extremely embarrassed

I would feel very ashamed that a disabled person thought I was being stereotypical and offended them. I would be very upset with myself and I would always watch my words and how I say things are disabled people.

i would feel like i totally let myself and them down, ashamed, sad

Would you ever feel embarrassed in the above situation? If yes, tell us more why you might feel embarrassed:

You feel as if you should know better than to ever offend someone. As you grow up social etiquette is ingrained on you. It's normally pretty clear what would offend someone. When dealing with a disabled person you no longer have a baseline measurement or a set of etiquette tools to rely on. Your perception of how to act has little grounding in a previous experience. That's made harder because of variances in how individual disabled people expect to be treated.

Of course I might feel embarrassed but this depends mainly on the context of the situation and above all: how well I know the physically disabled person involved.

I would feel embarrassed, mostly due to social anxiety. The desire to rectify any insult, but unable to ask if I have insulted them, in case I insult them. I would be faltering and preoccupied which I would also worry might insult them, and that would make it all worse.

Yes I would and made worse by the fact I didn't mean to offend.

Incredibly. I am very easy to embarrass anyway and I don't like confrontation so if someone took offense to something I had done unintentionally then that would embarrass me. If they caused a scene and made me people stare that would embarrass me and annoy me and getting annoyed would embarrass me. Vicious circle. Would worry people would think negatively of me and the idea of what they might think about me would embarrass and annoy me.

Oh yes, I would be embarrassed as all hell. I'd be embarrassed as I was bringing to like a characteristic of the physically disabled person - sort of like the elephant in the room.

Yes I would feel embarrassed, because I had upset/offended a person - it's not nice to know that you have done that unintentionally or otherwise. My general aim is to get on, not cause problems so by doing that I would question my own ignorance. I would want to somehow rectify the issue but would also feel like running away.

I think Shame is a tough one - I am learning in life that it is important to focus on the other person in a compassionate way, and to not let my own feelings of inadequacy to keep me from being a kind person... Shame gets in the way of being kind

Yes, particularly if it was in front of a number of people.

I would feel embarrassed because it would go against how I view myself - as treating everyone as equals and being non-judgmental. Part of this may also be because I wouldn't want to group myself with the kind of people who look down on or do not interact appropriately with people who are different to them.

Absolutely yes. Because I would never intentionally offend anyone - physically disabled or not. I'd feel foolish for being so careless/unthinking

Yes very embarrassed that I may have offended someone

Cos I'd be confronted with an 'unwanted self' -- behaving discourteously to another human being

Yes I don't like to offend people

Yes. Would feel that the disabled person and others around may judge me harshly. I would feel self-critical.

Yes, because I would have presented myself in a negative light to both the person in question and any onlookers.

yes, you may have unintentionally hurt their feelings or you might be considered as socially ignorant - and either way you would be judged by others around

Yes. Because you never know how anyone's going to react.

Yes because I would have made a social faux pas

YES! I would feel horrifically embarrassed that I had acted in a way that had made another individual feel uncomfortable or singled-out in any way.

I would feel embarrassed about the way I had acted to cause such offence and that I could have upset someone because I had acted so ignorantly.

Yes, I would feel embarrassed, because I do not wish to appear condescending or patronizing to disabled people. I would always feel like I 'should know better'.

Yes, absolutely. I always try to be sensitive to the needs of everyone with whom I interact, disabled or not. So if I committed some sort of faux pas in spite of my efforts, I'd be very embarrassed.

I would feel very embarrassed in that situation. I try to respect all people. If that ever happened I would really feel bad about it. I wouldn't understand it actually. It's hard for me to imagine that happening. I just don't see myself saying/doing something like that.

No, not really.

I would feel so embarrassed because it would be a difficult thing to come back from, how would you carry on a relationship after such an incident? Hopefully an explanation would be sufficient.

I would feel embarrassed because I may have caused someone emotional harm.

I would feel embarrassed because I probably treated them like many other people have treated them and probably made them feel less like a person.

Yes, very embarrassed, that's just the way I am. I always think before I speak, which for the most part has saved me many times in the past but if something would slip out I would feel ashamed of myself.

No not at all especially if I didn't mean to.

I would definitely feel embarrassed. I try not to ever make a person feel uncomfortable, I wouldn't like it if someone treated me that way so I try not to do it to other people.

I might feel embarrassed in that what happened was inconsiderate of the person's feelings.

Yes, because it would be the last thing that I wanted to do!

Yes, because I hurt a person with special needs.

I wouldn't feel embarrassed but I would definitely feel bad.

No. I acted as I thought right.

yes, I would feel singled out, or like I've made a mistake most people wouldn't make.

Yes, I would feel embarrassed. I would feel bad for offending someone that did nothing to deserve that offense. Yes, because I have made fun of another person that is suffering from a disability.

I would absolutely feel embarrassed and disappointed with myself if I had done something like the above mentioned situation. The main motives for my embarrassment is that it completely goes against my moral values to insult others this way & I wouldn't want someone to do this to me if I was ever in this situation.

Yes. I would have made myself appear ignorant and careless with peoples' feelings.

Yes, I would feel embarrassed. I wouldn't like it done to me.

Yes, I would feel extremely embarrassed because it was not my intent and I never wanted to offend the person.

Yes, I would feel very embarrassed. I think there is an accepted way to deal with disabled people in our society and if I didn't conform to that norm than I would feel embarrassed.

Yes, I would feel embarrassed because I consider myself knowledgeable and understanding about disability.

I would feel embarrassed because I should have known better and that the situation could have been totally avoided if I were thinking correctly.

I'd feel embarrassed because I would assume the situation would draw attention to me. I also dislike upsetting other people and being called out about it.

I would feel embarrassed for being so thoughtless and careless with my words and actions and not being considerate of another person's feelings. I would feel embarrassed that I had put someone in such an uncomfortable situation.

Maybe for a moment because I would not want other people, besides the disabled one, to think that I am disrespectful. If someone accused me of that then there would be a fight.

Because I would not want to appear insensitive or lacking in compassion or understanding when the case is entirely the opposite. I would not want to be in their shoes and hurt by someone else's lack of sensitivity

Yes of course, Because I would never mean to say anything offensive and if someone thought I came off that way then I would be very upset with myself.

yes very much so because of the offense

How would you react to the physically disabled person if you are accused of treating him/her differently because of their disability?:

Offended. Probably quite angry. It implies you are ignorant.

Differently in what way? I suppose there are situations where you need to treat a disabled person differently in order to help them for example. Everyone has got their specific character, individuality and abilities; in that sense we all treat each other differently. In the situation described above I would first ask the accuser to tell me how they see and interpret the way I treat the physically disabled person involved; they may have something valid to tell.

Depends how they accuse me, if it is very aggressively then I would react defensively, and justify my actions. If gently chided I would apologise sheepishly and ask what's right and wrong to do.

I would be quite defensive as this would not have been my intention at all.

With embarrassment, annoyance, irritation and anger depending on how they accused me. I may be apologetic depending on what I'd done but if it was unintentional or if they'd misread the situation then embarrassment and annoyance would be the most likely reaction.

I would talk to them one on one to try and discuss the options available. I would try to let them know I wasn't doing anything malicious or spiteful. If the person who took offense thought it was malicious or spiteful, I would change my behaviour.

I suppose it would depend on what it was I had done. I am certainly an advocate for equality etc., but I believe that in some situations a physically disabled person may need to be treated differently because of the disability - for example if I were stopping them from doing something that may cause harm to them or others because of their disability then I would feel justified and stand up for my decision/action. If I were discriminating against them for no good reason then my reaction would be different. Firstly I am sure I would not discriminate purposefully, if I did then I guess I would be an arsehole and would probably still feel I was justified. If I unintentionally discriminated against a physically disabled person, or was just accused of doing so then I would react in an apologetic fashion, I would be embarrassed and would be eager to rectify what I had done.

I would react as I do when people accuse me of things - I would say - how important is this? I would apologise if I were in the wrong, I would perhaps ask if there was a better way to treat him/her, what is this way, so I can understand and we can proceed on common ground, always assume we are trying to do something specific together... I would also be surprised, as most disabled people I have met would not 'accuse', they would be used to being treated differently by many people and hopefully would have learned to not take it personally, learned how to educate others about how they want to be treated, and also will know by experience (perhaps bitter, perhaps not) that they cannot control anyone else's behaviour - only their own...

calmly and rationally.

I would be apologetic. I'd probably try to explain where I was coming from and be insistent that it was not my intention.

It depends on whether I was really treating that person differently. It could have been that person's misinterpretation/being sensitive, or if I am doing it unintentionally. For the former scenario, I would apologise that that person feels that way, and that I didn't feel that way. If after that, the person then justified why s/he felt that way, and I realize I did it unintentionally, then I'll apologise and say I'll be aware of that in future. It also depends on the tone of that person when accusing me of the different treatment. If that person is very angry/aggressive, I might just apologise and walk away.

Apologetically.

I would apologise and attempt to explain the situation

It would depend who was accusing -- if the physically disabled person accused me, I would first apologise for causing offence, then ask him or her to tell me more about his or her experience and what my action meant (I'm assuming it wouldn't be obvious and that I wouldn't necessarily realise); if it was someone else - who was with the disabled person - I would probably do the same and then connect with the disabled person and have a conversation with the person directly; if it was a stranger who was passing judgment, I would explain that I myself have a physical disability and that, in fact, they were passing judgment inappropriately. I would then strike up a conversation with the disabled person myself.

I would try & reason with them

Would depend on the specific accusation - may have needed to. If not needed, would feel embarrassed. May be defensive and explain reasons why. May be apologetic.

It very much depends on the situation. If I was accused of having done so, and felt the accusation was valid, I would most probably acknowledge my fault, apologise, and hope the offended party would be able to forgive me. If I felt the accusation was unfair, I would defend my actions. If I felt that I had indeed treated the person differently, but had a valid reason for doing so, I would explain this, and hope they would understand my reasoning, even if they ultimately felt I had acted inappropriately (in which case, I would take this criticism on board and avoid acting in the same fashion in any analogous encounters).

apologise, and explain the difficulty I face understanding his/her disability - or try to overly compensate by offering no help at all (but still be aware that support may be needed - all the while appearing very red in the face)

Tell them to not be so bloody stupid as I take the piss out of everyone. Tell them their disability doesn't make them special.

I'm not sure - I can't imagine myself in that position because I don't treat people differently

I would apologise immediately and try to explain that my actions were unintentional.

If I am honest, I find this particularly hard as I cannot imagine being in this situation, it would of course upset me if I had treated someone differently, but I would not set out to. If I was accused of such a thing, I would have to explain my own situation with my relationship with my mother who is physically disabled and that I was sorry that they felt like I had done so. I suppose it depends upon the situation, if I was trying to help someone perhaps by opening the door, I would be very upset if I was accused of treating them differently, as I would open the door for anyone (for example I worked in a restaurant and I would open the door for people coming in or leaving if I had the chance) but if I had seemed as though I had ignored them, I would be disgusted with myself. As I said, it's hard to put myself in this situation as I have seen others treat my mother differently so I have almost been on the other side.

I would, of course, apologize, and explain simply that I meant no harm or offense. There's not much else to say or do in such a situation, I think.

I would apologize, and ask them to help me understand how to do better in the future.

I would apologize and try to explain myself. Perhaps the person misunderstood something I said. Words sometimes go awry with no bad intent. I would try to tell the person what I meant using different words. Or if it was an action, I would apologize and ask the person what I should have done differently.

I would apologize and ask how they would want to be treated.

I would most definitely try to get to the bottom of their feelings, whether I really am treating them differently, or if it's just a figure of their insecurities.

I would be very apologetic and most likely end my interaction with them out of embarrassment.

I would quickly apologize and make them understand that I meant I was sorry. I would be sure they knew it was not intentional.

I would be shocked because those are not my intentions and I would convince them of that. If they don't want to believe me then I can't do anything about it but my conscience would be clear.

I will let him/her understand that it's not like that.

I would be extremely apologetic. I would try to see if there was anything I could do to rectify the situation.

I would try to be very kind and state my sorrow for the situation.

What is fair for one may not be fair for others. People who have disabilities have been given a great deal of difficulties in their life and they deserve to be helped and things may not always work out in their favor. Now, there does come a time when safety is in play and I think if someone is not safe then treating them differently is not the correct mode of action.

I would act like I was sorry.

I would just explain that I was trying to help and apologize for offending them.

Get a bit angry.

I would apologize, and try to explain myself and make amends.

It would cause me to reflect on my actions. If I was treating him or her differently, I would realize I deserved to be called out. If I wasn't treating him or her differently, I would be mad that I was wrongly accused.

I would try to be as accommodating as possible.

I would sincerely apologize and explain that I never meant to do it intentionally and would put extreme effort into not doing it in the future.

I would apologize to them and tell them that it was not my intention to do so.

I could only apologize profusely and sincerely.

I would react by saying how truly sorry I was and by explaining myself over and over again. However, sometimes when saying sorry too much, it may just make it worse.

I would be say sorry to the disabled person. At the same time, I would not argue and just agree with him. I would intentionally refer to mistake in front of them and make them feel better.

I would apologize and ask how I should have corrected my behavior.

I would first apologize and offer to make it right.

I would apologize and let them know I didn't mean any harm.

I would apologize and ask the person why they felt that way. I would clarify my words or actions as much as possible to try and make them feel more comfortable.

I would be angry and take up an argument.

I would be surprised if someone said so. I would still try to examine what I may have done to appear this way and correct my actions and apologize for any transgressions.

I would stick up for myself depending on the circumstances. But as far as a disabled person getting off first or sitting in the front of a bus then that just called respect and I would stick up for myself in that situation.

i would fiercely apologize and ask for forgiveness for my ignorance

To what extent does thinking of physically disabled people make you worry that you might one day acquire a physical disability?:

Not at all. There's too much else in life to worry about

I never really associated the two. I guess interacting with physically disabled people may make me consider in a more detailed manner whether they have all the opportunities they desire for example, it can make me wonder whether the living conditions of a city, for example, are convenient enough for everyone. I suppose there is a possibility that I become physically disabled one day; there is such a possibility in everyone's life: however, interacting with people who are already physically disabled has nothing to do with this.

Thinking about the disabled doesn't make me worry about becoming disabled, it makes me wonder how I would cope with my own theoretical disability. I worry about becoming disabled because I have recurring dreams about losing my right leg below the knee.

To be honest I don't really think about it.

Not to a great deal. usually until you asked that question!!! Although that said there is a music video (by Rudimental?) about a guy who loses his leg in a car crash and he goes back to cycling and tells a hard story of the path in between and it's an interesting video but can't always watch it for that reason.

Not a lot - some of the physically disabled people have had their disability since birth.

None at all.

None What makes me worry is my own health, as I have an arrhythmia in my heart, and as I am getting older, my eyesight is not as good as it used to be, also my knee is giving way very slowly... I am old enough to not be influenced by another's disability...

not at all,

I do not necessarily worry I will acquire a disability but may wonder how I would cope with a similar disability, how my life would be different.

I don't worry about it. I just appreciate and not take for granted the current physical abilities that I have, and that if it happens one day, it's fate.

Not at all.

Very, I work with people who had a stroke and it makes me fear being disabled a great deal as I know how difficult my patients find it.

Not at all. It's happened. And had nothing to do with 'thinking about' or talking to physically disabled people.

I don't know

Not really. For example, I had not thought of that until the question above was given. I am around physically disabled people a lot through work and in family, so may not consider this much.

It's not the first thing that springs to mind.

to no extent

Not at all, if it happens it happens and I'll have to deal with it.

Not at all

I suffer from a fair deal of health anxiety, so am constantly quite concerned about my own health. As such, I fear death and paralysis quite frequently, but I don't find that this fear is amplified by thinking about, or spending time with, individuals who have a physical disability.

I do have first-hand experience of people with physical disabilities and I know how hard it is to do things that others take for granted. My mother has suffered from a disability all of her life but this has not meant she has been unable to do things, in fact I believe she has done more than most people without a disability, for example, taking part and completing marathons in a wheelchair, winning awards and medals in swimming and running and playing in a wheelchair basketball team. It is incredible that her disability has not prevented her from doing what she wanted in life. So for that reason, I see having a disability as not being the end, I have seen how people can achieve such great things with a disability. However, I would be lying if I said that I would not mind having a disability as I would not want to be physically disabled. I have seen how hard life is for people who are disabled and I have seen how well my mother and others have dealt with their disability. I know that I would find it extremely difficult to in the future become physically disabled. I almost look at my mother's strong will and see how much she has done because of her determined personality, and when I think of what I am like, I cannot imagine that I am anywhere near as determined or able to cope with such things. Personally, it is much harder as well to think that I could become physically disabled one day as my mother is physically disabled, my father has had strokes and my sister has a learning disability. I do not understand why I have been gifted as I have, but I mean to make the most of it by becoming successful and being able to financially support my family. That is what I want more than anything. And although I know people with disabilities can do such amazing things and can be very successful, I have a kind of personal responsibility that is made slightly easier but not having a disability.

I don't think that happens to me at all. Anyone might become physically disabled, but thinking about someone who is doesn't make me think of that possibility any more than usual.

I already have one, so no worry there. :) Still, I realize all too well that things could be much worse for me, so yes, I am concerned that either my health will decline further, or I will have some other disability added to my list of health issues.

Well, it makes me think about that a little bit. I have recently been having arthritic related problems that are affecting my mobility a little bit. So I've been thinking about that very subject. In fact, I've talked to a friend of mine who has a disability about this. My condition is miniscule compare to his, but he understands my situation. Yeah, I do worry about becoming disabled some day. It does scare me a little bit.

I have a long-term disability, so I already know how I would feel.

I do not live my life in fear or worry. If I end up disabled, that's it, nothing can be done, I would have to accept it. What's going to happen, is bound to happen.

Minimally. To some extent I wish I could experience life with a physical disability in order to understand the challenges and experiences of a physically disabled person. At the very least, I'm likely to have a different perspective the next time I see or interact with a disabled person.

None.

I think most people when they see a physically disabled person they think about how life would be if they were in that situation and it would not be an easy thing. It's in the back of my mind but I try not to think about it.

I don't think about things I can't control, that's not in my hand.

It does not make me worry about it at all. The people I have seen and known are perfectly capable of living normal lives.

It never crosses my mind at all.

It sucks to think about, but I do not worry about it because if I ever have to cross that road then I will have to deal and live with it. But no more on my mind than any other time.

Not a lot

Not too much, because I don't do too many things that could harm me severely. However anything can happen and I do worry slightly.

A bit. My best friend is paralyzed on the left side of her body, so I think of that often.

Not very much

I do not worry about it honestly. It hadn't crossed my mind.

I may in my lifetime; it depends on how I take care of myself from now on.

When I think of a physically disabled person I sometimes worry about having this type of disability myself one day because I imagine it could be both extremely physically and emotionally painful.

Also, I might not be able to enjoy some of my favorite activities that I have taken for granted that I'm able to do.

I am not extremely worried about it. I will take steps to help it not happen.

I am always aware that it only by God's grace that I am not disabled. I have been in several accidents and am glad to still be whole and healthy.

Not to a very high extent. I try not to do that to myself, nobody wants to live life afraid of what can happen.

Not at all. It is something that can happen to anyone because of anything. It's like death. It can happen to anyone at anytime so it's pointless worrying about it.

I don't worry. Whatever happens will happen and I will deal with things if they happen.

I think about it sometimes. I try to picture what it would be like and how I would deal with it.

Not at all.

It doesn't really make me too worried, but I do consider the possibility more when thinking about physically disabled people.

It does not.

rarely but it has happened. I have thought about what it might be like if I couldn't walk or perform certain tasks as well as an average person and of course it wasn't a pleasant thought

I often put myself in their shoes when I see a person with a disability. I'm very grateful that I'm not impaired and I have the softest heart for people with disabilities.

not at all

Qualitative questionnaire data (physically-disabled sample):

What characteristics do you think society commonly associates with physically disabled people?:

tragic but brave, difficult, a problem, ungrateful, scrounger, unable to do things, not able to speak for themselves, marginalised, vulnerable, not worth considering, unemployable, don't have other impairments, always ill, costs too much money to make reasonable adjustments for I could go on for ages with other examples!

Wheelchairs and crutches, I think there is a lack of insight that a physical disability can still be effectively 'hidden' or unseen.

Tragic, pitiful, inspirational, asexual

inability to be "normal." Dependent. Unhappy. Angry. Pitiabile. Brave. Pathetic. Inept.

Poor, lonely, depressed, pitiful, innocent

Well there is a whole range from paralympians to benefit cheats. Personally I find sometimes people go on about "courage", but mostly they don't mention it in my interactions with them. Even though I need help, it becomes invisible, and people that know me associate things other than disability with me. This is even though I work in the disability field professionally.

I think physical disability, and indeed, disability more generally is viewed in terms of its visible difference from the non-disabled community. By this I mean that there is almost a visual spectrum whereby society categorises physically disabled people in terms of how visible their disability is. The more visible the disability is, the more severe it is - regardless of whether this is true or not. In addition, the severity that is dictated from the visibility of disability leads into perceived competency of the physically disabled person. By this I mean that the more visible the disability, the more severe the impairments are, and therefore least competent the person is. I also think that this perception of competency is more than just physical, and, particularly from personal experience, leads into societal assumptions of intellectual or sensory difficulties, even though this is (personally) not true.

My experience has shown that the wheelchair "speaks". It will tell a stranger I am stupid or hard of hearing, mentally ill, or provide some other message that is totally opposite of the person I am. When I lost my first Service Animal I was totally ignored. 'JAKE' broke down barriers between non-disabled folks (especially children) and me. Interestingly he was a beautiful red golden retriever. Now my Service Animal, a beautiful large black Labrador retriever. Interestingly because of his size and color only people who like dogs or who are aware of his beauty and regal disposition will try to communicate with us. guInnis would not hurt a flea, but because he is black he also faces discrimination, just like me. Professionally, educationally and personally I am well versed, bright and articulate. However, I cannot get a full time job. Certainly organizations and agencies will use me to volunteer and thank me. However, I have needed to work and all I can get are part time (extremely part-time) positions. For example I could go and teach every Wednesday and the person involved used my material and appreciated all she got from me. She even received more money for the following year and I could not be brought on board or be provided a "token stipend". However, I heard she was able to hire "a non-disabled" person. It hurts; nevertheless according to society I just need to go on, keep a big smile on my face and continue to kiss 'ass'. Whether it is the government or lay people disabled people are second class citizens. My last example: January 25 2007 I was dropped from my state Attendant Care Program because of age. Rather than entering a nursing home I depleted my savings and retirement. May 2009 my picture and story appeared in a Philadelphia, Pennsylvania newspaper and the next day my exact services were restored. I was told until our new governor was elected I should be able to receive funding- it never happened. I never should have been dropped - government error but I have no recourse. I could go on and on. When I woke up paralyzed many years ago I thought I would remain myself -- after all my brain and self-did not change --- I just could not walk or stand. I was so wrong, and the more I accomplished the more isolated I am.

Depends on the type and extent of the impairment(s). For example, - if someone has communication and mobility difficulties non-disabled people can often treat them as though they are intellectually impaired, with no good reason to do so. - it depends on whether the individual was born with their impairment(s) or acquired them, with those born Disabled people being more likely to be perceived as of limited intelligence. - it depends

on how 'normal' they look, with them being most comfortable with those that are closest to the 'norm' e.g., a 'Jo Average' who has lost all use of their legs versus 'Vera Varying' who, say, experiences extensive spasms that mean they rarely have any control of their limbs. There still seems to be a polarisation of perception where we are either 'inspirational' or 'pitiable' and, increasingly 'deserving or undeserving'. Challenge them on a lack of access and you're still a 'crip with a chip' and instantly 'undeserving' e.g., if I go down the street in my 'chair' thanking people for sharing the pavement with me, I'm that lovely lady in the wheelchair; if I ask someone to move their car off the dropped kerb and point out they shouldn't park there I'm a bitter bitch who thinks the world owes her just because she's Disabled.

Bravery, competent despite their disability, 'lovely'!

Things like being asexual, being helpless and a 'burden' through living on benefits. Lower intelligence, lack of sexuality or need to socialize as "non disabled" do, perhaps dubious morality (they are marked by "god" for sins in a past life?), lack of ambition (what could they possibly expect, anyway?)

A wheelchair or walking stick. The assumption that we are thick and should be pitied. Many people think we are not worthy of being in society and that we 'fake' our disabilities in order to receive DLA.

They mistakenly say 'physical impairment has an effect on ability to perform normal day to day activities.' It is NOT the impairment that has the effect on ability; it is the barriers put in place by society which disable a person. This is known as the 'Social Model' of disability. So society commonly misperceives disability being unaware of the 'Social Model.' Another misperception concerns invisible impairments. Not knowing Percy Jones is deaf, Mrs Evans gets angry when he fails to return her greeting.

These days I fear that it's very negative; we have been portrayed in the media as scroungers and faking our disabilities to get what is not ours. This is, in the main, untrue. If this is not the case then you are either regarded with pity or as "brave". Some people just treat you like everybody else, but not enough, in my experience.

dependency, idleness, bravery, lack of intelligence, asexuality

Wheelchair use. In need of help, shouldn't be alone. Inability to walk.

Disabled people are seen in a different way than non-disabled people because they are in a wheelchair.

People think you are retarded just because you have a physical disability. People talk to your parents rather than you.

What are you most concerned about when you interact with non-disabled people who don't know you personally (on public transport, shopkeepers, someone on the street, future employer, etc.)?:

that they treat me for my ideas, skills, experience, abilities etc and not as a person with a mobility impairment or treat me differently because of my wheelchair. (By the way, we don't have a "physical disability" if you follow the social model of disability as the disability comes from the way society treats us either through physical, sensory, environmental, financial, procedural, attitudinal and other barriers. It is the barriers that make us disabled people not the impairments.) Most people don't understand the social model and make the impairment the focus and don't deal with the barriers. When training, it is clear that people also find it difficult to apply the social model to their everyday work as they are so used to thinking of the disabled person as the problem that they don't consider barriers. They also think in "boxes" e.g., when baby changing tables are put in accessible toilets they are often located too high as they don't think that there are disabled parents/guardians who are parents so they can't reach the facilities. Similarly, many environmentalists don't consider access issues when they recommend energy efficient and other solutions to environmental issues so that many of the solutions create additional problems for disabled people, e.g., water saving toilets that don't have accessible handles, waste disposal systems that are not accessible for disabled people. I also regularly find that when I am with a friend or family and I am using my wheelchair, that people won't speak to me directly but to the person I am with.

That I will be patronised, not taken seriously as an adult in my own right. That people will think that because my legs don't work properly, my brain doesn't either. Invasive personal questions, danger of physical harm

Concerned on public transport that driver will reject my service animal, or think I am lying -- same with shopkeepers. Concerned that shopkeepers will follow me because they suspect I will shoplift. Concerned that I will be asked invasive questions about my medical condition. On the street, concerned that I will get run over in a crosswalk, or yelled at. Concerned that I will become a crime victim. For employment -- concerned that prospective employers will judge me before I have a chance to prove my ability or suitability for the job.

Time, privacy

Things not to do with my disability. Disability most comes into it when I am in danger of being knocked over (e.g., in crowds); when I need help (e.g., I fall over, or need help to get to standing from a seat); or when I am attracted to someone. Also, e.g., in social things that need the body (such as dancing) this becomes more relevant.

I think for me, it is not knowing the response I am likely to experience. Although my disability is visible in a sense that I have a different walking style to the non-disabled community, I do not require any mobility aid. It is therefore perhaps less visible to someone who does require this support. Using a wheelchair or stick creates an obvious statement to the non-disabled community, whereas an abnormal walking pattern does not. For example, I could easily be seen as drunk rather than disabled. I think on the whole, there is a societal demand to be "nice to people in wheelchairs", whereas there is not that requirement for binge drinkers. This means that I cannot always predict how people will respond to me. Is it positive with the disability element, is it negative with the alcohol assumption? It's something that concerns me. And indeed, there is no guarantee the positive disability response will be there - we know just how thoughtless people who have not experienced disability can be.

I am past being concerned how I interact with non-disabled people. I try always if appropriate to be kind and smile. However, I do tell people my name and how I would like to be addressed in particular situations with a non-disabled individual or group.

1. The way complete strangers think it's fine to come up to me and ask questions like 'have you always been that way', 'how long have you been like that', 'what's wrong with you', etc etc (ad nauseum); 2. The way so many strangers seem compelled to comment in your passing (literally) on the street and have such a narrow (and totally impairment-related) vocabulary e.g., 'have you got a licence for that?', 'watch out, you'll get a speeding ticket!'; 3. The flip-side of the above where grumpy or patronising strangers think it completely reasonable to tell you how to drive your 'chair, as in, 'get on the road', 'get off the road', 'slow down', 'easy does it', etc. regardless of the fact that I'm a particularly proficient wheelchair driver.

Their impatience with my slowness, or even an assumed incompetence due to my poor fine motor skills

I'm not really particularly concerned, especially if I'll never see the person again, but it does annoy me when people say 'I'll push you!' (I'm a wheelchair-user) without bothering to ask if any pushing is required. Also, people constantly ask me if I need help, for no obvious reason.

I am concerned that both of us will be embarrassed or that I simply will not be able to meet their gaze and interact with them at all, due to my visual disability and facial difference. Sometimes I am laughed at, or perhaps they are laughing nervously at the situation. Name calling has stopped since I was a child, but the shame that I felt then still surfaces when it is obvious that someone is bewildered with my attempts to look directly at them.

That they will ask invasive questions, try and take a photo of me or assume I am like the dwarfs they see on TV, which is that I enjoy being laughed at because of my height.

Personally I have few concerns but I know others who have. Probably the most common for a wheelchair user (like me), is being talked over and being seen is a close second.

I don't want them to pity me or think I'm brave just because I'm going about my business like everyone else. I hate being stared at, but it seems to be on the increase. I really don't like it when people assume you can't do anything or you need help, just because you are disabled. I just want to be treated like anyone else, unless I ask for help.

being abused, underestimated, patronised

As my disability isn't visible many people don't know I am disabled. When I meet new people I sometimes find it embarrassing when I cannot remember something they told me at the start of the conversation (such as their name, 2 minutes ago). I do explain that I have memory problems if I know I have been told already or if someone appears surprised I don't know - but it's still embarrassing because I don't "look" sick or disabled.

I worry that people ignore me and they don't always talk to me. I don't like meeting new people.

Whether they will have the patience to understand you. Whether they will ask where is your mum or dad?

Imagine yourself in a situation where you notice a non-disabled person treating you differently because of your disability. For example, the other person is focusing mainly on your disability rather than on other aspects of who you are. Describe how you would feel in that situation:

I feel frustrated, sometimes angry if I feel they should know better because of their job etc, and sometimes I despair as it happens so often but always try to explain what they are doing, why it is offensive and how to communicate differently. Sometimes I will make a complaint or help someone else experiencing discrimination to take legal action under the DDA or Equality Act although it is more difficult now that there is no longer any legal aid for taking cases and the EHRC no longer support people in taking claims.

My reaction depends on how I am generally feeling on the day in question, I might be angry, sometimes I rise above it and find it amusing that someone is so stupid to treat me that way, I rarely outwardly show any feelings either way in this situation.

Angry! Get away from this as fast as possible

I have experienced this a lot. Just yesterday, a "friend" laughed at me because I was unable to locate the tip jar in a coffee shop. She would not stop laughing despite the fact that I expressed dismay and disbelief at her actions. This same person thinks I cannot cross a street by myself, and that she should help me, despite the fact that I've told her I travelled all over the world by myself. She is a social worker, and I expected better of her. I am very angry at her, and am re-evaluating our friendship. Pretty sure I'm done with it. When I said, "Why would laugh at me because I couldn't see that?", she just kept laughing, and other people started noticing the incident. I was embarrassed.

Frustrated, bored.

Well I am not thinking of good examples of this. Perhaps doctors might treat me like this? As I said, people I know tend to not acknowledge it so much (which can be problematic in itself). To answer the question I guess I would be offended and think about my other achievements that makes my disability less relevant.

I can think of many examples when I was in education. The continued problems I experienced were differing interactions and teaching styles/projects because I was physically disabled. This was an issue because ironically, the physical disability was not the issue - it was the assumption of delayed intellectual development. As someone who has never experienced any real intellectual delay, it used to infuriate me that my abilities were being overlooked because of a physical limitation that was irrelevant to the situation. If the teaching environment was gym or something, I would be able to understand, but it wasn't - it was everyday lessons such as English and Science where superior physical functioning is (on the whole) not required.

have learned to accept that most of the time I am treated differently and non-disabled people first judge me via my wheelchair. I have extremely thick skin and know that the people I am close with know me for my attributes. Life is too short to use my time and energy to focus on negative energy.

Depends entirely on my mood and the circumstances. Can range from angrily vocal, challenging, or dismissive etc to annoyed but all smiles or simply not prepared to let it spoil my good mood.

It would depend on whether they were asking questions about it, or whether they were drawing attention to my disablement: in the former case, I would welcome the opportunity to teach them about my experiences of it. However in the latter case, I would feel very uncomfortable.

I would feel annoyed, especially if it seemed as though the person was so convinced that he/she was doing the right thing that attempting to challenge the behaviour was essentially pointless.

The first emotion that surfaces is shame, again, from my childhood, when I internalized the name calling and thought that I must be different in a bad way on the inside because I was different on the outside. Then, as an adult, anger surfaces, that I have been put in this position. The anger is toward the situation itself, and also sometimes toward the person. But I don't express this, instead I now find humor in many of these situations, and I feel compassion and even pity for the 'able bodied' person who is so secluded from diversity that he or she is lost when confronting a differently embodied person.

I would feel down and at the same time angry. I would just want to get out of that situation. It brings you down because you see this person as very backward but you know if you point out what they are doing they will see you as the angry disabled person who can't accept their disability.

I do voluntary work in a milieu which focusses on equality and discrimination so I suppose I feel challenged. I certainly challenge the person.

I get annoyed, and people don't seem to understand why. If they offer help when it's not needed it's embarrassing and awkward, and I can't seem to stop myself from being rude.

Would give me a sense of frustration more than anything

I don't mind telling people about my condition but will then move conversation on to other subjects.

I would feel sad.

I would feel very upset, very annoyed and I would tell someone.

Would you ever feel embarrassed in the above situation? If yes, tell us more why you might feel embarrassed:

If it happens in public and I feel humiliated especially if I am not feeling well but usually I more often feel angry or take positive action to deal with the situation. My children are more likely to be embarrassed as they don't like me to complain or "make a fuss" although they will usually support me.

I feel less embarrassed the older I get, I certainly did in my teens and early twenties before I had the life experience I now have. I sometimes feel embarrassed on behalf of the non-disabled person because they are behaving so stupidly! The only time these days that I might start to feel embarrassed is if I can't get a word in edgeways and the situation goes on for a long period of time.

No, just angry

Oh, yeh, just said I was embarrassed. The person's laughter drew attention to my impairment, to the incident. The person behind the counter witnessed the whole thing, and I was embarrassed for him because it became so awkward. I was embarrassed that I was with this person who could be insensitive and stupid. I was embarrassed for her that she acted so unkindly, and her laughter was a reflection on her own attitude toward impairment and disability. Once I got home and reached out to other disabled people, I was no longer embarrassed. They helped me understand the incident was not about me, rather, it was about the woman acting badly.

If they were talking loudly.

Yes, it depends on context though. Who is it in front of?

Embarrassed no, not so much. Frustration more than anything in that I was trying to demonstrate my ability, and not being able to show it. I suppose I did feel an element of embarrassment when my teaching routine was different to my non-disabled peers. As I knew I was at least as intellectually competent as them, having to attend classes that were associated with "special learners" emphasised my personal feeling of difference, and all the negative emotions that stemmed from that, such as embarrassment.

Why would I let ignorant people make me feel embarrassed? I think your question is horrible.

I'm more likely to be embarrassing than embarrassed.

Yes, in the second situation I would feel embarrassed as I would feel like a failure in some way

Possibly, if the person started asking intrusive questions.

Yes, I feel embarrassed both for myself and for the other person. This happens all of the time in my classroom, in fact (I am a college prof). I will be looking directly at a student, asking them a question, and they will not respond. I'll ask again (this is before I've learned all their names -- a necessary but difficult task!) and they'll look behind them and to either side to see if the other students are being addressed. Then they'll turn to me and point to themselves. "Are you talking to me?" they'll ask. Yes, I'll say, trying hard to hold my head so that my eyes look like they're focusing on the person. There will be tittering in the room, and I don't know if the others feel embarrassed or just amused, but I know that I am -- and a bit peeved, too. Sometimes I'll just give up and lower my eyes so that I won't embarrass them/myself.

Depends. I probably would because I have an embarrassing disability. My disability is associated with humour and freak shows and thus by focusing on it most people think of om-pah lumpahs and silly dwarfs humiliating themselves and thus if the focus is on my disability, it is embarrassing

No.

Yes, because I'm not being treated as others would be - it makes you stand out, which is the last thing I want, most of the time. They don't put themselves in your place - they just assume without asking. I'm sure they'd ask other people in that situation but we don't get the same consideration.

yes, particularly if my ability to cope is being questioned or I'm being infantilised

I think I gave up being embarrassed about my disabilities years ago; they are just something I have to live with.

I would feel a bit embarrassed because they think they are better than me.

Yes, because I would be like they are undermining me.

If you feel that you have been treated differently because of your disability by a non-disabled person, how would you react to him/her?:

As before, I will point out the problem and try to explain how best to communicate with a disabled person, whether it is attitude, language, procedures etc. Sometimes if they don't acknowledge the issue and they represent a company or service provider, then I will complain.

Most people understand once the issues are explained to them but it is exhausting doing it regularly.

If I can educate people nicely I will however, like many non-disabled people, I too have a busy life and tend to just brush off these incidents and carry on as quickly as possible. Politely ending an interaction and moving on quickly is often the best way without risking protracted discussions!

Avoid any further interaction as fast as possible

It depends on the situation. If they were strangers that I would never see again, I might just let it go. Learned to choose my battles, and when it's worth trying to educate someone. If it happened during a transaction, such as when shopping or at an airport, I would ask to speak to the person's supervisor and/or I would file a formal complaint. I have done this before.

Get as far away as quickly as possible

Well sometimes I am angry with people when I don't get access; sometimes I try to explain; sometimes I stay calm; sometimes I ignore. It's quite a range! Ideally I would stay calm, explain if there was an opportunity and move on.

The education scenarios I've just talked about did make me feel uncomfortable, but I felt there wasn't really anything I could do to change it. If I did show any element of confrontation, it would always be used against me, such as in terms of punishment, further work, or greater segregation in more classes than I was already experiencing. So certainly, there was a great feeling of powerlessness. If I experienced the same thing today, I would certainly be able to deal with it in a different way, and be able to stand up for my rights. Saying that though, I am also very aware of what I find difficult. In this sense, I regularly experience different treatment with regards to physical tasks. On the whole, this is a very positive thing, as although it is obviously different treatment, it is more personalised to my needs. If this different treatment was one with a negative undertone, I would certainly kick up a fuss though!

Most of time I ignore the non-disabled person or situation when I am treated differently because of my disability. However, if the treatment truly was a violation that needed attention I will file with the US Dept. of Justice

See previous answers

I would just accept it at the time, and wait for an opportunity to raise the subject later I'd try to avoid further encounters with the person. If I had sufficient presence of mind, I'd say something sarcastic to demonstrate my displeasure. Although to be honest, I might just let it go and feel annoyed about it by myself.

Honestly, at this point in my life I just dismiss them. If it's a student, I will continue to treat them the same as others, of course, and perhaps even "out" myself with them regarding my disability, so that it's a learning experience for them. But with colleagues or other acquaintances, I don't bother. They're not worth my time, I've done my bit to educate the world.

Depends on the person, I would either point it out or just walk away from them

I would challenge him/her.

I quite often get annoyed, which means they get snotty as well. It doesn't help anybody really. I'm sorry to say that I tend to snap, but it does wear thin after so long and it does happen more and more. It's worse when people mock or stare, though.

If it's out of ignorance I'd try and educate them. If out of prejudice I'd ignore them if possible, if not, I have become sarcastic and abrasive

I sometimes get frustrated if someone is trying to help by doing things quickly (because I can't assimilate information quickly) or is telling me "you must remember this" after I have assured them I do not. Sometimes people over-compensate & don't include me in things they think I might find tiring (but don't ask me if I'd be OK).

I would say that I can do the same things as non-disabled people.

I would tell them to stop treating me like I am an alien.

To what extent do you think non-disabled people can understand exactly what it means to live with a physical disability?:

Not at all, even my best friend doesn't always understand. It is the exhaustion, the time taken to do things, I get fatigue a lot so have to organise my life rather differently to most people and it is costly and I have to manage my finances carefully. The pain issues are also something people don't understand unless you have it yourself. Also, it gets more complicated when you get additional health problems especially if you can't exercise or cook as effectively as you would like. Also housework is an issue.

Not at all, just as I can't understand how someone can walk when they can feel their feet, I think it is impossible to understand something fully unless you have experienced it first-hand. My mum who has observed me since birth openly admits that she cannot put herself 'in my shoes' so to speak.

No extent at all

I think they cannot completely understand ever. I think they might be trained to act appropriately (not in an "etiquette" kind of way, but in learning how to be a good ally, but that is the best we can expect of them.

50%, usually after years of informal education.

I don't understand "exactly" what it means to live with a disability myself! I disagree with splitting the world into "non-disabled" and "disabled". Disability is part of the life course of all of us. And how can I tell of the people I am interacting with whether they are disabled or not? Maybe they have a disability that isn't visible. Oh, and yes, can I, as a physically disabled person understand what it means for another person to live with a physical disability? Partially, if I spend time with them and groups of people who are disabled. So I think a non-disabled person can understand in the same way, if they spend time with physically disabled people and are sensitive to what is going on.

To me, it means very little. I was (lucky!?) to have been born with my disability, and therefore have not known anything different, and so this is normal to me. I guess I would feel differently if it was acquired later on. I think the "disability" aspect comes from a deficiency in general society in terms of dealing effectively with disability. For example, we would never say that women or racial minorities are a problem, it is always the responsibility of society to change to meet particular requirements, such as adopting programs that encourage women into work. The same thing should be adopted with disability. I'm not sure if this answers your question, so apologies if not.

Cannot

They can't unless they've had quite close and extensive experience of it i.e. an intimate relationship (parent, child, lover, friend) from sharing all aspects of life with a Disabled person. I don't particularly think this is unreasonable - it's just the nature of things, whether it's about disability, homelessness, serious debt/poverty etc. What I mind is when people start seeing you as the problem because it's difficult, say, to find a holiday/restaurant/walk that is accessible.

Not very much - they still use specific examples of, perhaps one disabled person they might know, who may not have the same disability as myself they might think that because we dope there isn't a problem, and they struggle to accept the reality coming from the disabled person themselves - they wait for 'the experts' to tell them. Please note that this includes parents as much as strangers!

To an extremely limited extent! Whilst there's a vague notion that 'impairment equals suffering', there doesn't seem to be any real understanding that the way you are treated by others might matter, and that their treatment of you actually constitutes behaviour.

Very little -- although they'll try to identify with you. "Oh, I have one finger shorter than the other." "Oh, I broke my leg once so I know what it's like." But to be fair, we're all on a spectrum of ability, so I'm a little uncomfortable with this entire binarized us/them assumption that these questions are based on. Perhaps it is fairer to say that some of us identify as disabled, while others do not (yet!) identify so.

It is very limited. I think if you explain to some people they will listen and even if they don't understand fully they will consider your needs. Other people are quick to tell you that you are not disabled and that you don't need help, i.e. the conservatives. There is so much connected to disability both spatially and socially, they only way you can truly understand what it is like to be disabled is to be disabled, otherwise your understanding will be very limited. Social workers, read a few text books on the most common types of disabilities and then think they understand, which is why many don't listen to the actual person with the disability which usually means they don't receive the required help that they need.

In my experience it takes a lot of time and repeated education. I have single sided deafness and my wife still still shouts at me that I have the TV on too loud! A prime example is the current widespread public belief that we're all 'scroungers' and 'layabouts.' There are though a few non-disabled people who have a full appreciation of disability and who do much work alongside us to educate others.

They can't. It's as simple as that. You have to experience it to understand, and most of them never will - even if they care for someone who is disabled, they will never know what it's like. And no, it doesn't count that "I broke my leg once".

I don't think they can as some physical disabilities change the whole way you have to live your life. I know that before my amputation I could imagine what it might be like but that was nothing like the reality of the situation. Even as someone with an existing congenital disability, that experience was not able to accurately inform my ideas of what my acquired would actually feel like and the effect it would have on my life.

It varies a lot between individuals & partly depends how much contact they have had with many disabled people. To what extent can any person understand exactly what it's like to live anyone else's life?

They can understand a little bit but not fully.

I would say some can understand and some cannot. They would only understand a little bit.