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# FICTION AS MEDIATED CONTACT: MECHANISMS OF FICTION ASSOCIATED WITH LOWER PREJUDICE TOWARDS SEXUAL AND GENDER MINORITIES

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# ABSTRACT

Fiction is an open door into experiences that are beyond the here and now. It allows us to live different lives, visit different worlds, and meet people we might not find in our everyday paths. Engaging with fictional stories can thus help people expand their understanding of their social world. Social Psychology researchers have acknowledged the power of fiction by adopting stories as contact strategies to reduce prejudice from one group to another. The present work builds on research showing that engaging with fiction improves audiences' attitudes towards others. This thesis investigates psychological mechanisms involved in the relationship between fiction and prejudice reduction, by testing audiences' responses to fictional characters that portray individuals from sexual and gender minorities. These mechanisms are examined through five studies in terms of engagement with the story, and of individual characteristics which modulate this engagement. One study investigated prejudice towards gay men and lesbians, while three others focussed on prejudice towards transgender people. One more study shifted the focus from prejudice to identity processes linked to fiction engagement in transgender individuals—a group traditionally misrepresented by the media. In these studies, participants read or viewed stories, and answered a questionnaire about these stories and the people represented by the characters. The main results showed that emotional engagement with a story was associated with lower prejudice, while individual characteristics had no effect in this engagement. This thesis integrates fiction into a contact theory framework in two ways: First, it outlines the common ground between contact and fiction on the basis of emotions; second, it characterises the unique contact experience that fiction affords to audiences by using characters to blur the line between "us" and "them". Overall, this thesis examines fiction mechanisms that help recognise sexual and gender minorities as ordinary inhabitants of the social world.

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# CONTENTS

# CHAPTER 1
# INTRODUCTION AND THESIS OVERVIEW

> Most of us can't rush around, talk to everyone, know all the cities of the world, we haven't time, money or that many friends. The things you're looking for, Montag, are in the world, but the only way the average chap will ever see ninety-nine per cent of them is in a book.
>
> —Ray Bradbury, *Fahrenheit 451*

The quote above defines concisely the value of books, or rather the stories they carry inside. In the novel *Fahrenheit 451*, however, books are burned because of that value: stories show readers possibilities of all kinds, a deed which authorities and most citizens in the novel perceived as a threat. It does not matter that many of these stories, like *Fahrenheit 451* itself, are not accounts of events that happened; these made-up stories called fiction speak about psychological and social realities as much as, or maybe even more, than factual accounts (Oatley, 1999). Scholars at the intersection of Psychology and Literary studies regard fiction not as mere entertainment to pass the time, but as an opportunity for people to expand their own selves, their viewpoints, their social worlds; to transcend their "here and now" and, in turn, change it. In this sense, researchers investigate fiction as a way for people to come into contact with the lives of others who are unlike them, to foster understanding and positive emotions towards these others, which can translate to positive experiences in the event of a face-to-face encounter.

One of the psychological and social realities that fiction reveals is people's experiences regarding sexual orientation and gender identity. In unveiling these experiences, fiction can expand the audience's understanding of human diversity, and specifically, of the lives of those who remain hidden or misconstrued in the social world. This potential of fiction to increase audience's acceptance of sexual and gender minorities is the focus of this thesis.

Sexual orientation and gender identity encapsulate a person's deepest sense of self (Clarke, Ellis, Peel, & Riggs, 2010; Olson, Key, & Eaton, 2015). At the same time, these two constructs structure daily life and its social roles; set expectations about oneself and others regarding appearance, desire, and behaviour; and enforce entire life trajectories. In this thesis, those who meet prevailing societal expectations for these aspects of life make up the high-status group, that is, cisgender and heterosexual individuals (cis-heterosexual from here on in). In contrast, the low-status group is referred to here as sexual and gender minorities, namely, the collective of lesbians, gay, bisexual, and transgender people, and other queer identities (LGBTQ). As described in Chapter 2, advances in the social acceptance of sexual and gender minorities are not equal worldwide nor for all people represented in that acronym. Overall, LGBTQ individuals

and groups commonly remain invisible, demonised or excluded from most domains of daily life. This negative treatment derives from the high-status group's hostile attitudes, or prejudice, towards sexual and gender minorities, which to this day are prevalent even in countries that formally recognise the rights of LGBTQ people (Cramwinckel, Scheepers, & van der Toorn, 2018).

Social Psychology research offers several proposals to tackle prejudice towards sexual and gender minorities. One approach that holds robust empirical support is intergroup contact theory, a framework that studies interactions between members of two social groups (Paluck & Green, 2009). Based on a coexistence approach (Hammack & Pilecki, 2015), contact theory involves promoting encounters between a high-status and a low-status group, under controlled conditions, to reduce prejudice from the former to the latter. In the field of sexual orientation and gender identity, however, face-to-face encounters between cis-heterosexual and LGBTQ individuals are not always possible for a number of reasons. Contact theory researchers have thus tested indirect forms of contact, that is, contact that does not involve an in-person interaction between individuals. Indirect contact is not considered a substitute, but rather a preparation for direct contact, and as such there is evidence that indirect contact improves intergroup attitudes, paving the way for positive future interactions. One form of indirect contact with a modest but growing body of research (e.g. Oatley, 1999; Paluck & Green, 2009; Tamir, Bricker, Dodell-Ferrer & Mitchell, 2016) is the use of stories, particularly fictional ones.

## 1.1. Aims of this thesis

Building on evidence that characterises fictional narratives as an effective way to improve intergroup attitudes, the general aim of this thesis was to examine mechanisms that support the association between fiction exposure and prejudice reduction. Fiction is understood in this research as part of mass media, referred to here as *media*, a collection of one-way communication technologies—including but not limited to television (TV), films, books, and newspapers—intended to reach large audiences (Merriam-Webster, n.d.-a). Studies about the outcomes of engaging with fiction have most frequently addressed written fiction. Written fiction is predominantly used in the studies in this thesis, but fictional narratives in audiovisual form (termed here TV series, or web-series if found on an online platform) are also included. The characters in the fiction stories used in this thesis are individuals from sexual and gender minorities, specifically, gay[1] (Study 1) or transgender (Studies 2 to 5) individuals.

This thesis examines the association between fiction portraying characters from sexual and gender minorities and lower prejudice, via two sets of mechanisms. The first set involves psychological processes that connect the story with the audience's response; these processes

[1] See Study 1 (Chapter 4) for a comment on why prejudice towards bisexual people was not examined in this research.

involve emotions caused by, or related to the story, which in turn are dependent of the person's level of immersion in that story. In this sense, previous research has found that the power of fiction to influence people's attitudes depends on the degree to which audiences become "absorbed" into the story (Green & Brock, 2000; Richter, Appel, & Calio, 2014). The second set of mechanisms includes audience characteristics, referred to interchangeably in these studies as individual differences, to test whether they modulated audience members' response of the story. In both contact (Voci & Hewstone, 2003) and in fiction (Adarves-Yorno et al., 2008; Kaufman & Libby, 2012; Payne & Dal Cin, 2015), research has found that the audience member's identity, and the identity of the character, can influence the former's response to the latter. Through four empirical studies, Studies 1, 2, 3, and 5, this thesis investigates prejudice responses of high-status audience members after fiction exposure to low-status group characters. One more study, Study 4, examines how transgender individuals, members of a low-status group traditionally misrepresented in the media, relate to media and fiction, and whether identity processes modulate their responses. Taken together, these studies provide insight into the mechanisms of fiction, and their impact in the audience's stance towards others or towards themselves.

## 1.2. Overview of chapters

This thesis is divided into eight chapters. In general terms, Chapters 2 and 3 lay the theoretical foundations of the overall approach of the studies conducted. Next, Chapters 4 to 7 report the five empirical studies conducted, presenting the theoretical frameworks that informed the studies, followed by their method, results, and discussion. Lastly, Chapter 8 integrates the study findings with previous research, indicating limitations and future directions for fiction research and media representation of sexual and gender minorities.

Following the present chapter, Chapter 2 introduces the three theoretical cornerstones of this thesis: Prejudice towards sexual and gender minorities, the use of contact theory to address conflict between groups, and the inner workings of fiction to communicate social information through stories. Chapter 3 integrates these three approaches. It does so by reviewing previous findings that show the relationship between fiction exposure and changes either in attitudes towards others, or in processes related to the individual's own emotions and self-reflection.

The next chapters report the five empirical studies that support this thesis. In general, all studies followed an experimental design, in which participants read or viewed stories, with or without characters representing the low-status group. Participants then answered questions about their engagement with the story, and other measures of either intergroup attitudes (Studies 1, 2, 3, and 5) or self-concept assessment (Study 4). In three of these studies (Studies 2, 3, 5), implicit associations with the low-status group were also examined. Each of the five studies has a distinctive focus in relation to fiction mechanisms: comparisons between imagined contact and

fiction (Study 1); semantic networks (Studies 2 and 3); intergroup anxiety and implicit associations (Study 5), and a self-concept measure termed identity congruence (Study 4). All chapters reporting the empirical studies are divided into four parts: theoretical framework, method, results, and discussion.

Chapter 4 delves into the first study of this thesis. This study built on imagined contact research, which has shown that this intervention can contribute to reduce prejudice towards sexual and gender minorities. The question that gave way to this study was whether participants exposed to a narrative that was more structured than an imagined contact script, that is, a fictional story, would report lower prejudice towards gay men and lesbians than participants who imagined contact. Therefore, Study 1, conducted online, compared sexual prejudice levels reported by heterosexual participants after either exposure to fiction with gay characters, or to imagined contact with a gay individual or a control. The mechanisms tested in this relationship were dimensions of engagement with a story (e.g. emotions, familiarity with the story), intergroup attitudes (e.g. preference for group hierarchies), and participants' country of origin (i.e. with high versus low sexual prejudice).

The findings and overall research experience from Study 1 informed decisions regarding the next studies. Studies after Study 1 tested more specific relationships between variables (i.e. fewer variables), and included measures of semantic associations and implicit attitudes to identify potentially unconscious responses to fiction (Chapter 2). Furthermore, the target group for prejudice switched from gay men and lesbians to transgender people. The reasons for this change are explained in detail in the General Discussion (Chapter 8), but the core of the matter was not only the scarce research on contact with transgender people when this thesis began developing (a research field that is growing at the time of writing this chapter), but most importantly, the blatant anti-transgender climate that prevails worldwide (Chapter 2). Therefore, the next three studies after Study 1 focussed on prejudice towards transgender people, or transnegativity. Moreover, these latter studies motivated the interest in acknowledging low-status groups not only as characters but as audience members; hence, Study 4 reported in this thesis addresses experiences of transgender individuals with media and fiction.

Despite this switch in target group following Study 1, the mechanisms linking fiction exposure and prejudice levels remained the focus of this thesis. Studies 2 and 3, reported in Chapter 5, examined participants' level of transnegativity after exposure to transgender characters. The common thread in this set of studies was the evaluation of responses to these characters in the form of semantic associations; that is, to observe whether meanings attributed to the concept "transgender" varied as a function of reading a story with transgender characters. Positive findings in this regard would suggest that fiction entailed a scarcely researched mechanism in fiction (Johnson, Jasper, Griffin, & Huffman, 2013), semantic changes, which in turn

would be linked to prejudice levels. Study 2 focussed only on the measure of semantic associations after reading fiction, while Study 3, followed the experimental design set in Study 1. In the latter study, mechanisms related to the story (mediators), and to the reader (moderators), were examined as potential links between fiction exposure and transnegativity levels, in addition to testing semantic associations related to the story.

The first study in Chapter 5, Study 2, was a qualitative experiment (Ravasio, Guttormsen-Schär, & Tscherter, 2004) conducted online. In this study, cisgender (non-transgender) participants read a fictional story featuring either transgender or cisgender characters, and reported the words they associated with the concept "transgender"; these semantic networks were compared between these two groups. The second study in this chapter, Study 3, built upon the strengths and shortcomings of Study 2. This study was conducted in the lab, and it tested the association between fiction and transnegativity by examining participants' engagement with the story (i.e. identification with the character), and individual differences (i.e. identification as a cisgender person) as intermediaries in this relationship. This study included the semantic network technique used in Study 2.

In Chapter 6, Study 4 is reported. This study examines a psychological mechanism prompted by fiction exposure, identification with the character (similar to Study 3), but it differs from the other four studies of this thesis due to the group under study. In Study 4, the audience are not high-status group members, but low-status ones, seeing themselves represented in fictional stories. In this study, transgender participants read or viewed two stories online, one with transgender and the other with cisgender characters. Rather than looking at prejudice as the outcome of fiction exposure, in this study the end-result was identification with the character (transgender or cisgender), in interaction with an audience-related variable, an aspect of self-perception termed congruence. This study also explored the participants' long-term engagement with media and fiction, which have traditionally ignored or misrepresented transgender people. The inclusion of this study in this thesis responds to an interest of examining the mechanisms of fiction as a social tool, not only in the form of intergroup contact, but also as a medium to link together members of the same disadvantaged group (Bandura, 2011; see also Chapter 6).

Chapter 7 presents the last study of this thesis, Study 5, which returns to the outcome of prejudice, following the experimental template of Studies 1 and 3. This study, conducted in the lab, tested the relationship between cisgender participants' exposure to transgender fictional characters and their reported transnegativity. This study sought to integrate fiction to the contact theory framework by testing one mechanism that, according to research, explains the effectiveness of fiction and of contact, separately: emotions. Emotions were addressed in this study using the construct of transportation from fiction engagement studies, and that of

intergroup anxiety from contact theory. Moreover, this study considered the potentially unconscious responses to fiction by including an implicit association task.

The last chapter of this thesis, Chapter 8, is a general discussion of the findings from the five studies described above. This chapter presents a summary of findings, positioned within relevant literature on fiction and contact, and states the academic contributions and practical implications of these results. Theoretical and empirical limitations are also reviewed, with recommendations on how future studies can overcome them. This chapter closes the thesis with conclusions about the mechanisms and the value of fiction as mediated contact.

## 1.3. Contributions to the study of mediated contact and prejudice reduction

This thesis contributes to expanding the literature about prejudice reduction and the social purposes of fiction on three fronts. The first one relates to the focus in the relationship between fiction exposure and prejudice reduction: This thesis centres on the connecting dots that join one with the other, particularly those that are common to fiction and contact. Research on mediated contact with sexual and gender minorities tends to focus on the outcome, that is, cis-heterosexual audiences' prejudicial responses to LGBTQ groups after exposure to LGBTQ fictional characters. This thesis contributes to the literature by testing the impact of contact-related variables (e.g. the group to which audiences and characters belong to), and fiction-related variables (e.g. engagement with the story), on the relationship between fiction exposure and prejudice reduction.

The second contribution of this thesis is the proposal of fiction as a distinct form of indirect contact. Researchers have established the use of media in general, and fictional narratives in particular, as a tool that helps reduce prejudice (Johnson, 2013; Vezzali et al., 2012; Solomon & Kurtz-Costes, 2018). As described through this thesis, fictional narratives that serve as contact between cis-heterosexual audiences and LGBTQ groups are typically categorised as parasocial or vicarious contact (Chapter 2). This thesis encourages to define fiction as a separate form of contact which—while it overlaps with other forms—allows audience members to blur the line between their own self and that of the character (Decety & Grèzes, 2006). This interest in categorising fiction as a distinct form of mediated contact is reflected in this thesis by including measures which are, not exclusive to, but strongly linked to fiction and overall media responses, such as semantic associations (Chapter 5) and implicit attitudes (Chapter 7).

Lastly, this thesis develops the role of sexual and gender minorities in contact and media studies as more than targets of prejudice and narrative characters, but also as creators and audiences of the narratives in which they are represented (often poorly, see Chapter 2). To this day, studies of contact, direct or indirect, with sexual and gender minorities focused on prejudice towards lesbians, gay men, and—less so— bisexual individuals (Chapter 2), with interest in

contact with transgender people emerging in more recent years (Flores, 2015; Tadlock et al., 2017). With the exception of Study 1 (Chapter 4), the other four studies in this thesis focus on the latter subject, and the stories featuring transgender characters used in these studies were created by transgender authors. Throughout the thesis it is argued that the use of stories authored by members of the target group is crucial to ensure the proper "presence" of this group in the mediated contact situation.

This characterisation of fiction as contact with sexual and gender minorities is built upon a literature review and five empirical studies. Through these studies, the narrative and extra-narrative elements that make fiction a suitable option for prejudice reduction interventions (Studies 1, 2, 3, and 5), and identity-building processes (Study 4) are examined. Ultimately, this thesis investigates mechanisms and effects of what Mar and Oatley (2008) called the function of fiction, that is, the abstraction and simulation of social experiences.

# CHAPTER 2
# A THEORETICAL FRAMEWORK CONNECTING INTERGROUP RELATIONS, SEXUAL AND GENDER MINORITIES, AND FICTIONAL STORIES

This chapter introduces the three theoretical cornerstones of this thesis. These theoretical foundations speak of tendencies that are inherent to the human experience: establishing relationships with people like us and unlike us; giving meaning to ourselves and others through sexuality and gender; and structuring the world through stories. The aim of this chapter is to characterise the negative relationships between sexual and gender minorities and their high-status counterparts, and to explain how fictional narratives can serve as a form of contact between these groups to improve these relationships. This contact framework falls under a coexistence approach (Hammack & Pileck, 2015), which aims to find common traits or experiences between members of the two groups in conflict, and to stimulate positive attitudes towards individual members, which can then be generalised to the whole group.

This chapter is divided in three sections. The first section defines the most relevant characteristics of prejudice addressed in this thesis, and establishes the groups that populate the studies of this thesis. The second section explains what Contact theory is, its diverse modalities, and why indirect contact can be a sound alternative to address prejudice. The third and last section of this chapter uncovers the nature of fiction to explain its influence in the real world, which can either benefit or harm the inclusion of sexual and gender minorities in everyday life.

## 2.1. Prejudice towards sexual and gender minorities

> All animals are equal, but some animals are more equal than others.
>
> — George Orwell, *Animal Farm*

In George Orwell's novel *Animal farm* (1945), farm animals revolt to gain freedom from their human oppressors, the farmers. "All animals are equal" is their war cry, and they come together to fight a common enemy. Once the farmers are defeated, however, other animals take their place as oppressors: The pigs position themselves above the rest of the farm animals, those who were deemed equals under different circumstances. In the novel's allegory of totalitarianism, this turn of events is a cautionary tale about the shifting boundaries regarding who belongs –and who does not– to our social circles (Brewer, 1999). Group membership is a powerful lens through

which we evaluate and relate with ourselves and others, and it can be the basis for conflict and hostilities between groups, or from one group to another.

Individuals have an innate tendency to search for patterns to categorise themselves and others according to common features (MacInnis & Page-Gould, 2015). Two basic social categorisations emerge from taking an individual or individuals as the point of reference: The ingroup, those who are like "us", and the outgroup, those who are not like us, "them" (Cuhadar & Dayton, 2011). This thesis refers to the ingroup as the group that expresses prejudice and is a *high-status group*, and to the outgroup as the target of prejudice and positioned as a *low-status group*.

### *2.1.1. Defining prejudice*

The negative perceptions of individuals based on their group membership have been widely researched as an intergroup phenomenon termed prejudice (Cooley & Burkholder, 2011; Paluck & Green, 2009). Prejudice is composed of a wide range of attitudes, emotions, and behaviours that imply negativity from high-status members towards low-status members (Brown, 2010). Researchers and decision-makers link prejudice to a diversity of social problems that result in discrimination, exclusion and violence from high-status to low-status groups (Paluck & Green, 2009), which translate into adverse social, political, and health outcomes for the latter (Broockman & Kalla, 2016). Additionally, contemporary research argues that prejudice is not only determined by hostility (Dixon, Durrheim, Keer, & Thomae, 2013), as the ingroup may simultaneously hold negative and seemingly positive perceptions about the outgroup. For instance, sexism can be hostile (e.g. "women are less rational than men"), but also benevolent (e.g. "a woman needs a man to protect her") (Glick & Fiske, 2001).

Durrheim, Quayle, and Dixon (2016) claimed that prejudice, outside of academic definitions, is defined collectively based on how people make sense of their encounters with others (Dixon et al. 2005). These experiences entail a constant reformulation of the nature of prejudice, where ingroup members set boundaries on how to treat outgroups, and who is included in the ingroup under "reasonable grounds" (Passini & Morselli, 2016). In this sense, people can be motivated to express prejudice, even if they do not consider themselves prejudiced (Forscher, Cox, Graetz, & Devine, 2015), that is, "superficially plausible" (Herek & McLemore, 2013) arguments are used to justify the rejection of an outgroup. For instance, arguments in favour of discrimination of gay and bisexual people by conservative politicians, who place the rationale of this discrimination outside their attitudes: discrimination is "not prejudice", but an interest in protecting the institution of marriage, and children's well-being (Burridge, 2004). In other words, individuals can define prejudice in manners that allow them to distance from it. High-status

groups can thus render prejudice difficult to measure, as their members justify their prejudice by framing it as a reasonable stance that protects their own group.

*Right-Wing Authoritarianism and Social Dominance Orientation*

The study of prejudice has identified two constructs that reflect a person's tendency to establish intergroup boundaries and hierarchies. These constructs constitute the ideologies[2] termed Right-Wing Authoritarianism (RWA) and Social Dominance Orientation (SDO). The literature characterises RWA and SDO as individual differences that predict generalised prejudice (Ho et al., 2015; Hodson, McInnis, & Busseri, 2017; MacInnins & Page-Gould, 2015). These two constructs have been shown to correlate with personality traits, yet they are "surface" constructs that are sensitive to situational factors, such as being reminded of one's group membership, or entering a new social context such as university (Akrami, Ekehammar, Bergh, Dahlstrand, & Malmsten, 2009; Bergh & Ekehammar, 2010; Jetten & Iyer, 2010).

RWA is considered an intragroup phenomenon, whereas SDO is an intergroup phenomenon (Whitley, 1999). On the one hand, RWA measures the person's tendency to follow established conventions and authorities within their group (Al Ramiah & Hewstone, 2013; Whitley, 1999). People high in RWA comply with authorities to maintain traditional values (Funke, 2005) and to protect social norms, that is, the collective perception of how people behave or should behave in society (Paluck & Green, 2009). Such compliance often requires oppressing outgroups who are perceived as threats to these values and norms (Crawford, Brandt, Inbar, & Mallinas, 2015). On the other hand, SDO reflects support for group-based hierarchies. People high in SDO hold negative attitudes towards groups that push for social equality, such as gender and sexual diversity groups, and tend to avoid contact with them (Mata et al., 2010). They opt instead for hierarchical intergroup relationships, and for sustaining the superiority of the ingroup while legitimising discrimination and domination over outgroups (Ho et al., 2015; Passini & Morselli, 2016; Whitley, 1999).

*Explicit and implicit prejudice*

Prejudice has been studied as either a conscious or unconscious response to others. Traditionally, research has framed prejudice as *explicit attitudes*, that is, researchers assumed that individuals are aware of their prejudicial responses to objects, people, or events, and can consciously control these responses (Dasgupta & Greenwald, 2001; Tinkler, 2012). In contrast, *implicit attitudes* manifest automatically and unconsciously, that is, outside of people's awareness (Greenwald et al., 1998; Lai, Hoffman, & Nosek, 2013; Payne & Dal Cin, 2015).

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[2] Jessee (2012) defines an ideology as a person's cognitive model that structures their understanding of, and their interaction with the world around them.

The current literature on implicit prejudice posits that the physical and social environment in which the person is immersed shapes the link between a target and its evaluation (Lai, Hoffman, & Nosek, 2013; Karpinski & Hilton, 2001; Phills, Santelli, Kawakami, Struthers, & Higgins, 2011). In other words, as explained by Hinton (2017), people learn group-based beliefs as part of their socialisation (e.g. the nature of outgroup members and what to expect from them), and these beliefs become firmly established in the individual's memory. According to this researcher, implicit stereotypes—overgeneralised attributes automatically associated with a social group— persist through the individuals' experiences in their social world. These stereotypes can be automatically activated when ingroup individuals encounter members of the stereotyped outgroup, even if the individuals consider themselves non-prejudiced. Implicit prejudice can therefore be understood as a result of combining memory processes, personal experiences, and the normative environment (Jost et al., 2009).

One important environmental source of social information is mass media (Bandura, 2011). Hinton (2017) declared that media can both reflect and change the associations that are prevalent within one's culture. For instance, a study by Igartua et al. (2014) showed that consistently negative portrayals of minorities in television fiction can encourage and reinforce prejudice among majority audiences. This study did not make the distinction between explicit and implicit attitudes, but Payne and Dal Cin (2015) provide support to the relationship between media portrayals and prejudice in implicit terms. These researchers found that depictions of Arabs and African-Americans in TV news and videogames resulted in more short-term implicit negative attitudes towards these minorities when their members were portrayed as criminals or terrorists. Overall, research findings suggest that the development and maintenance of implicit attitudes can be linked to media exposure (Blanton & Jaccard, 2015; Hinton, 2017; Payne & Dal Cin, 2015).

**A LOOK AHEAD: PREJUDICE IN CONTEXT**

Prejudice comprises a broad set of attitudes that imply negativity from a high-status group to a low-status group. These attitudes are informed by individual and environmental factors, such as, respectively, ideology and what people perceive is accepted or customary within their group (i.e. social norms). Prejudice is better understood in context, however, and the next section characterises the high-status and the low-status groups that provide the framework to examine prejudice in this thesis.

### *2.1.2. Prejudice towards sexual and gender minorities*

*Sex and gender*

Sex and gender are amongst the most fundamental categorisations that organise and give sense to our social world (Fast & Olson, 2017; Gressgård, 2010). In simple terms, sex refers to the individual's physical or biological attributes (Lee & Kwan, 2014). Traditionally, sex is equated

with genitalia: Vaginas for females, and penis and testicles for males. However, research in genetics and biology demonstrate a much more complex picture, in which sex comprises a spectrum rather than discrete categories (Ainsworth, 2015). Roughgarden (2013) extensively reviewed the complex biological interplay between genes, chromosomes, hormones, and anatomy, seen not only in humans but also in species across the animal kingdom. This researcher thus asserted the myriad of ways in which sex manifests in an individual (e.g. it is appearance and size, and not the gonads, which signal roles and behaviours of an individual within a social structure). Subsequently, gender –in humans– can be understood as a person's expression of sexual identity in a cultural context (Roughgarden, 2013).

From the common understanding of sex and gender, societies tend to recognise two groups, men and women. Each group is associated with a distinct set of body features –male or female, and an array of traits, behaviours and roles –masculine or feminine. One's sex and gender become decisive factors in education and employment pathways, and in the responsibilities assumed regarding childcare, household duties, and interpersonal relationships (Carroll, Güss, Hutchinson, & Gauler, 2012; Fine, 2012). This binary characterisation of humans also presumes that men are romantically and sexually attracted to women, and women to men. However, historical accounts, research findings, and everyday life, demonstrate that this binary distinction does not tell the complete story about human experiences of desire, attraction, and sense and expression of self.

People in *sexual and gender minorities* fall outside the typical categorisations on the basis of sex and gender, i.e. male-man-masculine-attracted to women, and female-woman-feminine-attracted to men. These minorities are referred to in this thesis as LGBTQ, meaning Lesbians, Gay men, Bisexual and Transgender individuals, and those with other sexual or gender identities, or Queer (Clarke et al., 2010; Lewin & Meyer, 2002). The divergence between LGBTQ individuals and their normative counterparts reside in how sex and gender are experienced. The first distinction is *sexual orientation*, the person's emotional and sexual attraction to other people of different gender, same gender, or to more than one gender (Amnesty International, 2001). These orientations are termed, respectively, heterosexual, homosexual (lesbians and gay men), and bisexual, although other labels to describe the nature of attraction and desire are also recognised (e.g. pansexual, asexual). Sexual orientation is not merely a function of having a romantic or sexual partner, but a part of the individual's sense of self and gender self-expression (Kuper, Nussbaum, & Mustanski 2011), e.g. a lesbian can present herself as masculine.

The second distinction in the experience of sex and gender is established in terms of *gender identity*, people's sense of self regarding their sex at birth, and their self-expression regarding social constructions of masculinity and femininity (Amnesty International, 2001). People whose gender identity corresponds to the sex they were assigned at birth are called

cisgender (Tebbe, Moradi, & Ege, 2014), e.g. a lesbian can present herself as masculine *and* identify as a woman. In comparison, transgender people do not experience this correspondence between their assigned sex and their gender identity (Amnesty international, 2001; Billard, 2018; Gressgård, 2010). Transgender is an umbrella term that includes identities outside binary categorisation of sex and gender, including intersex and non-binary people (Kuper et al., 2011; Levitt & Ippolito, 2014a). In terms of sexual orientation, both cisgender and transgender people may be heterosexual, gay or bisexual, meaning that neither the individual's anatomy or gender identity determines who the individual is attracted to.

Theoretical definitions of sex and gender identity may convey the understanding that the first one is a biological construction, while the second one is an environmental construction. In contrast, evidence from research (Foreman et al., 2018; Olson et al., 2015; Roughgarden, 2013) shows that the boundaries of biology and environment as determinants of gender identity are unclear. In the largest longitudinal study to date with transgender youth, Olson et al. (2015) found that cisgender and socially transitioned[3] children show preferences in clothing, toys, and peers (i.e. play with others of their same gender) in accordance to their expressed gender. Furthermore, these preferences are expressed as early as three years old, and independent of the child's gender upbringing (Olson & Gülgöz, 2017). In other words, the awareness of one's gender identity appears in early childhood, and this is true for both cisgender and transgender children (Olson et al., 2015). Research comparing neural, genetic and hormonal functioning between cisgender and transgender adults has also shown that gender identity has biological grounds (Foreman et al., 2018; Levasseur, 2015). It is thus possible that a person expressing a male gender identity has female body features (i.e. breasts and vagina), or a person expressing a female gender identity has male body features ones (i.e. penis and testicles) (Lee & Kwan, 2014), contravening the ordinary characterisation of men and women stated above.

Estimates from diverse countries suggest that sexual and gender minorities make up a small percentage of the population, between 2.0% and 4.5% for LGB people (Newport, 2018; Office for National Statistics [ONS], 2017), and less than 1% for gender-variant or transgender individuals (Balakrishnan, 2016). Against these small percentages, heterosexuality and being cisgender are perceived as "normal" and "natural" conditions (Blackburn & Smith, 2010; Clarke, Ellis, Peel & Riggs, 2010; Evans & Broido, 2005). Expressions of sexual and gender diversity have been historically framed as a sin, an illness or pathology, a social or ideological deviation, or even a betrayal of one's culture (Amnesty International, 2001; Arévalo & Duarte, 2018; Green-Simms & Azuah, 2012). These beliefs have allowed widespread, socially and institutionally sanctioned discrimination and human rights abuses for LGBTQ people (Amnesty International, 2001; Carabez

[3] Children who go by the name, pronouns, and appearance in accordance with their expressed gender (Olson & Gülgöz, 2017).

et al., 2015; Carroll & Itaborahy, 2015; Chaparro & Vargas, 2011; Lewin & Meyer, 2002; Sívori, 2011).

*Prejudice towards sexual and gender minorities: Manifestations and correlates*

Advocates and activists for the rights of sexual and gender minorities have made significant progress in this regard across the globe. Same-sex orientation has been decriminalised in diverse countries around the world (Carroll & Itaborahy, 2015); more recently, several countries have also updated their laws to recognise transgender identities (Ghoshal & Knight, 2016). In the mental health realm, in 1973, the American Psychiatry Association recognised that same-sex orientation was not a psychopathology and thus removed it from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) (Herek, 2004), while the World Health Organisation also removed transgender identity from its *International Classification of Diseases* (ICD) in 2018 (see Robles et al., 2016). Media studies suggest that LGBTQ representation in mass media is improving, in quantity and quality (GLAAD, 2016, 2017b). These and other advances on the subject are impacting public opinion, with cross-country surveys reporting more positive attitudes towards LGB people (Flores, 2015) and transgender people (IPSOS, 2018) in late 2010s.

Despite this progress in the recognition of rights of sexual and gender minorities, the prevalence of prejudice, aggressions and discriminatory practices and legislations towards these groups remains alarmingly high around the world (Carroll & Itaborahy, 2015; Clarke et al., 2010). Discriminatory actions against LGBTQ people occur in daily life (Case et el., 2014), such as being prevented from divulging or casually talking about their identity and romantic relationships, embracing publicly with their partners (Cramwinckel et al., 2018; Cavicchia, 2011), or using public toilets, in the case of transgender people (Broockman & Kall, 2016; Deshane, 2013). LGBTQ people report being discriminated against by friends, family, and other members of their community and police forces (Sívori, 2011; Feder, 2014); at school (Ryan & Rivers, 2003), and in the context of hiring and labour (Drydakis, 2015; Sívori, 2011; Tilcsik, 2011); in sports and physical activity environments (Lee & Cunningham, 2014), and in access to proper health care (Carabez et al., 2015; Lewin & Meyer, 2002). LGBTQ individuals also experience particularly stressful life events such as “coming out”, and the pressure to do so (Clark et al., 2010), or having their sexual or gender identity discovered, being made public and ridiculed by others (Ryan & Rivers, 2003). On a broader level, restrictions sanctioned formally and informally by societies and states identify LGBTQ people as second-class citizens at best, and as criminals or even less than human at worst (Walters, Paterson, Brown, & McDonnell, 2017). The stigma associated with belonging to sexual and gender minorities is linked to higher prevalence of physical and mental health issues among LGBTQ populations than in cis-heterosexual populations (Carabez et al., 2015; Meyer, 2003).

Prejudice towards LGBTQ people has received several labels over time. These labels range from homophobia (Clark et al., 2010), heterosexism (Blackburn & Smith, 2010), biphobia, transphobia, or sexual stigma; to the notion of negativity, i.e. homonegativity, binegativity, transnegativity (McDermott, et al., 2018); and sexual orientation and gender identity prejudice (Cramwinckel et al., 2018). This thesis adopts *prejudice towards sexual and gender minorities* in general; *sexual prejudice* (Herek, 2000a, 200b) for prejudice based on sexual orientation (Study 1, Chapter 4); and *transnegativity* (McDermott, 2018), for prejudice directed towards transgender people (Studies 2 to 5, Chapters 5 to 7). These constructs were chosen because their definition distances from the traditional idea of prejudice as a "phobia", a clinical term that focusses on the individual and assumes irrational fear as motivation for negative attitudes (Herek, 2000). Instead, *sexual prejudice* and *transnegativity* encourage a broader characterisation of personal and societal influences for prejudicial attitudes. For instance, research shows that prejudice towards sexual and gender minorities arises from, and helps deal with, discomfort stemming from violations of gender rules (Cramwinckel et al., 2018; Herek, 2004). Therefore, expressing sexual prejudice serves a function, such as, in the case of men, to demonstrate to others that they are heterosexual (Cook, Calcagno, Arrow, & Malle, 2012; Herek, 2000b).

Although sexual and gender minorities share common problems as a low-status group in society, the diverse groups found in these minorities face distinct forms of prejudice (Dittman & Meecham, 2006; Herek, 2000b; Ryan and Rivers, 2003; Worthen, 2013). For instance, male homosexuality has been criminalised while female homosexuality has been erased from the public sphere (Huerta, 2014; Smith et al., 2009; Worthen, 2013). Bisexual and transgender people are discriminated against by both heterosexual and gay communities due to their perceived ambiguity and challenging of sexual and gender binaries (Garelick et al., 2017)—bisexuals due to stereotypes of bisexuality as inauthentic, promiscuous, and transitional (Burrell, 2015; Cragun & Sumerau, 2015; Monro, Hines, & Osborne, 2017), and transgender people because they do not fit the traditional alignment between sex and gender (Clark et al., 2010). These forms of prejudice can also be internalised, expressed by individuals towards themselves as members of the disadvantaged group (Clark et al., 2010).

The correlates of prejudice towards sexual and gender minorities have been extensively investigated. Main findings in this regard are displayed on Table 2.1. As this table shows, research has identified a number of socio-demographic variables which consistently function as predictors of prejudice. These variables are education level, age, traditionalism, religiosity, group-related ideologies, and gender. It must be noted, however, that people who do not show these socio-demographic characteristics can still hold discriminatory beliefs towards sexual and gender minorities (e.g. university students, Brandelli Costa et al., 2015; and people from high socio-economic strata and education level, Arévalo and Duarte, 2018). Research also has established

that sexual prejudice and transnegativity strongly correlate with one another (Flores, 2015; Nagoshi et al., 2008; Tee & Hegarty, 2006), but the attitudes towards gay and bisexual people tend to be more favourable than those towards transgender people (Norton & Herek, 2012).

Data for Table 2.1 come from studies in samples from the United States (Elischberger, Glazier, Hill, & Verduzco-Baker, 2016; Nagoshi et al., 2008; Norton and Herek, 2012; Tadlock et al., 2017), the United Kingdom (Tee & Hegarty, 2006), Nigeria (Green-Simms & Azuah, 2012), and several countries in the Americas (Maldonado, 2015). Other data come from Cramwinckel et al.'s (2018) literature review on interventions to reduce prejudice towards sexual and gender minorities, and Pew Research Center's (2013) worldwide examination of sexual prejudice indicators.

*Table 2.1.* Main correlates of prejudice towards sexual and gender minorities reported in research

| **Correlate** | **Relationship with sexual prejudice and transnegativity** | **Research examples** |
|---|---|---|
| Socio-economic status and education level | Higher socioeconomic status, and higher educational level, are linked to lower sexual prejudice and transnegativity. | Acker (2017); Arévalo and Duarte (2018); Brandelli et al. (2015); Cramwinckel et al. (2018); Lau et al. (2014); Maldonado (2015); Pew Research Center (2013); Tee and Hegarty (2006). |
| Age | Older people report higher sexual prejudice and transnegativity than younger people, although both forms of prejudice are socialised among peers since the school years. | Carrera-Fernández et al. (2014); Cramwinckel et al. (2018); Lau et al. (2014); Maldonado (2015); Mata, Ghavami, and Wittig (2010); Ryan and Rivers (2003). |
| Traditionalism | Higher traditionalism (i.e. anti-egalitarianism; rejection of gender non-conformity; beliefs that there are only two sexes and that gender is biological) is linked to higher sexual prejudice and transnegativity. LGB people are less traditionalist than heterosexuals, but remain prone to displaying transnegativity. | Brassel (2015); Elischberger et al. (2016); Norton and Herek (2013); Solomon and Kurtz-Costes (2018); Tebbe and Moradi, (2012); Tee and Hegarty (2006); Warriner, Nagoshi, and Nagoshi (2013) |
| Religiosity | Higher religiosity is linked to higher sexual prejudice and transnegativity. | Barrientos (2001); Costa et al. (2015); Cragun and Sumerau (2015); Elischberger et al., (2016); Green-Simms and Azuah (2012); Herek and McLemore (2013); Maldonado (2015); McDermott et al. (2018); Solomon and Kurtz-Costes, 2018; Tadlock et al. (2017); Tee and Hegarty (2006). |
| Right-Wing Authoritarianism and Social Dominance Orientation | Higher RWA predicts higher sexual prejudice and transnegativity. SDO is also positively linked to sexual prejudice, but evidence regarding its correlation with transnegativity is inconclusive. | Crawford et al. (2015); Herek and McLemore (2013); Norton and Herek (2012); Mata et al. (2010); McDermott et al. (2018); Nagoshi et al. (2008); Tebbe and Moradi (2012); Tee and Hegarty (2006). |
| Gender | Men report significantly higher sexual prejudice and transnegativity than women. | Acker (2017); Carrera-Fernadez et al. (2014); Cramwinckel et al. (2018); Elischberger et al. (2016); Herek and McLemore (2013); Herek (2000b); Maldonado (2015); Matta et al. (2010); Smith, Axelton, and Saucier (2009); Solomon and Kurtz-Costes (2018); Tee and Hegarty (2006); Tadlock et al. (2017); Tebbe and Moradi (2012); Winter, Webster, and Cheung (2008) |

**A LOOK AHEAD: CONTACT WITH SEXUAL AND GENDER MINORITIES**

Sex and gender provide one of the most fundamental ways for people to define themselves, others, and their social world. At the same time, these two constructs are exceedingly complex to grasp, even by scholars, and individuals who do not adhere to the binary, collectively-agreed explanations about sex and gender can become targets for prejudice. There are certain factors that make one person more or less likely to hold prejudicial attitudes towards LGBTQ groups. A major factor was left out of Table 2.1 and it is instead presented in the next section, because it constitutes the theoretical basis of the studies in this thesis: Contact with LGBTQ individuals.

## 2.2. Contact theory to reduce prejudice towards sexual and gender minorities

> I never change, except in my affections.
>
> — Oscar Wilde, *The Importance of Being Earnest*

The goal of promoting contact between individuals from two groups is to change how these individuals think, feel and behave towards one another and their groups. Specifically, contact aims to improve high-status group members' attitudes towards their low-status counterparts. The quote above connects with a key finding by contact theory researchers, whose interventions are not meant to change participants' ideology or personality, but merely to instil positive thoughts and feelings in these participants in relation to the outgroup. Such a change of minds and hearts, as explained below, can be the start of more positive relations between otherwise antagonist groups.

This section defines contact theory as an intervention to reduce prejudice. First, some of the mechanisms that explain the effect of contact on attitude change are described here, emphasising the intermediary role of affect in this relationship. Second, studies on the diverse modalities in which contact can be promoted, besides face-to-face encounters, are reviewed. Some of these forms of indirect contact provided guidance for the studies in this thesis, and thus are examined in more detail. Furthermore, building on Section 2.1, the present section also addresses findings from research on contact with sexual and gender minorities, setting up the approach of indirect contact that is the foundation of this thesis.

### *2.2.1. Defining contact theory*

Social psychology has proposed a wide range of interventions to reduce prejudice, in observational, laboratory and field settings. Prejudice reduction interventions follow a causal pathway (Dixon et al., 2013), in which individuals from a high-status group experience a specific

condition that helps them reduce negative beliefs about low-status group individuals. This reduction is expected to generalise to the whole group. Paluck and Green (2009) examined the diverse methodologies used in these interventions, from traditional training and educational programs, to cooperative learning, and narrative and normative communication (i.e. mass media).

One of the most well-known prejudice reduction interventions is *Contact Theory,* developed by Gordon Allport in 1954 (Al Ramiah & Hewstone, 2013; Hewstone & Swart, 2011). Allport's Contact Hypothesis stated that contact, meaning an encounter between members of two groups, could reduce prejudice and improve relationships between the groups. These encounters, according to Allport, should meet four essential conditions: Individuals from both groups should have *equal status*, share *common goals* which must be achieved through *cooperation*, and these conditions should have *institutional support* (Hewstone & Swart, 2011). The list of conditions has expanded as contact research progresses (Cuhadar & Dayton, 2011; White & Abu-Rayya, 2012). Dixon, Durrheim and Tredoux (2005) highlight 13 conditions that make up an *optimal contact strategy*, a strategy which, the researchers note, can hardly be accomplished in ordinary life. Despite the difficulty for researchers to meet all conditions, there is robust research that shows how contact becomes an effective prejudice reduction intervention (Hewstone & Swart, 2011).

There are three major mechanisms that explain the effect of contact on prejudice, as distinguished by Pettigrew and Tropp (2008). One mechanism, knowledge about the outgroup, is cognition-oriented. The other two mechanisms are affect-oriented: Anxiety about contact, and empathy and perspective-taking. Pettigrew and Tropp (2008) conducted a meta-analysis to measure the effects of these mediators; they found that increasing knowledge about the outgroup did not reduce prejudice as effectively as both reducing anxiety, and enhancing empathy and perspective-taking (see Chapter 3). Therefore, these researchers, along with others (Hewstone & Swart, 2011; Stephan, 2014; Tropp & Pettigrew, 2005; Voci & Hewstone, 2003), emphasised the central role of affect in intergroup processes, that is, contact reduces negative affect and induces positive affect in ingroup members, which in turn reduces their prejudice towards outgroup members.

*The mediating role of negative affect between contact and prejudice*

In Pettigrew and Tropp's (2008) meta-analysis, intergroup anxiety emerged as the most effective mediator between contact and prejudice. This finding is consistently reported in contact research (Binder et al., 2009; Tausch, Hewstone, & Roy, 2009; Tropp & Pettigrew, 2005; Voci & Hewstone, 2003; West et al., 2015). Stephan (2014) and Tausch et al. (2009) defined *intergroup anxiety* as a negative affective state experienced by members of the groups involved in contact in anticipation of the intergroup interactions and its repercussions. Although the concept evokes affect, Stephan (2014) established that intergroup anxiety has affective (e.g. apprehension),

cognitive (e.g. concerns about being misunderstood, harmed, deceived, contaminated, negatively stereotyped, disrespected, perceived as prejudiced), and physiological (e.g. galvanic skin response) components. Stephan (2014) asserted that other factors should be expected to play a role in the effect of contact on intergroup anxiety, such as personality traits, amount of intergroup contact, RWA, SDO, and intergroup identity. Both ingroup and outgroup members can experience anxiety about contact, but the focus of research has been to reduce this state in members of the high-status ingroup.

From these and similar findings, contact researchers suggest that intergroup anxiety should be the first target of a contact intervention (Pettigrew & Tropp, 2008), because this apprehension is the basis for avoiding contact (Stephan, 2014). While contact can reduce prejudice, prejudice can also reduce contact (Binder et al., 2009), or reinforce instances of negative contact; according to Vincze and Harwood (2013), it is in these high-prejudice, low-contact contexts in which intergroup affect should be targeted first. Cognitive mediators, such as high-status group members learning about the low-status group, can become more effective in improving intergroup relationships once positive affect towards the low-status group has been established (Vorauer, 2008).

*Findings from contact theory in prejudice towards sexual and gender minorities*

Research with sexual and gender minorities supports the assertion that contact is linked to prejudice reduction. Studies have found that more frequent interpersonal contact with gay men and lesbians is associated with lower sexual prejudice in adult (Costa et al., 2015; Lau, Lau & Loper, 2014; Norton & Herek, 2012), adolescent (Mata et al., 2010), and undergraduate samples (Burke et al., 2015). Results from a meta-analysis by Smith, Axelton & Saucier (2009) supported this significant effect of contact on sexual prejudice. Contact with transgender people has been less investigated, but findings so far support that more contact is associated with lower transnegativity (Acker, 2017; Tadlock et al., 2017). Additionally, the effect of contact on sexual prejudice has been found to extend to transnegativity (Flores, 2015; Hoffarth & Hodson; 2018; Tadlock et al., 2017; Tee & Hegarty, 2006).

**A LOOK AHEAD: INDIRECT CONTACT**

Contact theory is one of several frameworks that guide interventions to reduce prejudice (Paluck & Green, 2009), but it stands out in the literature for two reasons. First, due to its effectiveness in a variety of contexts, in terms of the nature of the groups (i.e. racial/ethnic differences) (Pettigrew & Tropp, 2008), and the real-life settings (Lemmer & Wagner, 2015). The second reason that makes contact theory stand out as an intervention for prejudice reduction is the number of modalities in which this intervention can be delivered. In the above section, contact

has been defined in general terms and as face-to-face encounters, but intergroup contact can also be indirect or mediated (Crisp & Turner, 2009). The proposition tested in this thesis is built upon the indirect contact framework, that is, on encounters between ingroup and outgroup members through a medium, such as films, internet-based communications, and even the imagination.

### *2.2.2. Indirect contact*

Researchers examine indirect forms of contact due to concerns about not being able to promote social interactions in segregated or hostile settings, or due to a lack of opportunity for certain groups to engage with other groups (Brambilla, Ravenna & Hewtone, 2012: Crisp, Stathi, Turner, & Husnu, 2009; Lemmer & Wagner, 2015). Studies have found that indirect contact has smaller effects on prejudice reduction than direct contact (Brown & Paterson, 2016; Cuhadar & Dayton, 2011), so indirect contact is not considered a substitute for face-to-face encounters. Instead, indirect contact can be a preparation for eventual positive direct contact (Crisp & Turner, 2009), as it is described in some of the studies commented below.

The following subsections present the types of indirect contact documented in the literature, highlighting their general mechanisms and outcomes. In all its modalities, indirect contact has shown to reduce negative intergroup attitudes (Cooley & Burkholder, 2011; Mazziotta, Mummendey & Wright, 2010; Miles & Crisp, 2014; White & Abu-Rayya, 2012), and this reduction is relatively long-lasting (White, Abu-Rayya & Weitzel, 2014). Some of these types of contact are described in more detail given that they support the interest of this thesis to define fiction as mediated contact; these types are imagined contact, based on mental simulation, and vicarious and parasocial contact, based on media exposure.

*Vicarious contact*

Research has shown that individuals who see members from their group engaging in a certain experience can respond as if they engaged in that experience themselves (Crisp & Turner, 2009). Specifically, vicarious contact refers to an ingroup member observing another ingroup member interacting with outgroup members (Brown & Paterson, 2016). For example, Mazziotta et al. (2010) conducted two studies, with German undergraduates and adults, in which they used video to depict German and Chinese people interacting. These researchers found that vicarious contact increased participants' self-efficacy for contact with Chinese individuals, which in turn reduced uncertainty about an encounter and thus increased willingness for contact. Mazziotta et al. (2010) recommended that, for vicarious contact to improve intergroup attitudes, this contact should showcase positive interactions, an observed ingroup member conducting actions that are self-relevant for the observer, and have ingroup and outgroup members that are prototypes of their respective groups.

Vicarious contact can be carried out within other forms of indirect contact, such as extended and parasocial contact, explained below (Joyce & Harwood, 2014; Mazziotta et al., 2010). Paluck and Green (2009), and Joyce and Harwood (2014) argued that narratives (see Section 2.3) are a means to promote intergroup interaction, because they provide ingroup characters with whom the audience can identify, an outgroup character to judge, and an interaction between both from which vicarious lessons can be learned. Brown and Paterson (2016) reviewed vicarious contact interventions based on one of two forms of media, literature and audio-visual media (TV and film), and found that vicarious contact is far-reaching, easier to implement than other types, and may effectively generate positive intergroup outcomes.

*Extended contact*

The premise of extended contact (Hewstone & Swart, 2011) is that an ingroup member who has a close positive relationship with an outgroup member can positively influence other ingroup members' attitudes towards the outgroup. Namely, extended contact examines the effects of cross-group relationships on ingroup observers of these relationships. Brown and Paterson (2016) noted that extended contact may be more effective in high-prejudice groups, but it is impractical as a focussed intervention because it entails establishing long-term relationships.

Findings on the effectiveness of extended contact are mixed. Cook, Calcagno, Arrow, and Malle's (2012) examined friendships between White and Black people, and heterosexual and non-heterosexual people; intergroup discomfort was found to be reduced by contact with ethnicity-based groups, but not with sexuality-based groups. A longitudinal study of cross-group friendship by Binder et al. (2009) showed that the effects of extended contact were non-existent for low-status group members. From a study of cross-group romantic relationships between British and Asian partners, Paterson, Turner, and Conner (2015) found that extended contact can change the perceived norms regarding the ingroup members' contact with other groups. According to Hewstone and Swart (2011), extended contact reduces apprehension about intergroup encounters, allows to include others in the self, and it encourages the perception that ingroup and outgroup members are willing to engage in an interaction.

*E-contact*

In *e-contact*, members from different groups engage in computer-mediated contact, usually via the internet (Al Ramiah & Hewstone, 2013; White, Harvey, & Abu-Rayya, 2015). For instance, White and Abu-Rayya (2012), and White, Abu-Rayya, and Ratzel (2014) conducted a dual identity-electronic contact intervention to improve relationships between Muslim and Christian high school students. These research teams found that intergroup bias was reduced among participants, and these effects were still present 12 months after the intervention,

providing evidence that e-contact can be useful in contexts of high intergroup tension, and physical segregation between groups.

*Imagined contact*

An underlying assumption of *imagined contact*, central to this thesis, is that mental simulation is an essential element of human experience (Crisp, Mirtel & Mileady, 2011). Imagined contact was first proposed by Turner, Crisp, and Lambert (2007). This intervention encourages ingroup individuals to mentally simulate an interaction with outgroup members, which may evoke emotional, cognitive and behavioural effects similar to those experienced in an actual encounter (Al Ramiah & Hewstone, 2013; Hewstone & Swart, 2011). Miles and Crisp (2014) conducted a meta-analysis of imagined contact studies, finding statistical support for this proposed link between mental simulation and both prejudice reduction and increasing intentions to behave positively towards the outgroup.

When ingroup members think of a disliked or unknown outgroup, they tend to initially respond with negative attitudes and behaviours (Turner et al., 2007), particularly those high in RWA and SDO (Asbrock, Guttenbrunner & Wagner, 2013). For instance, participants who imagined using the mobile phone of a gay man reported a need of physical cleansing, more so those who were politically conservative (Golec de Zavala, Waldzus & Cypryanska, 2014). Imagined contact may surpass this initial aversive reaction because it requires ingroup members to think beyond the social category and focus on imagining themselves in an intergroup interaction. The imagined contact script includes clear instructions to participants, which involve imagining a positive interaction with a member from a specific outgroup (Crisp et al., 2009). Studies have found that the more elaborated this script (i.e. detailed and rich in cues), the stronger the effects of imagined interaction on intergroup attitudes and behaviours (Hodson, Dube, & Chome, 2015; Husnu and Crisp, 2010; Miles & Crisp, 2014).

Research findings have shown that imagined contact can reduce explicit and implicit negative attitudes (Miles & Crisp, 2014). This form of indirect contact has also been shown to reduce intergroup disgust (Hodson et al., 2015), modify behaviours towards members of a stigmatised group (Turner & West, 2011), and improve the perception of dehumanised groups (Brambilla et al., 2012). These effects have been shown to generalise from an outgroup member to the outgroup in general (Stathi, Crisp, & Hogg, 2011), and to make outgroup members feel more at ease in the interaction (West, Turner, & Levita, 2015). Birtel and Crisp (2012) also found that imagined contact can be applied following principles of exposure therapy (see also Crisp & Birtel, 2014; McDonald, Brent, Lang, & Nikolajuk, 2014). These researchers asked participants to first imagine a negative encounter, and then a positive encounter, with members of stigmatised groups (adults with schizophrenia, gay men, and British Muslims). This two-step approach resulted in

significant reduction of prejudice in these participants, compared to those who only imagined a positive encounter.

Imagined contact appears to be most effective in lab settings and with high-prejudice groups. This intervention is presented as a means of promoting future contact intentions (Crisp et al., 2009), a *pre-contact tool*, which should be used as part of a wider intergroup intervention (Hewston & Swart, 2011; Meleady & Seger; 2016). In line with the need to address affect-related factors before cognitive ones in contact, imagined contact seems to work effectively in high-prejudice contexts (Meleady & Seger, 2016; West, Hotchin, & Wood, 2017; West, Husnu, & Lipps, 2015) and for people with heightened intergroup anxiety (McDonald et al., 2014). However, it appears that not all high-prejudiced people (e.g. those high in SDO) may respond effectively to imagined contact (Asbrock et al., 2013).

*Parasocial contact*

*Parasocial contact* consists of a spectator establishing a one-way relationship with public figures, such as politicians, celebrities, athletes, and even fictional characters (Oatley, 2016b). The Parasocial Contact Hypothesis, proposed by Schiappa, Greeg and Hewes (2005), states that this relationship between an audience and a media figure can influence attitudes about the group represented by the latter, in a manner consistent with direct contact. According to Lee and Jang (2013), this influence is plausible because media heightens the presence of a performer, which in turn alters the individual's perceptions of said performer.

The relationship that audience members establish with media figures can fulfil emotional needs (Bruns, 2016; Greenwood & Long, 2010; Lee & Jang, 2013), but it can also shift perceptions from audiences towards members of the group represented by the media figures. For instance, Dasgupta and Greenwald (2001) asserted the potential of outgroup media representations to change prevalent negative implicit prejudice and stereotypes about Black people and older people. For their part, Vincze and Harwood (2013) found that Italian citizens' exposure to positive media representations (1) of German speakers, and (2) of contact between Italians and Germans, resulted in more positive attitudes towards German speakers, especially for those Italians with little direct contact with this outgroup. Conversely, negative portrayals of German people lead to more negative attitudes towards this group.

While exposure to portrayals of, and narratives about, outgroup members is the least interactive form of intergroup contact (Joyce & Harwood, 2014), this form of contact can also be beneficial to the group that is the target of prejudice. In other words, Vincze and Harwood (2013) suggested that media representations not only can change attitudes and provide knowledge about the outgroup to the ingroup. These representations can also provide the outgroup with a space for encountering their group identity (i.e. the group's own language and customs).

*Indirect contact and prejudice towards sexual and gender minorities*

Direct contact with members of sexual and gender minorities can be difficult for a number of reasons. First, as shown in an earlier section, these minorities comprise a small percentage of the population; hence opportunities for direct contact are few (Hoffarth and Hodson, 2018). For instance, a 2018 survey by GLAAD (2017a) showed that 84% of Americans said they did not personally know someone who was transgender, which suggests that most cis-heterosexual individuals learn about these minorities through the media (Solomon & Kurtz-Costes, 2018). Second, it is common for some members to conceal their stigmatised status (Herek & Capitanio, 1996; Mao, Hauper & Smith, 2018), which may be essential for them to remain safe in their social contexts. Third, cis-heterosexual individuals can actively avoid contact with LGBTQ people to avoid being misclassified as part of this group (Zielaskowski & Boerner, 2013). Therefore, indirect contact and pre-contact instances are needed to pave the way for reducing prejudice towards sexual and gender minorities.

Research on indirect contact with sexual and gender minorities has produced mixed results. For extended contact, Cook et al. (2012) found no evidence that friendship between heterosexual and non-heterosexual people reduced the discomfort of the former towards the latter group. For parasocial contact, findings show that homosexual characters can both induce identification and reinforce negative stereotypes in heterosexual audiences (McLaughlin & Rodriguez, 2017); and that brief (i.e. 8 minutes) exposure to characters who are transgender women does not improve attitudes towards this group (Solomon & Kurtz-Costes, 2018). Other findings suggest that media representation of LGBTQ people helps reduce sexual prejudice (Cooley & Burkholder, 2011; Schiappa et al., 2005) and transnegativity (Carroll et al., 2012; Hoffarth & Hodson, 2018; McDermott, 2018).

For imagined contact, some studies have shown that imagining contact with LGB people improves attitudes towards this group (Birtel & Crisp, 2012; Lacosse, 2014; Lau, Lau & Loper, 2014; Turner et al., 2007; West, Husnu & Lipps, 2015; West & Greenland, 2016); others showed no effect, particularly with gay and bisexual men, a group that conjures more negative feelings than lesbian and bisexual women (Burrell, 2015; Golec de Zavala, Waldzus, & Cypryanska, 2014). Imagined contact with transgender people has been less investigated, but West, Hotchin, and Wood (2017) reported that this was an effective intervention associated with lower implicit transnegativity, and to greater likelihood of signing a petition in favour of rights for transgender people. In most of the imagined contact findings, researchers suggest that imagined contact might be most beneficial for people not used to interacting with LGBTQ individuals or highly prejudiced towards them (Lau et al., 2014; Lee & Cunningham, 2014; West et al., 2017).

**A LOOK AHEAD: FICTION AS INDIRECT CONTACT**

Indirect contact can contribute to reducing ingroup members' negative emotions about an outgroup, and increasing positive emotions as well as intentions for future contact (Brown & Paterson, 2016; Miles & Crisp, 2014). In the case of sexual and gender minorities, these findings are not conclusive, but still provide directions as to when indirect contact might be most effective (i.e. in high-prejudice settings). The use of narratives, conveyed via books, films, TV shows, or radio, collectively referred to here as "mass media", or simply "media" (Paluck & Green, 2009), are often labelled as one of the forms of indirect contact described above. However, these narratives can be more than a mediated encounter between "us" and "them". The distinctive nature of narratives are addressed in the next section, focussing on the sort that concern this thesis, made-up stories and the ways in which they impact audiences in the real world.

## 2.3. Fiction as mediated contact

> It would be so nice if something made sense for a change.
>
> —Lewis Carroll, *Alice's Adventures in Wonderland*

The story of Alice in Wonderland is full of impossibilities, like a rabbit running late, a girl becoming a giant after eating a biscuit, and a cat that vanishes leaving its smile behind. Nevertheless, this story is well-known in pop culture, known enough so that people who have not read the book can understand references to it. For instance, novelist and cognitive psychologist Keith Oatley (1999, p. 106) explained the job of a fiction writer by saying: "The writer invites the reader to enter, Alice-like, through the looking glass and into the imagined story world". Furthermore, despite being built upon impossibilities, Alice's story makes *some* sense, and we can take elements from this story –or any other story– to illustrate or understand aspects of real life.

This section of Chapter 2 addresses a tendency claimed to be fundamentally human: structuring and making sense of the world through stories (Cremin et al., 2013; Oatley, 2012; Tateo, 2015). Fiction is defined here, in three subsections: Emphasising the elements that make it stand out from other forms of narrative; explaining why engaging with it can be a social endeavour; and showing that fiction, indeed a tool to influence attitudes, has portrayed LGBTQ people in a manner that increases rather than reduces prejudice. Overall, this final section of Chapter 2 explains why and how a story that is not real can influence real life.

### *2.3.1. Defining fiction*

*Creating worlds through fictional narratives*

The notion of fiction encompasses imagination, arts, and narrative, but none are synonyms. Fiction is defined here as an account of a series of events, partially or entirely made up, developed as a narrative to induce the perspective of a hypothetical observer (Goldman, 2006). Oatley (1999, 2012, 2016b), and Mar & Oatley (2008), defined fiction as an emotional and cognitive simulation of selves and social worlds, a characterisation that inherently involves the imagination. Given that most of entertainment media comprises simulated social situations (Sestir & Green, 2010), fictional narratives can be transmitted through all forms of art and entertainment media, such as books, films, TV shows, music, and other visual and performing arts.

Fiction reflects the *narrative* mode of the human mind. According to Bruner (1985), human thought organises experience and constructs reality using either through the *logical* or the *narrative* mode. The logical mode of thought is based on arguments and proof, on hypotheses and analysis; it leads to sound theories and empirical discoveries, and it aims to convince others of "the truth"[4]. The narrative mode of thought aims to convey a believable account, but not necessarily a true one. This second mode organises experience, such as actions and consequences, rather than concepts. A narrative is a representation of an event or sequence of events, with a beginning, a middle, and an end; it contains characters and plots, causal structures, a sense of unity, and significance (Cremin et al., 2013). Oatley (1999) affirmed that a narrative is parallel to a simulation, as neither imitate reality completely. van Laer, de Ruyter, Visconti, and Wetzels (2014) differentiate *story* from *narrative*, the former being a person's account of a sequence of events, and the latter being the story interpreted by an audience who become makers of meaning, in collaboration with the creator (Oatley, 2012). In this thesis, story and narrative are used interchangeably.

Despite its made-up nature, fiction strives for realistic portrayals of the most important aspects of human experience: people's psychological and social lives (Mar & Oatley, 2008). Fictional stories create worlds, events, and characters that are plausible to the extent that audiences can learn useful social information from them, and apply it to real-life contexts (Appel & Richter, 2007; Mar & Oatley, 2008; Phillips, 1995). In contrast to the popular idea that people turn to entertainment media for hedonic experiences, that is, to maintain positive affective states, Schneider et al. (2016) showed that people seek media contents to achieve eudaimonic experiences, to attain meaningfulness and self-realisation. Good stories, according to Bruns (2016), entail a break from reality or the fulfilment of a need. Even if the propositions from a story cannot be, or should not be, translated into real life propositions, stories can present a reality more

[4] Nevertheless, Bruner (1986) stated that no narrative is entirely "real" and "objective", because they all include the narrator's interpretation of the event.

compelling, meaningful, and satisfying than ordinary life (Bruns, 2016).

*The inner workings of (written) fictional narratives*

Most investigations of fiction from distinct disciplines have focussed on written fiction, and the remainder of this section refers to this format, and thus refers to the audience as readers. This focus acknowledges language as the means to encode (authors) and decode (readers) the variety of elements that make up a text (Klein et al., 1983). Cremin et al. (2013) compared written fiction to children's play, as a form of socially situated, language-based symbolic action, which creates possible and imaginary worlds through words. The readers receive an abstract narrative with distinctive cues that guide the construction of the environment, the interpretation of characters' perspectives and experiences, and the evocation of senses (Fong et al., 2015; Mar & Oatley, 2008). This decoding process is termed aesthetic reading, which Barnes (2015) defined as the lived experience of immersing into a text: Sensing, feeling, imagining, and thinking beyond the goal of extracting information.

A text is built upon indications of positions and relationships between objects, events, and characters. This structure reflects the deictic function that Scott (2018) attributed to language in fiction, meaning that certain words, such as "you", "over there", "last year", are only understood within the context of the story. Similarly, Oatley (2016a) explained that the content of fiction is delivered through propositions and suggestions, which creates a degree of ambiguity that encourages the readers to fill in the blanks about the characters' emotions, beliefs, and intentions (Black & Barnes, 2015a; Mar & Oatley, 2008).

Language constitutes the building blocks of a fictional narrative, but the use of language in fiction has different properties from those of daily-use language (Klein et al., 1983). For instance, Scott (2018) distinguished two orientations of a narrative discourse, mimesis ("showing") and diegesis ("telling"), which are included in the number one advice for fiction writers: Show, don't tell. This showing is achieved through properties of fiction, two of which were highlighted by Oatley (1999, 2016a), and are illustrated in the beginning of this short story:

> There is no one who hasn't observed that frequently the floor will fold in such a manner that one part of it rises at a right angle with the plane of the floor, and later the following part is placed in a parallel manner to this plane, giving way to a new perpendicular, and that this conduct repeats as a spiral or broken line up to an extremely variable height. Each one of these footholds, formed along the way by two elements, is situated equally higher and more forward than the former, a principle that gives meaning to the staircase, since whatever other combination will produce a form perhaps more beautiful or picturesque, but incapable of translating the lower floor to the upper floor.
>
> —Julio Cortázar, *Instructions for climbing a staircase*.

The two properties of fiction seen above are foregrounding and defamiliarisation. Foregrounding is a set of stylistic deviations in language, on the levels of phonetics (e.g. rhymes), grammar (e.g., ellipsis), and semantics (e.g. metaphors) (Hakemulder, 2014). These deviations encourages readers to look a familiar objects and events in a different way, which is the second property addressed here, defamiliarisation (Koopman & Hakemulder, 2015). Oatley (1999, 2016a) explained that these properties are stylistic devices that invite the reader to consider a familiar feature in new, prominent ways by deviating from conventional means of communication.

These dynamics of fiction tap into two relevant cognitive processes. First, fictional narratives activate schemas (Scott 2018), which are a cognitive framework to sort, organise, and interpret linguistic information by activating "mental baggage". In other words, a schema is a generalised mental representation of real-world objects (Freeman, 2014). Schemas, according to Freeman (2014) can either hinder people's ability to absorb what is presented to them, because they over-rely on their mental templates, or they can guide people's attention to critical information (Oatley, Mar and Djikic's, 2013). A second cognitive process recruited by fiction is decoding metaphors. Oatley (2016b) affirmed that artworks –fictional narratives included– are metaphors, the indication of an object that is another object, a "this" that is a "that", the mapping of one domain of meaning onto another (Oatley et al, 2013).

The metaphors account for the "double-aspected" response to fiction (Woods & Isenberg, 2010), that is, acknowledging that a story is made up of sentences that are both true and false: True within the fictional context of the narrative, and false when set in a real-world context outside the narrative, for instance, Alice fell down a rabbit hole; detective Sherlock Holmes lives at 221B Baker Street, London (see Woods and Isenberg, 2010). This "double-aspected" response encompasses the paradox of fiction (Nichols, 2006): Readers know that a character in a story does not exist, and yet they can have an emotional response as if they believed that the character exists. This affective response to fiction can parallel the affective responses to the real world.

*The distance between fiction and nonfiction: Artistic merit*

People engage with texts, films, and other materials, for a number of reasons, such as to obtain information, or to experience emotions. Each purpose activates different expectations and psychological processing strategies (Harkin, 2005; LaMarre & Landreville, 2015). Typically, non-fiction content, such as editorial columns, investigative reports, documentaries, and advertisements, present arguments to persuade or to convince about factual claims (Appel & Richter, 2007; Hormes, Rozin, Green, & Fincher, 2013). The distinction stated above, between a logical and a narrative mode of thought, does not necessarily mean that the logical relates to objective accounts while narratives describe subjective situations. Logical thinking can be delivered through a narrative, while a narrative can present logical arguments, and introduce new

information to shape an individual's stance on a subject or a group (Joyce & Harwood, 2014). Overall, works of fiction and non-fiction can share a narrative nature, and portray the same subject in a different manner. In a study on exposure to the 1994 Rwandan genocide through media, LaMarre and Landreville's (2015) found that both film and documentary can be equally engaging, moving, and informative for the audience.

Fiction and non-fiction can achieve the same result of, to put it broadly, changing someone's mind; both can be equally persuasive (Appel & Mara, 2013; Cao, 2015). The cause of this change created by fiction seems to stem from its *artistic merit* (Djikic, Oatley, Zoterman, & Peterson, 2009a). Non-fiction forms, such as documentaries, can have highly artistic qualities (i.e. foregrounding), but for the purposes of this thesis, artistic merit is defined as the art-based language in which fiction is expressed (literary prose, music, painting), and its intention, which is not to present arguments or to convince, but to promote exploration of emotional complexity (Djikic et al. 2009a; Djikic et al., 2012). This artistic merit turns fiction into a personal matter, because the ambiguity of the fictional narrative leads readers to different interpretations constructed from their own experiences or imagination (Demir, 2014).

Compared to expository non-fiction, which requires readers to engage with concepts and arguments, fiction requires readers to engage with other "beings", to closely follow the characters in the story and sometimes adopt their role (Fong et al., 2015). The narrative mode is not merely a sequence of events and actions, but an exploration of the inner lives of the characters (Oatley, 2016b); hence fiction provides vicarious experiences and situations which may not always be encountered in everyday life (Oatley, 2012). The audience, then, can adopt of a wider range of perspectives, oscillating between their own and others' point of view (von Wright, 2002).

### *2.3.2. The social nature of fiction*

In 1852, the novel *Uncle Tom's Cabin* was published in the United States. Written by Harriet Beecher Stowe, the novel tells a story about the enslavement of African Americans. Appel and Richter (2007), and Appel and Mara (2013) stated that this book helped promote the abolitionist cause and the outbreak of the United States civil war. The book, however, also instilled negative stereotypes about Black people in the public's imagination that remain to this day (Hulser, 2003). Fiction does not claim to provide readers with detailed knowledge, but it nevertheless contains information about the real world, to the extent that fiction can alter our views about the world (Appel & Richter, 2007).

The content of fiction both reflects and influences "real life". Studies that examined patterns in mood-related words usage in 20th century English books (Acerbi, Lampos, Garnett & Bentley, 2013), and mood expressions in 20th century English and German books (Bentley, Acerbi, Ormerod & Lampos, 2014), found that these patterns were linked to political and socio-economic

phenomena that spanned over the decades before publication of those books (e.g. the Great Depression, World War II). On a day-to-day basis, fictional narratives in entertainment media can contribute to socialising and educating people of all ages on a wide range of social issues (Appel & Richter, 2007), such as engagement with environmental issues (Schneider et al., 2016) and dispelling myths about abusive relationships (Dill-Shackleford, Green, Scharrer, Wetterer, & Shackleford, 2015). However, some studies have shown that representations of social issues in fiction can also reinforce idealistic expectations of romantic relationships (Galloway, Engstrome, & Emmers-Sommer, 2015); miscommunicate the nature of medical research (Fisher & Cottingham, 2017); and support negative attitudes, such as negative stereotypes of immigrants (Igartua, Barrios, Ortega, & Frutos, 2014), and transgender people (Miller, 2012; Ryan, 2009). Ultimately, fiction is a vehicle that transmits all sorts of messages—positive or negative—across the social world. The evidence reviewed below suggests how audiences actively process the social information contained in fiction.

*Constructing meanings and relationships with fictional characters*

Engaging with fiction is an exercise of the imagination, not only for those who produce it, but for those who consume it (Barnes, 2015; Machado & Silva, 2012). Authors write a text with a specific intention, but once this text reaches an audience, it takes "a life of its own", it becomes independent from the author's control (Harkin, 2005; Pateman, 1997). Bruner (1985) asserted that creators of a fictional text do not seek a uniform response to their narrative, but aim to engage the readers' relevant experiences and conceptions. Therefore, the possibilities of fiction do not rely on fiction itself; these possibilities depend on the readers (Bruns, 2016).

Two disciplines investigate how readers produce different interpretations of the same text: *Reader Response Theory* (Demir 2014; Harkin, 2005), a literary viewpoint, and *Cognitive poetics* (Scott, 2018), from a psychological standpoint. The converging point of these two disciplines is that fictional works are polysemous, that is, their diverse meanings are based on individuals' personal and societal schemas. This is why, according to Oatley (1999), fiction works with a "truth" outside that of empirical correspondence; unlike the "truth" sought by the logical mode of thought, fictional narratives conceive truth as coherence within complex structures (e.g. inside Alice's Wonderland), and truth as personal relevance. Engaging with fiction therefore becomes an active process (Scott, 2018), and reading habits become an expression of one's identity or personal style (Schmidt & Retelsdorf, 2016). This ability to give meaning to a story helps explain why engaging with a story can become a memorable experience, leading readers to integrate the narrative into their life (Koopman, 2015).

Stories become memorable for another reason: the characters. The impact of literature does not only come from its function as a repository of worldviews (Bruns, 2016), but also from

having someone inside the narrative to convey these worldviews to the reader. Fictional characters are the driving force of a story. The core of a character's existence resides in their journey from one state to another, that is, to experience –and often resist– change as the story progresses (Oatley, 2016b). Moreover, fiction portrays the minds and lives of the characters in a way that the reader can become intimately familiar and emotionally invested in them (Barnes, 2015; Fong et al., 2015). The audience contributes with their own imagination –based on their own experiences, personalities, and values– by expanding the stories and character development with daydreams (Mar et al., 2011) and fantasy lives, or by creating fanfiction (Barnes, 2015).

Oftentimes, the relationship between readers and fictional characters is understood as parasocial contact (McDermott et al., 2008; see also Section 2.1), because it entails an encounter between two groups via the medium of stories. However, this relationship runs deeper than the traditional forms of indirect contact: Fictional characters allow readers to imagine what it would be like to be in other people's situations (Oatley, 2016b). The opportunity to engage with the characters' mindset promotes the process of putting our own mental states aside to experience instead what the character is experiencing (Crisp et al., 2011; Oatley, 2016b; Zalipour & Athique, 2014). Here, Oatley's (2012) metaphorical effect of fiction, in which something is both itself and something else, is extended to the reader who encounters a fictional narrative: Individuals can be both themselves and a fictional character.

Neuroimaging research supports this connection between readers and characters, showing that brain areas involved in processing fictional narratives are also involved in social cognition (Mar, 2004; Mar & Oatley, 2008). This research is categorised as Neurocognitive poetics (Oatley, 2016b), a field which combines theories of cognitive poetics (Scott, 2018), empirical studies of stylistic effects in literature, and observation of brain activation. Findings from these studies have demonstrated that brain areas activated by mental processes depicted in a story are used for the very same mental processes in real life, supporting the idea of fiction as simulation (Oatley, 2016b). For instance, Gunraj, Upadhyay, Houghton, Westerman, and Klin (2017) showed that readers tend to remember and forget the same things as the characters, while Spreng, Mar, and Kim (2009) found that readers who are engaged in a story "share" cognitive activities with the character. Speer, Reynolds, Swallow, and Zacks (2009) found that different brain regions track and update different aspects of a story, such as a character's physical location or current goals (e.g. precentral and parietal areas associated with grasping objects were seen to increase activation when readers encountered a character grasping an object in the story). These findings provide evidence that individuals' cognitive and affective responses to situations are similar whether these situations are found in everyday life or in fiction.

*The key contribution of fiction: Eliciting emotions*

Emotion is a fundamental part of the narrative experience (Nabi & Green, 2015). The components examined above make fiction a complex stimulus with a capacity to move us, to elicit emotions in us. According to Lombardo (2018), one of the great merits of literature is to offer "thick" descriptions of emotions. The social knowledge nested in fictional narratives is not conveyed factually, but through emotional content (Bentley et al., 2014). Hence, for Kind (2013, p. 153), reading a novel, or watching a movie or a play, goes hand in hand with emotional engagement: "we're shedding tears, shuddering with fear, wincing in disgust, or laughing aloud".

The emotions evoked by the narrative are different from aesthetic emotions, those resulting from appreciating the literariness of the text, or its artistic qualities (Nabi & Green, 2005). Rather, the emotions are evoked by the readers' experiences with the story, as both an outsider and insider. Readers can respond emotionally to fiction "from the outside" (Carroll, 2001, cited in Goldman, 2006) because they have different preferences and information than the characters about what is happening in the story. Moreover, characters can be wrong about their own emotions or be self-deceptive (Lombardo, 2018). Emotions evoked "from the inside" of the story come from the readers' ability to process the emotional implications of narrative events from the standpoint of a character (Goldman, 2006). This occurs as we read a novel or watch a film, and we set aside our own goals and plans to take those of the fictional character (Oatley, 2012). Reading then becomes a vicarious experience for the reader, based on cognitive processes such as identification (Sestir & Green, 2010), and empathy (de Vignemont & Singer, 2006) towards the character (see Chapter 3).

Research findings support the notion that fiction triggers real emotional experiences in its audience (Machado & Silva, 2012; see Chapter 3). Hsu, Conrad, and Jacobs (2014) used the *Harry Potter* series to study immersive reading experiences, and found that this experience was more pronounced in fear-inducing (i.e. highly emotional) passages. The researchers explained that negative feelings induced by reading engaged the empathy network of the brain, which in turn was associated with a more immersive reading experience. In two studies with undergraduates, Johnson (2012) demonstrated the link between reading fiction and greater empathy (i.e. sensitivity to fearful facial expressions) and prosocial behaviour (i.e. helping others picking up dropped objects). This link was stronger when participants were more immersed in the story. Djikic et al., 2009a, 2009b) found that the impact of fiction on self-perception of change in personality traits was mediated by emotional changes experienced due to reading the story. Overall, emotional responses to fiction are idiosyncratic and complex (Djikic et al. (2009a, 2009b), but they can nonetheless influence how people engage with the world (Mar, Oatley, Djikic, & Mullin, 2011).

*"The gay dies at the end": Contact with sexual and gender minorities through fiction*

Intergroup contact is often understood in a positive manner (e.g. pleasant encounters), but contact can, and does entail negative (e.g. hostile) engagement between groups (Barlow et al., 2012). Likewise, in looking at how fiction has worked as contact, this negative engagement has been a constant when it comes to sexual and gender minorities. The presence and portrayals of LGBTQ people, through history and across arts and media (Chaparro & Vargas, 2011; Dittman & Meecham, 2006; DeNordo et al., 2011; Huerta 2014), have often been appropriated by high-status group members to fit traditional gender norms, or have been erased altogether (e.g. art museums restricting access to objects that depict stories of same-sex love and desire, and gender non-conformity, see Frost, 2013; Steorn, 2012).

While LGBTQ media representation has increased in the last two decades, in quantity and quality (GLAAD, 2017b), there are important caveats. Some of these representations perpetuate misunderstandings about sexuality and gender identity, or portray these characters in a manner that prevents the complexity of interpretation (Bronski, 2008) that is afforded to normative characters. In mainstream fiction, LGBTQ people are rarely allowed happy endings, as illustrated by a popular narrative trope called "Bury your gays" (Rawson, 2013; TVtropes.com, n.d.; Waggoner, 2017). In an examination of homosexual characters in Nigerian cinema, Green-Simms and Azuah (2012) showed that homosexuality is portrayed as part of social life but framed as anti-social behaviour, and many films end with the death, arrest, or conversion of the homosexual character. Bisexuality is even more poorly represented, as it is deemed more confusing and controversial than homosexuality (Raley & Lucas, 2006). Transgender people are persistently mischaracterised in fiction (Solomon & Kurtz-Costes, 2018; Wodda & Panfil, 2014) as either deceivers, helpers to fix other people's problems, gender-transgressive killers (Ryan, 2009), or victims (Whitney, 2018b). The marginalisation and demonisation of LGBTQ characters in mainstream fictional narratives occur not only through showing stereotypes, but by setting these stereotypical characters within narrative conventions (e.g. a crisis leads to cross-dressing) and visual codes (e.g. attention of the camera to the character getting dressed, to stress the effort they go through to create their appearance) that encourage cis-heterosexual audiences to feel disconnected from these characters (Miller, 2012).

Educators and scholars have encouraged the use of LGBTQ literature and film in learning environments (Acker, 2017; Clark et al., 2009) in order to challenge social norms based on cis-heterosexuality (Clark & Blackburn, 2016), and to show that LGBTQ people, regardless of their gender identity and sexuality, have to navigate the world like everybody else (Curwood, Schliesman & Horning, 2009). Considering the major influence that narratives can have on the audiences' construction and modification of their social world, researchers in the field of fiction as contact must examine carefully the LGBTQ-related contents and characters portrayed in the

lab, in interventions, and in the individuals' ordinary life. As stated above, media narratives are an effective means of indirect contact to reduce sexual prejudice (Cooley & Burkholder, 2011; Schiappa et al., 2005) and transnegativity (Carroll et al., 2012; Hoffarth & Hodson, 2018; McDermott, 2018). Fiction, inasmuch it creates possibilities, can help audiences envision a world that includes sexual and gender minorities.

### A LOOK AHEAD: THE EFFECTS AND MECHANISMS OF ENGAGING WITH FICTION

Sexual prejudice and transnegativity are strengthened by a normative environment that excludes LGBTQ individuals for social circles and portrays them negatively in the media, and by a number of individual characteristics (i.e. correlates) in high-status members. Interventions based on Contact Theory have been shown to counter these forms of prejudice. Although there are reports that neither direct (e.g. cross-group friendship) nor indirect (e.g. imagined) contact work against prejudice towards sexual and gender minorities, most evidence in this regard points at favourable effects. One of the most understudied forms of contact in the literature so far is the use of fictional narratives. Although it is often portrayed as vicarious or parasocial contact, the complexities of fiction call for a closer examination of its potential place within contact theory.

Based on a coexistence approach, this thesis proposes that fiction can function as mediated contact to reduce prejudice towards sexual and gender minorities. This chapter described the components that makes up this proposal. Chapter 3 examines the research that has shed a light on how and why people engage with fiction, and the socio-cognitive outcomes of this engagement. These findings provided guidance for the conduction of the studies that support this thesis.

# CHAPTER 3
# IS IT A "CLOCKWORK ORANGE"? SOCIO-COGNITIVE OUTCOMES AND MECHANISMS THAT MAKE FICTION WORK AS CONTACT

The idea of a clockwork orange, behind Anthony Burgess' novel of the same title, is that an organism that appears lively on the outside, is cold and mechanical on the inside. Part of Chapter 2 was dedicated to the organic side of fiction, to the natural flow of narratives that take audiences to territories they can rarely access in the real world. The effects of engaging with fiction are receiving increasing attention in research, which translates into news headlines that consider whether "reading fiction makes you a better person" (e.g. Kaplan, 2017; Wilson, 2016), hinting that fiction exposure is a cause of personal transformation. Researchers are more cautious in their take-aways from these studies, but the evidence so far does suggest that fiction can be a means of improving social relationships.

This chapter delves into the mechanics of fiction: It focusses on the socio-cognitive processes set in motion when individuals engage with fiction, and on how research harnesses these processes to turn fiction into indirect contact. Section 3.1 reviews the outcomes of fiction reported in the social and cognitive psychology literature, some of which are investigated in this thesis. Section 3.2 examines relevant studies that have attempted to explain how, when, and why the aforementioned outcomes appear. As was the case in Chapter 2, fiction here is referred to in its written form by default, unless otherwise noted. Overall, this chapter provides a general landscape of the research that has informed or supported the development of this thesis, in theoretical, methodological and/or practical terms.

## 3.1. Effects of fiction exposure on social cognition and interpersonal relations

> Hey, you created me. I didn't create some loser alter-ego to make myself feel better. Take some responsibility!
>
> –Chuck Palahniuk, *Fight Club*

*Fight Club* tells the story of an unnamed narrator and his soap-selling friend, who set up clandestine meetings for men to fight one another. As events unfold, the narrator turns to an alter-ego to distance himself from his tedious life, becoming instead an admired and powerful man. The opportunity to experience lives and selves different from our own—notwithstanding the disastrous consequences of doing so in *Fight Club*— is one of the main appeals of fiction (Mar &

Oatley, 2008), and seizing this opportunity seems to have significant effects in real life. Research has sought to demonstrate these effects, that is, to show that fictional stories can alter the readers' frame of emotional and cognitive reference (Appel & Richter, 2007).

This first section of Chapter 3 presents relevant findings on the effects of fiction on diverse aspects of social cognition. Researchers have operationalised social cognition as identifying and sharing others' emotions and states of mind (Mar, Oatley, Hirsh, dela Paz, & Peterson, 2006). Mumper and Gerrig (2017), and Dodell-Feder and Tamir (2018), each conducted a meta-analysis on the effects of fiction on social cognition, dissecting this phenomenon into empathy (emotion-sharing) and theory of mind (mentalising) as outcomes. Both meta-analyses showed that reading fiction, compared to reading nonfiction and not reading, resulted in a small, statistically significant improvement in social-cognitive performance across studies. Empathy and theory of mind are not addressed in the studies of this thesis, but they are part of this review because research on these variables provided a method template for these studies, and because the enhancement of both variables hints at the potential for change in other socio-cognitive domains. Therefore, the following list is a review of socio-cognitive outcomes of fiction exposure, ranging from self-focussed variables (self-perception, changes in emotion) to other-focussed variables (empathy, theory of mind, intergroup attitudes and prejudice). Few studies have examined whether fiction exposure results in prosocial behaviour (e.g. Johnson, Cushman, Borden, & McCune, 2013; Koopman, 2015b), thus behavioural outcomes are omitted here.

*Changes in trait self-perception and self-reflection (Study 4)*

Researchers have examined two outcomes in relation to the impact of fiction on the readers' self-perception. The first outcome is self-perception of personality traits. In a sample of Canadian undergraduates, Djikic et al. (2009b) measured five dimensions of personality before and after reading, and found that participants who read literary fiction reported greater change in their self-perception of personality traits compared to those who read a control story. In a follow-up study with a similar sample, Djikic, Oatley, and Carland (2012) found that the genre of the text did not make a difference in personality variability, but participants who judged the text as high on Artistic Merit (Chapter 2) presented greater variability in their personality trait profile. Sestir and Green (2010) showed fictional film clips to a sample of US undergraduates, and found that viewers tended to adopt perceived traits of characters with whom they identified. These researchers thus argued that audiences' repeated exposure to media characters may lead to chronic activation of traits, that is, to long-term changes in individuals' overall self-concept.

A second self-focussed outcome of fiction exposure addressed in the literature is self-reflection. Koopman and Hakemulder (2015) defined self-reflection as the conscious experience of having thoughts and gaining insights about oneself, others, and many aspects of life and the

world. Self-reflection generated by fiction has been studied by Koopman (2015a), who examined how text genres (literary narrative, life narrative, or expository) contributed to the process of reflection. In Koopman's study, a sample of Dutch undergraduates read two texts in each genre, one addressing grief and the other depression. Findings showed that immediate reflections were not higher for narrative than for expository texts, but the narrative text tended to evoke deeper reflection, via the emotional experience of reading and over time. Changes in self-reflection, according to Koopman and Hakemulder (2015), can be explained by the properties of fiction. For instance, stories showing familiar events or objects in a novel way (i.e. defamiliarisation, Chapter 2) can prompt readers to dedicate more cognitive efforts to consider these events and objects from this new angle.

*Changes in emotion*

Emotional experiences are a core feature of fiction (Chapter 2), and these experiences occur before, during, and after reading (Mar, Oatley, Djikic, & Mullin, 2011; Nabi & Green, 2015). Prior to reading, according to Mar et al. (2011) and Nabi and Green (2015), the readers' emotional state is likely to influence the type of story selected. In this regard, in a study with a sample of Dutch adults, Koopman (2015c) showed that "eudaimonic"—meaning-making—motives (see Schneider et al., 2016; see also Chapter 2), such as insight and personal growth, and affective responses to one's own emotions, predicted the preference for sad books. In other words, participants sought sad stories for both the experience of feeling, and for the experience of learning.

Experiencing emotions during reading is highly dependent on the degree of engagement with the story (Section 3.2). As readers advance through the narrative, they experience emotions related to the story (e.g. sympathy, empathy), and evoke their own from past experiences (Mar et al., 2011). In addition, readers experience emotional flow (Nabi & Green, 2015), emotional shifts throughout the narrative, which keeps readers engaged with the story, and accounts for the story's persuasive potential. Fiction reading has been found to increase emotional experience in people with avoidant attachment, compared to people with low avoidance (Djikic et al., 2009a); and emotions have been found to mediate the readers' self-perception of personality trait changes (Djikic et al., 2009b). In a related line of research, the fiction feeling hypothesis states that narratives with emotional content promote the readers' immersion in the story, which in turn makes the readers more empathic (see Empathy section below) towards the characters. Hsu et al. (2014) found evidence for this hypothesis, in a sample of German university students who read both *Harry Potter* passages describing characters in pain or distressed, and emotionally neutral content. Results showed that reading the *Harry Potter* passages increased the involvement of brain structures related to empathy.

After reading fiction, readers can perceive and report immediate changes in emotion (Djikic et al., 2009a). Most importantly, researchers have suggested that emotional engagement with fiction can have an influence on readers which manifests over time. Nabi and Green (2015) posited that the emotional flow of the story can result in repeated consumption of the story, elaboration on message and topic (i.e. belief shifts), and social sharing. Likewise, Appel and Richter (2007), and Bal and Veltkamp (2013) have pointed to a "sleeper effect", meaning that the influence of fiction on individuals' beliefs is seen over time, compared to the explicit and immediate change in beliefs that come from texts presenting claims and arguments.

*Empathy*

Empathy is the experience of sharing the emotions of others (Koopman & Hakemulder, 2015). An empathic experience entails that individuals observe or imagine emotions in another person, and experience them as their own, but they remain aware that these emotions "belong" to the other person (de Vignemont & Singer, 2006). It may be due to this experience that empathy has been consistently associated with increased positive attitudes towards a range of groups (Burke et al., 2015). In the context of fiction, "the others" with whom individuals share emotions are the narrative characters.

Meta-analytic evidence has suggested a causal link between reading fiction and increased empathy in readers, compared to readers of non-fiction or not reading (Dodell-Feder & Tamir, 2018; Mumper & Gerrig, 2017). This link has been demonstrated in samples of Canadian undergraduate students (Mar et al., 2006) and adults (Mar et al., 2009), and US adults (Johnson, Cushman, et al., 2013) regarding overall empathy, that is, not aimed at any specific group. Increased empathy towards specific groups after reading fiction has been reported by Johnson, Jasper, et al. (2013), and by Johnson (2013), in US undergraduates and adult samples. These latter researchers showed that reading a fictional story with an Arab-Muslim protagonist induced empathy for Arab-Muslims.

Despite the link established between reading fiction and higher empathy, this effect should be interpreted with caution. Koopman and Hakemulder (2015) pointed out to the potential confound in fiction studies between participants' trait empathy, a personality variable, and "narrative empathy", identifying and sharing the emotions elicited by a narrative world and its characters. Mar et al. (2009) ruled out personality traits in the prediction of empathy after reading fiction, but there remains the possibility that individual differences, and repeated exposure to fiction, account for the higher narrative empathy reported in fiction research (Koopman, 2015b). Researchers may encounter a ceiling effect when participants are avid readers or highly empathic individuals (Bal & Veltkamp, 2013), meaning that potential increases in empathy after reading a fictional text in an experimental setting may be small.

*Theory of Mind*

In comparison to the affective and vicarious nature of empathy, the literature distinguishes the capacity to infer (theory of mind) and adopt (perspective-taking, Section 3.2) other people's point of view without sharing what the other person is feeling (Bischoff & Perskin, 2014; de Vignemont and Singer, 2006; Koopman & Hakemulder, 2015). Hence, research on social cognition often considers theory of mind as the cognitive counterpart of empathy. Kidd and Castano (2013) defined theory of mind as the ability to infer, identify, and understand others' subjective states, either related to emotions, or to beliefs and intentions.

The causal link between reading fiction and higher theory of mind has been reported mostly for written fiction (Dodell-Feder & Tamir, 2018; Fong et al., 2013; Kidd & Castano, 2013, 2016; Kidd, Ongis, & Castano, 2016; Mumper & Gerrig, 2017). Black and Barnes (2015a) extended the study of theory of mind to the medium of award-winning TV dramas in a sample of undergraduate students. These researchers showed that the effect of fiction, compared to that of non-fiction (i.e. a documentary), on theory of mind remains when fiction is presented in visual media. Researchers have declared that reading fiction improves theory of mind because fiction stimulates the neural basis of simulation (Tamir et al., 2016; see also Chapter 2), and because the literary features of fiction (Chapter 2) stimulate audiences to make more mental inferences than non-fiction (Koopman & Hakemulder, 2015; Oatley, 2016b). On the other hand, three independent research groups attempted to replicate the studies by Kidd and Castano (2013), but found no evidence that reading fiction predicts theory of mind (Panero et al., 2016).

*Prejudice and other intergroup attitudes (Studies 1, 2, 3, and 5)*

A growing body of research has shown that audiences who engage with fictional stories depicting outgroup members report more positive attitudes towards outgroup members. For example, Vezzali, Stathi and Giovannini (2012) compared attitudes towards immigrants in Italian students who read a book about intercultural topics, with students who either read a book unrelated to intercultural themes or did not read any books. Students in the first group reported more positive intergroup attitudes, less negative intergroup stereotypes, and more willingness to engage in future contact with immigrants, compared to participants in control conditions. In another study, Vezzali, Stathi, Giovannini, Capozza, and Trifiletti (2015) looked at the effect of reading the *Harry Potter* series on: attitudes towards immigrants in Italian school children; attitudes towards homosexuals in Italian high school students; and on attitudes towards refugees in British undergraduates. These studies showed that those who read *Harry Potter* novels reported more positive attitudes towards stigmatised groups. Based on this set of studies, the aforementioned researchers proposed engagement with fiction as vicarious contact.

More evidence of the uses of fiction as mediated contact come from studies by Johnson (2012, 2013), Johnson, Cushman et al. (2013), and Johnson, Jasper et al. (2013), in US undergraduate and adult samples. Two of these studies showed that reading a fictional story can increase overall empathy and interpersonal sensitivity, and likelihood of prosocial behaviour (Johnson, 2012; Johnson, Cushman, et al., 2013). The other two studies showed that fiction can act as indirect contact to reduce prejudice towards Arab-Muslims by enhancing empathy (Johnson, 2013), and by decreasing intergroup anxiety (Johnson, Jasper, et al., 2013). Research on the effect of fiction on prejudice towards sexual and gender minorities shows mixed results (see Chapter 2 regarding indirect contact).

Most of the studies described above investigated changes in intergroup attitudes after providing participants with a story, except for Vezzali et al. (2015), who measured long-term exposure to fiction and to *Harry Potter* novels (i.e. respondents chose to read these books) specifically (see Section 3.2 for research on the long-term effects of fiction). Lastly, research on changes in intergroup attitudes associated with reading fiction includes attitudes towards non-human groups. Małecki, Pawłowsk, and Sorokowski (2016) examined the influence of reading fiction on attitudes towards animal welfare. Participants who read fragments of a novel about abuse of a monkey reported significantly higher support for outlawing economical and societal practices that harmed animals, compared to readers of a fragment unrelated to animal themes.

Most of the effects and mechanisms of fiction on socio-cognitive abilities have been observed and measured through self-reports, that is, aiming to capture explicit attitudes. However, research indicates that fiction can operate on an unconscious level to lower the cognitive and emotional defences of readers (e.g. the "sleeper effect"). A growing concern in Media Psychology is how to better observe and measure the influence of media (and fiction) exposure that occur outside of the individual's awareness (Blanton & Jaccard, 2015).

At the time of writing this thesis, there are no studies that have examined implicit prejudice (Chapter 2) towards sexual and gender minorities in the context of fiction. In a study about fiction exposure and prejudice towards Arab-Muslims Johnson, Jasper, et al. (2013) proposed that the mechanism underlying implicit prejudice reduction may be a modification of semantic networks (Studies 2 and 3, Chapter 5). These researchers found that participants who read the fragment of a story featuring an Arab-Muslim character, compared to those who read a control story, reported more positive implicit associations in the Implicit Association Test (Study 5, Chapter 7) and in a semantic differential task (e.g. warm-cold). Hinton (2015) also suggested a connection between semantic networks and implicit attitudes. In this thesis, Studies 2 and 3 (Chapter 5) examine semantic networks, and Study 5 (Chapter 7) implicit prejudice, both in relation to fiction exposure and transnegativity.

**A LOOK AHEAD: THE MECHANISMS OF FICTION**

The outcomes above provide evidence that fiction, beyond mere entertainment, is a means to foster socio-cognitive changes—self-oriented and other-oriented—in its audiences. The studies examined above, and others in a similar vein, have shown that these changes are not associated with fiction exposure itself, but to certain conditions involved in this exposure. The next section presents these intermediaries, related to the narrative or derived from individual characteristics, which research has established as mechanisms that strengthen the impact of fiction on the "real world".

## 3.2. Mechanisms of fiction that influence social cognition and interpersonal relations

> I'm sick to death of this particular self. I want another.
>
> —Virginia Woolf, *Orlando*

In the novel *Orlando*, its titular character lives 300 years, first as a man and then as a woman. This is a fact within the story, which shows the reader that Orlando is the same person—same personality, same interest in perfecting their poem over the centuries—regardless of their gender. Fiction affords readers, and to some extent viewers, the ability to take on different personas and perspectives, such as the ones that Orlando experiences throughout time. Research has shown that this process reaps socio-cognitive benefits but it is important to also understand how and why they happen.

This section describes seven mechanisms found in the literature that link audience's exposure to fiction and their responses to the social world. All mechanisms listed here, except one, are addressed, directly or indirectly, in the studies that compose this thesis. The excluded mechanism, perspective-taking, is nevertheless addressed because adopting another person's point of view is an inherent component of experiencing a fictional narrative, and it has been associated with contact-related characterisations of fiction. These mechanisms have been divided into two categories: Features of fiction (fiction-related), and psychological variables (reader-related).

### *3.2.1. Features of fiction*

*Literariness of the text*

Literariness refers to stylistic means, such as foregrounding, that prompt emotional reflection, reappraisal, and defamiliarisation (e.g. a new perspective to assess a staircase, Chapter

2) (Koopman & Hakemulder, 2015; Oatley, 2016b). Hakemulder (2014) studied responses to foregrounding in Dutch undergraduates; participants read a novel fragment or a poem, in their original literary form or modified to remove foregrounding (e.g. "The aircraft cracked in half, a seed-pod giving up its spores" vs. "The airplane broke in two"). Findings showed that foregrounding increased readers' enjoyment of the text and appreciation of the themes addressed in the stories. The style of the text was not found to diminish the communicative function of literature; rather, it enhanced it precisely for its deviation from daily language. Several studies (Djikic et al., 2011, 2013; Kidd & Castano, 2013, 2016; Mar & Oatley, 2008) have pointed at the literariness of fiction as the foundation for mental simulations and subsequent improvement of interpersonal abilities.

Although non-fictional texts can also display literariness, the nature and aims of fiction and non-fiction (Chapter 2) impact readers differently. This distinction was shown in an fMRI experiment by Altmann, Bohrn, Lubrich, Menninghaus, and Jacobs (2014), who compared the neurocognitive process underlying reading of factual content versus fictional content. Volunteers read short narratives with negatively valenced plots, such as crimes or accidents, from news stories ("real") or novels ("invented"). Results from this study, based on observing the activation of specific brain areas, showed that fictional events were perceived as possibilities and constructive simulations, while real-world events were processed as an update of knowledge.

Television and film can also display the equivalent of literary qualities. Kroener (2013) and Butter (2017) analysed narrative complexity in visual media storytelling (i.e. films, TV series), arguing that such complexity is based on how the narrative conveys knowledge to the viewer. In other words, the way a narrative arranges its information for viewers can demand a high cognitive effort on the viewers' part to give a coherent shape to the story. Kroener (2013) exemplified narrative complexity through the TV series *Breaking Bad*, about a high school teacher and family man who creates and sells methamphetamines. This series relied on narrative techniques such as flashbacks, flash-forwards, time jumps, and complex characters who cannot be described simply in only positive or negative terms, making the series a "narrative puzzle" for the viewer to solve.

*Type of media and genre in which the story is presented*

Narratives can be presented through various media, and research has examined the degree to which audience members engage with a story depending on its medium. In terms of written narratives, studies have looked at reading experience comparing texts presented on paper or on a digital screen, such as a computer or an e-reader[5]. Some findings suggested that reading performance and comprehension are independent of the medium in which the text is presented

[5] See Pierce (2017) for a discussion on the particularities of the e-reader.

(Margolin, Driscoll, Toland, & Little, 2013; Porion, Aparicio, Megalakaki, Robert, & Baccino, 2016; Schroeders & Wilhelm, 2010). Other studies, in contrast, have demonstrated that paper[6] is a better medium for digesting elaborate texts, while screens support quick information gathering (Ackerman & Goldsmith, 2008; Lenhard, Schroeders, & Lenhard, 2017; Stoop, Kreutzer, & Kircz (2013). Although testing paper-screen differences is not part of this thesis, the methodology of Study 3 (Chapter 5) aligns with the literature supporting the use of paper, and in the other four studies, stories were shown on screen due to practical reasons.

Another line of research has compared effects of fiction when it is presented in text or in audio-visual form, and some of these studies have been mentioned above. In studies about fiction and social cognition, Green et al. (2008), Fong, Mullin, and Mar (2015), and Black and Barnes (2015a) showed that fiction can be equally effective in print or in audio-visual form. The medium seems to be less important than one quality in particular: Vividness. Blondé and Fabien (2016) conducted a meta-analysis about the effects of vividness on persuasion, finding that vivid stimuli significantly impacts attitudes and behavioural intention. This quality of attracting and engaging the perceiver's attention can take many forms; video heightens the presence of a target for audience members (Case et al., 2014; Lee & Jang, 2013), but vividness can also be found through pictures, metaphors, concrete examples, and affectively charged words.

Lastly, audience responses also depend on the genre of the fictional story. However, fiction pieces can vary greatly from one to the other, according to a wide variety of features. One major distinction underscored by Kidd and Castano (2016) is *genre* fiction, defined by its reliance on formulaic plots, and *literary* fiction, defined by aesthetic qualities of the narrative and its character development. Compared to genre fiction, literary fiction is more likely to be narratively complex –a quality not defined[7] but often acknowledged by an award-winning status[8]–, and it is this complexity seems to provide the audience a challenging opportunity to position themselves within the story and its characters (Black & Barnes, 2015a; Kidd & Castano 2013, 2016). Some of the most popular genres in fiction are romance, suspense/thriller, and science fiction (Fong et al., 2013; Fong et al., 2015).

Each of these genre categories and others respond to particular tropes and expectations from the audience, or, in words of Bruner (1985), they signal the organising of the themes, events, and how they are told. Genre may thus have a distinct influence in the audience's response to the story. In a sample of undergraduate students, Fong et al. (2013) showed that exposure to domestic fiction, romance, and suspense/thriller fiction subgenres correlated positively with interpersonal sensitivity, whereas exposure to science-fiction and fantasy did not. Out of the first group, the

[6] It has been argued that reading a book in print is a physical act besides an intellectual one (Piper, 2012).
[7] For a thorough analysis of narrative complexity, see Mittell (2006) and Kroener (2013).
[8] 'Art that elicits culturally valued psychological processes may be more likely to be produced and endorsed by critics' (Kidd & Castano, 2016, p. 11).

romance genre was more likely to promote a simulation of social relationships, given the characteristics of this genre (i.e. plots and characters navigating social interactions), and thus it was highly probable that it would enhance the readers' performance on interpersonal tasks.

*Long-term exposure to fiction*

Most findings on fiction and social cognition come from cross-sectional studies, which have suggested that fictional narratives can be associated with changes in socio-cognitive skills. Nevertheless, the literature has also shown that some of these changes are the product of, or at least enhanced by, sustained exposure to fiction. In a sample of Canadian undergraduates, Fong et al. (2015) found that exposure to literary fiction was linked to higher endorsement of gender equality, and more rejection of gender role stereotypes. A literature review by Abad and Pruden (2013) suggested that exposure to gender-atypical characters and behaviours in storybooks can challenge children's stereotypes about gender-appropriate occupations and activities, and increase play with gender-atypical toys. A meta-analysis by Mol and Bus (2011) examined general effects of lifetime print exposure, showing that children's early exposure to books was associated with language growth, and that university students who read for leisure were more academically successful. This meta-analysis also showed that children with higher proficiency in reading skills read more, suggesting that ability comes before exposure. Nevertheless, Mol and Bus (2011), and Acheson, Wells, and MacDonald (2008) declared that individuals with poor reading skills can still improve these skills by expanding print exposure.

Long-term exposure to fiction has also been advised when these narratives portray stigmatised groups. Solomon and Kurtz-Costes (2018) found that participants who watched an 8-minute clip of a TV series portraying a transgender woman varied in their transnegativity responses, depending on the depiction of this character. Transnegativity was measured before and after exposure. Those who watched a positive depiction (i.e. the character reaffirming her gender identity) did not improve their attitudes towards transgender people. In contrast, participants who watched a negative depiction (e.g. a "psychotic" trans woman[9]) did report significantly higher transnegativity than before watching the clip. These findings recall Barlow et al.'s (2012) "contact caveat", which is that negative contact appears to be more strongly associated with increased prejudice, than positive contact is with its reduction. Hence, Solomon and Kurtz-Costes (2018) suggested that media contact effects for stigmatised groups, such as transgender

[9] Note that, in Solomon and Kurtz-Costes' (2018) study, the positive depictions of transgender women were portrayed by transgender actresses, while negative depictions were portrayed by cisgender male actors. The latter was termed by the authors as "problematic representation" (controlled for in a second study reported in their paper): A well-known cisgender male actor portrays a transgender female character in a somewhat sympathetic manner. Nevertheless, this portrayal reinforces the notion that transgender women are "really men who are performing as women" (Solomon & Kurtz-Costes, 2018, p. 42).

women, can only be produced through longer and repeated exposure to fictional positive representations of members of these groups.

For cross-sectional studies on the effects of fiction, there is a measure of long-term print exposure which can complement their experimental findings: the Author Recognition Test (ART, Stanovich & West, 1989; see Study 4, Chapter 6). In the ART, participants are shown an extensive list of names, authors and non-authors (foils), and they mark those authors they recognise. Studies on the effects of fiction on theory of mind (Black & Barnes, 2015a; Fong et al., 2013; Kidd & Castano, 2013, 2016), empathy (Mar et al., 2006), gender stereotypes and sexual conservatism (Fong et al., 2015), and intuitive physics (Black & Barnes, 2015b) have used the ART as predictor or covariate, often in revised versions that include fiction, non-fiction, and specific genres. Overall, the ART has been demonstrated to be an indicator of print exposure which supports the proposed link between long-term print exposure/familiarity with fiction and enhanced social cognition.

Although long-term fiction exposure is critical to achieve significant changes in social cognition, the literature suggests that fiction effects manifest on a time continuum. That is, previous research shows that both longitudinal and experimental approaches to fiction can yield substantial results. Note that the findings reviewed in this subsection relate mostly to cognitive changes: stereotypes and beliefs, reading skills, language growth, and factual knowledge (through the ART). The study by Solomon and Kurtz-Costes (2018) did not find positive changes in intergroup attitudes after brief fiction exposure. Changes in beliefs and cognition may occur over time via the "sleeper effect" (Appel & Richter, 2007; Bal & Veltkamp, 2013), while emotional changes occur immediately during and after fiction engagement (see Section 3.1). Moreover, emotional changes prompted by fiction appear to be the gateway for meaningful changes in social cognition (Green & Brock, 2000; Johnson, 2013). Hence, an experimental approach to fiction is used frequently in the relevant literature (see Chapters 4 to 7), and it is used in the studies in this thesis.

### *3.2.2. Psychological variables*

*Perspective-taking*

Research recognises perspective-taking as an important strategy to manage social encounters, and as a mediator between these encounters and intergroup attitudes (Ku, Wang, & Galinsky, 2015; Husnu and Crisp, 2015). Perspective-taking is defined as the ability to identify and adopt the viewpoint of another person (Bischoff & Peskin, 2014; Galinsky & Moskowitz, 2000); colloquially, it is the ability to "put oneself in somebody else's shoes". For instance, Broockman and Kalla (2016) reported that a 10-minute conversation that encouraged participants to take the perspective of transgender people (i.e. being judged negatively for being different) reduced participants' transnegativity for at least three months. Along with theory of mind, perspective-

taking is sometimes referred to as "cognitive empathy" (Burke et al., 2015), but neither cognitive process guarantees an increase in empathy (Bischoff & Peskin, 2014).

Studies on perspective-taking in the realm of fiction have shown the role of adopting others' viewpoint in the reduction of prejudice. Vezzali et al. (2015) conducted an online survey among UK undergraduates, finding that those who had read *Harry Potter* novels reported higher perspective-taking towards refugees, particularly in readers who identified less with the villain of the story. Johnson, Jasper, et al. (2013) found that participants –US undergraduates and adults– with low dispositional perspective-taking (i.e. less prone to put themselves in others' shoes) reduced their ingroup anxiety about Arab-Muslim individuals after they encountered Arab-Muslim characters in a story. According to these researchers, fiction is a safe haven in which people can practice perspective-taking without the anxiety of a direct encounter. Therefore, lower intergroup anxiety led to higher perspective-taking in low perspective-takers, which in turn led to reduced implicit prejudice (see Section 3.3) in these participants.

Against most studies on fiction and social cognition which have focussed on audiences, Bischoff and Peskin (2014) sought to examine perspective-taking in creators of fiction. In their first study, via an online survey, Canadian adults reported believing that writers are better at inferring and understanding others' mental states than non-writers. In a second study, however, Bischoff and Peskin (2014) found that writers and non-writers did not differ in perspective-taking abilities, questioning the proposed generalisation of fiction effects to real-world situations (see General Discussion, Chapter 8).

*Relationship with the outgroup characters*

The relationship that audiences establish with outgroup characters is a key concern in this thesis. Characters are the motor of fiction (Nabi & Green, 2015; Oatley, 2016b), and studies on traditional indirect contact suggest directions to make outgroup characters more likely to engage ingroup audiences. For instance, Brauer, Er-rafiy, Kawakami, and Phills (2012) found that, when French students were exposed to descriptions of Arab people which included both positive and negative traits, the less intense was the students' negative affect towards them. Brauer et al. (2012) interpreted this result as a difficulty to maintain generalised negative affect towards a group whose members are dissimilar to each other.

The study of fictional media as indirect contact has focussed less on character trait details and more on the general context of the story. Johnson, Jasper, et al. (2013) pointed out that specific narrative components that are necessary to reduce prejudice remain unknown; for instance, research has yet to establish whether content showing discriminatory acts is more effective than showing prosocial behaviour. Joyce and Harwood (2014) conducted a study about vicarious contact (via visual narrative) between US citizens and undocumented immigrants and provided

evidence regarding the components that should be highlighted. These researchers suggested that, to influence intergroup attitudes, a story should portray: outgroup characters who are likeable but also representative of their group; ingroup characters with whom the audience can identify; and positive intergroup interactions between these two characters.

Notwithstanding the usefulness of these findings for research on fiction as mediated contact, the way that ingroup members respond to outgroup fictional characters may not be (solely) defined by group membership, but by the way these characters are constructed. In broad terms, a fictional character can be "round" or "flat" (Kidd & Castano, 2016; Oatley, 2016b). Flat characters are predictable and unidimensional, based on schemas, stereotypes, and categories; they are types and caricatures that quickly evoke a social identity. On the other hand, round characters are psychologically complex, and elicit a person-based perception in the audience; this individuation requires that the reader pays closer attention to the cues to their mental states. Complex characters, and complex (i.e. literary) fiction have shown to enhance social-cognitive abilities (Kidd & Castano, 2013, 2016, Black & Barnes, 2015b), although flat characters can also have a significant effect on audiences (Kidd & Castano, 2013).

Perhaps one of the most important aspects of the relationship between audiences and characters can be derived from results of a direct contact study. Herek and Capitanio (1996) found that heterosexual people who knew a non-heterosexual person were likely to hold more favourable attitudes towards non-heterosexuals in general, but these attitudes were associated with a degree of intimacy, and shared values and goals in these relationships. Intimacy is the key word here, it speaks of closeness between individuals. Researchers may not be able to induce a high, persistent sense of intimacy in real-life cross-group settings, but fiction is designed to do so: Oatley (2016b) explained that writers do not describe but suggest what is happening, thus prompting processes of inference in the readers. This inference, in turn, leads readers to a deeper identification and understanding of the characters, compared to being told directly what the character is feeling. This opportunity for immersion in the characters' world and mindset (see the discussion of Transportation, and Experience-taking below) seems critical for fiction to influence audiences.

*Transportation*

Abundant research has established transportation as the essential condition for fictional narratives to modify individuals' beliefs, attitudes, and behaviours (Appel & Richter, 2007; Green & Brock, 2000; Richter et al., 2014; Sestir & Green, 2010). Transportation is defined as the cognitive and emotional immersion in a story (Green et al., 2008; Quintero & Sangalang, 2016). From the relevant literature, van Laer et al. (2014) developed an extended transportation-imagery model that determined antecedents and consequences of transportation, highlighting the

importance of social context (e.g. perceived norms), individual differences, characteristics of the story and storyteller, and the modality in which the story is presented; and changes in beliefs, attitudes, intentions and behaviours. Although the transportation-imagery model in itself is not adopted in this thesis, Studies 1 and 5 (Chapters 4 and 7, respectively) examined some of the dimensions included in it.

Research has demonstrated that transportation is a mediator between reading or viewing a story and changes in empathy, prosocial behaviour, and prejudice. Higher transportation into a fictional story has been linked to higher empathy in Dutch undergraduate samples (Bal and Veltkamp, 2013) and US adult samples (Hsu et al., 2014); and to higher empathy and higher likelihood to engage in prosocial behaviour in US undergraduate and adult samples (Johnson, 2012; Johnson, Cushman et al., 2013). Transportation has also been associated with less stereotyping and negative attitudes towards Arab-Muslims in US adults (Johnson, 2013), and to higher acceptance of gay men and lesbians in a sample of US undergraduates (Mazzocco, Green, Sasota, & Jones, 2010). Moreover, Bal and Veltkamp (2013) showed that low transportation can actively decrease empathy for the story characters.

The effects of transportation have also been tested across media, and in instances of repeated exposure to the same narrative. Green et al. (2008) explored whether reading a *Harry Potter* book before viewing the film version had any effect on transportation into the film. Adult movie-goers who had read the book reported being more transported into the movie, and this transportation did not only rely on the excitement of learning the story ending, but also on the return to a familiar narrative world and beloved characters. A second study by Green et al. (2008), with an undergraduate sample, tested whether print and film versions of the same narratives were equivalent in transportation. The researchers concluded that individual differences in Need for Cognition influenced whether the participant was more transported into books (higher need for cognition) or into films (lower need for cognition). Other researchers have compared the effects of fiction in print (Mar & Oatley, 2008), and the effects of film, drama, and documentaries (Black & Barnes, 2015a), concluding that written and visual media equally stimulate cognitive engagement and emotional responses (Mar & Oatley, 2008; Quintero & Sangalang, 2016).

*Experience-taking*

Kaufman and Libby (2012) defined experience-taking as the imaginative process of assuming the identity of a story character, and simulating the character's inner world as if it were one's own. Sestir and Green (2010) provided a similar definition for what they called "identification", which occurs when viewers vicariously take the place of a media character, and react to the characters' experiences as if they were their own. As will be explained below, experience-taking builds on transportation, perspective-taking, and identification processes.

To develop the concept of experience-taking, Kaufman and Libby (2012) conducted five studies with undergraduate samples. Their findings showed that a reduced self-concept accessibility (i.e. identity salience), first-person narrative, ingroup membership of the protagonist, or delayed revelation of the character's belonging to a stigmatised group increased the level of experience-taking of the participants. In another study with an undergraduate sample, Sestir and Green (2010) found that higher identification with a character from a movie lead to a quicker response to traits that were both of the character's and self-descriptive.

Evidence so far suggests that experience-taking might help measure the particular experience afforded by fiction: Not only encountering an outgroup character, but *becoming* that character. Experience-taking frames fiction beyond parasocial contact, given that, as Sestir and Green (2010) pointed, in parasocial contact characters are "the others". In contrast, experience-taking emphasises becoming the character, a self-other overlap that is also posited by perspective-taking (Galinsky & Moskowitz, 2000); yet perspective-taking remains a cognitive involvement, while experience-taking is an experiential, vicarious one (Kaufman & Libby, 2012). Unlike transportation, which pertains to immersion in the general environment of the story, experience-taking is focussed on immersion in the character's mindset (Sestir & Green, 2010).

Regardless of the potential of experience-taking, studies on this construct are scarce at the time of writing this thesis. It is not yet clear to what extent experience-taking can have as much a generalised effect (i.e. attitude change) as transportation. Evidence from Smith (2014) and Hawkins and Scherr (2017) (see Chapters 5 and 6) suggests that experience-taking may require complementary processes, such as perceived self-character similarity and frequency of exposure, to produce an effect. Furthermore, Sestir and Green (2010) hypothesised that experience-taking may influence individuals in domains that are self-oriented, such as trait perception and self-concept, rather than to other-oriented changes, such as intergroup attitudes.

### A LOOK AHEAD: IMPLICATIONS OF LITERATURE REVIEW FOR THE STUDIES IN THIS THESIS

Is fiction, then, a clockwork orange? The evidence from the research reviewed in this chapter shows that fiction can enhance social cognition and decrease prejudice, but these effects are a function of certain conditions. Fiction is not "cold on the inside"; the inner workings of a fictional narrative (Chapter 2) are composed by numerous elements which are difficult to isolate to identify the ones that produced the outcome of interest (Wheeler et al., 1999), and for whom. Nevertheless, research has uncovered some of these elements (e.g. literariness, transportation) and their contribution to eliciting socio-cognitive changes in the audience. The studies in this thesis build upon the findings of the research reviewed in this and the previous chapter.

The next four chapters present the five studies that support this thesis. Building on contact theory and fiction research (Chapters 2 and 3), these studies examined the association between

fiction exposure and prejudice towards sexual and gender minorities. Features of fiction and psychological processes were also investigated in the studies to better understand this potential association. Four studies examined prejudice levels reported by high-status group participants after encountering low-status group characters: Heterosexual audiences' level of prejudice towards lesbians and gay men (Study 1); and cisgender audiences' level of prejudice towards transgender women (Studies 2, 3, and 5). The remaining study focused on the low-status group, examining the relationship between fiction and self-perception, by looking at exposure to transgender characters and identity congruence in transgender audiences (Study 4).

The next chapter reports the first empirical study of this thesis. Study 1 aimed to compare sexual prejudice levels after exposure to either fiction featuring gay characters or imagined contact. This relationship was tested in responses from heterosexual participants of two countries, one high and the other low in sexual prejudice. In keeping with fiction's effects and mechanisms addressed in this chapter, Study 1 focussed on variables related to both engagement with the story and audience characteristics, probing both sets of variables as underlying processes that link narrative exposure to reduced sexual prejudice.

# CHAPTER 4
# STUDY 1. SEXUAL PREJUDICE ASSOCIATED WITH EXPOSURE TO GAY CHARACTERS: A COMPARISON BETWEEN FICTION AND IMAGINED CONTACT

> He's all alone in the world, meaning he's a bachelor. Can you imagine, at the age of fifty-six…Such bad luck. The other ladies in the building, first thing they did was shake their heads in disbelief, and wonder how it could have come to this—for him to be without a wife? Such a treasure, a treasure!
>
> —Sylwia Chutnik, *Fakes*

For some people, including the characters populating the story quoted above, there is a limit to the extent that the experiences of others can be imagined. A kind, helpful man is without a wife because he has had "bad luck". Fiction can come in handy, as a way to expand one's limited worldview (Bruns, 2016), and help consider, for instance, that some helpful men are not in seek of a wife but of a husband. The story *Fakes*, like the rest of the stories used in Study 1 of this thesis, portrayed supportive relationships between heterosexual people and non-heterosexual people, namely lesbians, gay men, and bisexuals. This was done to investigate what is termed in this chapter imagination-based contact: the use of imagination in a structured manner, either an imagined contact script or a fictional narrative (Chapter 2), to reduce prejudice.

The aim of Study 1, reported in this chapter, was to compare sexual prejudice responses of participants who either engaged with a fictional story featuring gay characters, or in imagined contact with a gay individual or a control. This chapter first describes the theoretical basis of this study, addressing the definition of sexual prejudice, indirect contact interventions to reduce prejudice, and the social purposes of imagination and fiction. This section ends by postulating the four hypotheses that guided this study, which proposed that fiction would be associated with lower sexual prejudice than imagined contact ($H_1$); and that engagement with the story ($H_2$), individual differences ($H_3$), and country of origin of the participants ($H_4$) would be intermediary variables in this association. Following these hypotheses, the next section describes the method and measures used in this study. The last two sections cover the findings of Study 1 as well as their discussion in terms of their contribution to knowledge and implications for further studies using fiction as mediated contact with sexual and gender minorities.

## 4.1. Imagination-based contact and sexual prejudice reduction

### *4.1.1. Defining sexual prejudice*

Lesbians, gay men, and bisexuals[10] comprise a low-status group whose visibility and progressive access to civil rights coexist with a persistent stigmatisation. State institutions and high-status society members establish heterosexuality as the norm, to the extent that non-heterosexual expressions of gender and sexuality are the target of high levels of prejudice and discrimination (Carabez et al., 2015; Cavicchia, 2011; Chaparro & Vargas, 2011; Clarke, Ellis, Peel & Riggs, 2010; ILGA, 2015; Hylton, 2005; Lewin & Meyer, 2002; Sívori, 2011). In this chapter, the acronym LGB is used to refer to lesbians, gay men, and bisexuals, when research includes the three groups, and LG when only lesbians and gay men are included.

Prejudice based on sexual orientation is termed sexual prejudice (Herek, 2004). Research has established that sexual prejudice persists in most spheres of daily life. It has been shown that sexual prejudice is socialised among peers from an early age, and violence from heterosexual youth towards LG peers can intensify over time (Poteat, 2007; Ryan and Rivers, 2003). Surveys from countries such as the United Kingdom (Boochman & Gooch, 2017), Argentina, Colombia, Chile, Brazil and Mexico (Barrientos, 2010; Barrientos et al., 2011; Sívori, 2011) show that LGB individuals experience a wide array of prejudice and discriminatory acts based on their sexual orientation. For instance, respondents of these surveys report not being hired for a job (see also Tilcsik, 2011), or being fired, after disclosure of sexual orientation; having their entrance denied or being kicked out of a store; being mistreated or neglected by health care providers (see also Lewin & Meyer, 2002; Carabez et al., 2015). LGB respondents in these studies also reported daily discrimination from classmates and teachers, friends, neighbours; being marginalised in family and religious environments; being prevented from donating blood; and experiencing abuse from police forces and private security (Feder, 2014).

Efforts to reduce sexual prejudice have shown uneven results between countries. For this study, participants were either from the United Kingdom (UK) or El Salvador (SV). In the UK, while

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[10] Bisexual individuals were initially considered as part of the target of sexual prejudice in this study. However, the nature of prejudice towards bisexuality differs from that one towards homosexuality (i.e. bisexuality is not perceived as a legitimate sexual orientation, and instead is conflated with sexual curiosity, disloyalty, and/or promiscuity; see Brewster & Moradi, 2010; Israel & Morh, 2004; Schrimshaw, Downing, & Cohn, 2018). There are several examples of media representations of bisexual individuals (see Bisexual.org, n.d.), but until improvements reported by late 2010s (GLAAD, 2017b), these representations were built on negative stereotypes, painting bisexual characters as selfish, unwilling to commit to a monogamous relationship, or mislabelled as gay or heterosexual based on the sex of their partners (Corey, 2018). Based on this and other research on this subject to date, it is safe to say that bisexuality is not yet as visible in the public eye and in the media as homosexuality, and even transgender issues, such invisibility being one of the main problems that bisexual people face (Monro, Hines, & Osborne, 2015). Prejudice towards bisexual people was considered to be addressed in a further study, but this thesis switched its attention from sexual prejudice altogether to transnegativity for reasons explained in the General discussion (Chapter 8).

prejudice and discrimination continue (Morris, 2015), only 18% of the population reports rejecting homosexuality (Pew Research Center, 2013), and the country's advancements in the legal protection of LGBTQ population have been internationally recognised (ILGA-Europe, 2015). SV, on the other hand, consistently shows high levels of prejudice levels nation-wide, and ranks as one of the most homophobic countries in the Americas, with 64% of its population against accepting homosexuality (Pew Research Center, 2013).

Research has found that sexual prejudice correlates with several individual characteristics (Chapter 2). Some of these correlates are religious values, gender (i.e. men are more likely to be prejudiced), a conservative political ideology, fewer years of formal education, conventional beliefs about gender roles, and lack of personal contact with LGB people. Moreover, some heterosexual individuals can perceive that homosexuality and bisexuality go against their value system (Herek, 2000a), so sexual prejudice serves to achieve social identification with the group that holds these values (i.e. other heterosexual individuals, Durrham et al., 2016). Examples of these tendencies are the declaration of homosexuality as un-African in Nigeria (Green-Simms & Azuah, 2012), or men's use of homophobic labels to maintain a heterosexual identity (Carnaghi, Maass, & Fasoli, 2011), or to demonstrate to others that they are heterosexual (i.e. to avoid being misclassified as gay) (Cook et al., 2012). In other words, the concern of heterosexual individuals of identifying with their own high-status group (Doosje, Ellemers, & Spears, 1995) can lead them to avoid contact with LGB people (Davis-Delano, Morgan, Gillard, & Davis, 2018).

Two other correlates of sexual prejudice relate to such concern of heterosexual individuals to come into contact with LGB people (Whitley, 1999): Right-Wing Authoritarianism (RWA), and Social Dominance Orientation (SDO) (Chapter 2). RWA is the tendency to promote submission to authority figures, norms and traditions (Crawford, 2015), and is a strong predictor of negative attitudes towards groups perceived as threatening to traditional moral values and beliefs (Crawford et al., 2015; Funke, 2005). SDO is the desire for one's ingroup to dominate and assert its superiority over outgroups (Pratto, Sidanius, Stallworth, & Malle, 1994). People high in SDO hold negative attitudes towards groups that push for social equality, such as sexual and gender diversity groups. RWA seems to be a stronger predictor of sexual prejudice than SDO (Van der Toorn et al., 2017), but both constructs underlie the opposition to contact with LGB people (Hoffarth & Hodson, 2018).

### *4.1.2. Indirect contact to reduce sexual prejudice*

Findings from contact theory (Chapter 2) show that direct encounters between heterosexual and LGB individuals can significantly reduce sexual prejudice. The strongest piece of evidence so far in this regard comes from Smith et al.'s (2009) meta-analysis on contact between heterosexuals and gay men and lesbians. However, direct contact is not always possible

nor effective. First, LGB people may opt to conceal their sexual orientation during daily social interactions to avoid discrimination (Cooley & Burkholder; 2011). In a study about cross-group friendships, Cook et al. (2012) found that participants making friends with someone from a different ethnicity reduced their discomfort in the interaction with this person, but this effect was not seen when heterosexuals made friends with LG individuals. Cook et al. (2012) hypothesised that there may more enduring barriers (i.e. value systems, identification with one's group) to overcoming discomfort in relationships between people of different sexual orientation. In this regard, Dermody, Jones and Cumming (2013, p. 271) stated that sexual prejudice is "particularly overlearned and fairly intractable", while Burrell (2015) hypothesised that heterosexual individuals' negative evaluations may arise from fear that LGB individuals will show sexual interest in them.

Indirect contact can be an alternative to reduce such discomfort, and hence it can be considered a preparation for more positive interactions between heterosexuals and LGB individuals. From the different forms of indirect contact in the literature (Brown & Paterson, 2016), imagined contact appears as an effective alternative in the study of sexual prejudice reduction. The *imagined contact hypothesis* (Crisp et al., 2009; Crisp & Turner, 2009) postulates that simulating contact with outgroup members is a simple yet effective way to foster more positive intergroup attitudes in high-status members. Imagined contact is proposed not as an intervention for attitude change, but as a means of promoting contact intentions. This promotion is done by opening the individual's mind to the possibility of positive relations (the cognitive route) while diminishing intergroup anxiety (the affective route) (Crisp et al., 2009).

Results from imagined contact studies are, for the most part, indicative of this intervention's efficacy (Lacosse, 2014; Turner et al., 2007; West & Greenland, 2016). In this line of findings, researchers have suggested that imagined contact is more effective when participants have little or no prior direct contact with LGB people, or when they are in contexts of high sexual prejudice (Hoffarth & Hodson, 2018; Lee & Cunningham, 2014; Lau et al., 2014; West, Husnu, & Lipps, 2015). Miles and Crisp (2014), on the other hand, asserted that country was not a source of variation in the effectiveness of imagined contact. While this evidence suggests that individuals may respond favourably to these interventions independently of their cultural context, Lee and Cunningham (2014) encouraged researchers to compare the effects of imagined contact with LGB people in cultures with different levels of sexual prejudice.

Other studies have not supported the effectiveness of imagined contact, specifically with gay and bisexual men (Burrell, 2015; Dermody, Jones & Cumming, 2013). These latter findings are explained by the participants' harsher evaluation of men than of women when it comes to not conforming to traditional gender roles (e.g. having a different-sex partner, Carroll et al., 2012). Gay and bisexual men are consistently evaluated more negatively, by men and women, than

lesbians and bisexual women (Dodge et al., 2016; Helms & Waters, 2016; Herek & Capitanio, 1996; Herek, 2000b; Smith et al., 2009), and a brief imagined encounter may not be enough to overcome such negativity (Dermody et al., 2013).

### *4.1.3. The social purposes of imagination: imagination-based interactions with others*

Understanding the imagination can help explain why, despite some null findings in sexual prejudice reduction, imagined contact can work. For the purposes of this thesis, imagination is defined as a mental simulation of alternate realities (Jung, Flores, & Hunter, 2016; Waytz, Hershfield, & Tamir, 2015). These simulations entail a complex cognitive capacity that enables people to think outside the present reality; to represent and construct objects and experiences detached from the immediate; to think about possibilities; and to reason about oneself and others (Abraham & Bubic, 2015; Agnati, Guidolin, Battistin, Pagnoni, & Fuxi, 2013; Andrews-Hanna, Smallwood, & Spreng; Liang, Chang, & Hsu, 2014). Neural evidence has shown brain processes and structures that activate in accordance with mental simulations (Agnati et al., 2013; Jung et al., 2016), a neural system called the Default Mode Network (DMN, see Andrews-Hanna et al., 2014; Tamir et al., 2016; Vessel, Starr, & Rubin, 2013, for a detailed description of the areas involved in the DMN). Furthermore, psychophysiological evidence shows that the DMN is linked to memory systems and not sensory systems (Buckner, Andrews-Hanna, & Schacter, 2008).

Imagination is an essential component in managing information about other people, that is, in interpreting, predicting and responding to social action (Fracaro, 2010; Lysaker, Tonge, Gauson, & Miller, 2011; Zalipour & Athique, 2014). Imagination thus functions as a representational tool that helps understand the self and others (Decety & Grèzes, 2006), with the crucial advantage of a "safe space": the opportunity to work out personal and interpersonal conflicts (Boyce, 2016), to anticipate outcomes of events, and to practice actions without performing or experiencing them (Agnati et al., 2013; Morton, 2006). Mentally simulating other people, then, is a doorway to connect with others (Crisp et al., 2011).

The mechanisms of imagination in everyday social relations can be addressed by examining imagined interactions. An imagined interaction, as proposed by Allen and Honeycutt (1997), is an attempt to simulate exchanges with significant others within one's mind. More properly, imagined interactions are "internal talk" that help either to plan or replay interactions to improve the effectiveness of interpersonal communication (Bodie, Honeycutt, & Vickery, 2013). Imagined interactions have diverse features and individuals engage with them for various reasons. Bodie et al. (2013) categorised these features as attributes, and the reasons to engage as functions. The eight attributes posit the ways in which the content of an imagined interaction relates to the individual, in terms of how vivid and how familiar this content can be: frequency, valence, discrepancy, self-dominance, variety, proactivity, retroactivity, and specificity (see

Measures for the definition of each attribute). The functions describe the reasons to engage in imagined interactions: opportunity for catharsis; compensation when a conversational partner is not available; conflict management by reliving or re-imagining conflicts; relational maintenance; self-understanding as an examination of core ideas, attitudes, values, or beliefs; and rehearsal, or planning and preparing upcoming interactions.

Imagined contact and imagined interactions are distinct paradigms, but both establish that the mental simulation of social encounters can influence the way that individuals handle actual experiences. Crisp and Turner (2010) underscored that imagined interactions occur spontaneously on an interpersonal level, while imagined contact is designed for intergroup-level effects. In this study, both paradigms are considered, as a way to examine more thoroughly the features of the participants' imagined encounter.

Imagined interactions and imagined contact also differ in the extent that the person's mental content is structured. Imagined interactions are unstructured and based on past or future experiences; imagined contact is based on a script that involves imagining people who otherwise may not be part of the individual's internal talk. Research shows that the stronger the elaboration of the imagined context (i.e. a more structured script), the stronger the effects of imagined contact (Miles & Crisp, 2014). This latter finding suggests that the more elements are brought to the attention of the participant in the narrative that guides the imagined encounter, the more impact imagination can have on intergroup attitudes.

#### *4.1.4. Fiction as indirect contact: The importance of engaging with the story*

The idea that a structured narrative can help change attitudes is present in the research on prejudice reduction interventions (Paluck & Green, 2009). Organising the world through stories is claimed to be a fundamentally human tendency (Cremin et al., 2013; Oatley, 2012), one that allows individuals to seek, manage, and enrich social experiences, and to promote communication with others. In particular, fictional narratives serve as simulations of social worlds which provide insights about ourselves and others that go beyond "ordinary perception" (Oatley, 2016b, p. 618).

Numerous studies support the assertion that fiction influences social cognition (Chapter 3). Research has shown that engaging with fiction can modify beliefs about the real world (Wheeler et al., 1999); evoke and modify emotions (Mar et al., 2011; Djikic et al., 2009a); improve theory of mind (Fong et al., 2013; Kidd & Castano, 2013, 2016), perspective-taking (Oatley, 2012), empathy and social skills (Mar et al., 2006); reduce negative attitudes (Fong et al., 2015), stereotypes (Abad & Pruden, 2013), and prejudice towards marginalised groups (Johnson, Jasper, et al., 2013; Vezzali et al., 2012). Of particular interest to Study 1 in this chapter, Vezzali et al. (2015) found that Italian high school students who read the *Harry Potter* novels (in their own

time, not in a lab setting) reported lower prejudice towards LG individuals. These novels do not touch the subject of sexual orientation, but the protagonists of the novels have positive contact with individuals from stigmatised groups, and try to understand their difficulties, which often result from intergroup discrimination (Vezzali et al., 2015).

Research about fiction that specifically addresses sexual prejudice is scarcer, but findings suggest that media exposure to LGB characters can increase the audience's acceptance of this minority group (Schiappa et al., 2005). This acceptance, however, can coexist with a stereotypical vision of LGB individuals, as McLaughlin and Rodriguez (2017) found in a US national survey concerning exposure to fictional gay men characters. Heterosexual audiences can both identify with a gay character and reinforce their implicit stereotypes about how gay individuals "should" act or behave. To McLaughlin and Rodriguez (2017), to surpass the tendency to sustain stereotypes and benefit from media exposure to LGB characters, these characters should be afforded a wide range of portrayals (e.g. complex characters, Chapter 2). Additionally, scholars have pointed that narratives on sexual diversity can foster knowledge and empathy on sexual orientation issues (Clark, Blackburn & Gardner, 2009; Elderton, Clarke, Jones & Stacey, 2014; Jones, 2015; Larralde, 2014), particularly if these narratives portray non-heterosexual peers as "one of us" regardless of their gender and sexuality (Curwood et al., 2009).

Higher acceptance of LG individuals after exposure to a fictional narrative has been found to be associated with the audience's engagement with the narrative (Mazzocco, Green, Sasota, & Jones, 2010). This engagement is often measured as transportation, the cognitive and emotional immersion in a story (Green et al., 2008; Quintero & Sangalang, 2016). There is substantial evidence that transportation is the essential condition for fictional narratives to modify individuals' beliefs, attitudes, and behaviours (Appel, Gnambs, Richter, & Green, 2015; Appel & Mara, 2013; Appel & Richter, 2007; Green, 2004; Green & Brock, 2000; Richter et al., 2014; Sestir & Green, 2010), and likelihood of engaging in prosocial behaviour (Johnson, 2012; Johnson, Cushman, et al., 2013). Although transportation includes a cognitive aspect, the audience's responses are most influenced by the emotional immersion (Bal & Veltkamp, 2013).

Engagement with a fictional narrative is strongly associated with emotional experiences (Nabi & Green, 2015; see also Chapter 3). Fiction reading has been found to increase emotional experience in people with avoidant attachment (Djikic et al., 2009a); and emotions have been found to mediate the readers' self-perception of personality trait changes (Djikic et al., 2009b). The fiction feeling hypothesis states that narratives with emotional content promote the readers' immersion in the story, which in turn makes the readers more empathic towards the characters (Hsu et al., 2014). As readers advance through the narrative, they experience emotions related to the story (e.g. sympathy, empathy), and evoke their own from past experiences (Mar et al., 2011).

Related to this access to past experiences thought a narrative, some research has suggested that transportation into a story with LG characters is enhanced by familiarity with the story or its themes. In a study by Green (2004), undergraduate students read a story about a gay man facing prejudice, and participants who had gay relatives or close friends reported higher transportation after reading the story. Quintero and Sangalang (2016) also asserted that familiarity and personal relevance of the story can increase transportation.

Another question that the literature on engagement with a story has addressed is whether the medium in which the story is presented has a differential impact on the audience. The difference can be due, as Goldman (2006) pointed out, to the fact that readers'/viewers' mental representations of what is happening are partly guided either by actions perceived on stage or screen, or by verbal descriptions (written or spoken). In other words, according to some scholars, engaging with a film is a visual experience and not an imaginative one (Matraver, 2010). Such a vivid form of media may heighten the presence of a target, which in turn can affect an individuals' perceptions and evaluations of this target (Case et al., 2014; Lee & Jang, 2013), more than a less vivid form (e.g. a text) might. However, the story's demand for imaginative effort depends not only on the medium, but also on the story's ambiguity and complexity (Chapter 2). For instance, Barnes (2015, p. 70) argued that "sometimes a scene [in a film] is scary […] because of what we don't see". The medium of the story, whether a book or a film or any other format, may shape the ways in which audiences process the story (Fong et al., 2015). Yet a vivid stimulus, meaning one that attracts attention and excites the audience's imagination to the point of being proximate to them, can be presented via several media (e.g. pictures, metaphors, affectively charged words) (Blondé & Fabien, 2016). Overall, findings from Fong et al., (2015) and Black and Barnes (2015) showed that fiction can be equally immersive in print or in audio-visual form (Mar & Oatley, 2008).

### *4.1.5. Overview of Study 1*

Imagined contact was designed to promote the individual's imaginative processes in order to improve intergroup attitudes. Fiction also harnesses the imagination to the point of prompting significant effects on social cognition, but the purposes of fictional narratives –considering the complexity of this stimulus– go beyond attitude change (Chapter 2). Thus, to characterise fiction as a form of mediated contact, it is necessary to understand which aspects of its many features and mechanisms aid in producing attitudinal change. In this study, some of these mechanisms are isolated based on previous studies (i.e. transportation, emotions), comparing the inner workings of fiction to those of imagined contact, which has been more widely researched and has shown significant impact on prejudice reduction. Understanding the potential similarities and distinctions between imagined contact and fiction can shed light on which form of imagination-based contact can be more effective for prejudice reduction, under which conditions.

The aim of this study was to compare participants' sexual prejudice levels after exposure to either fiction or imagined contact; the former featuring LG characters and the latter, a LG individual or a control (i.e. sexual orientation of the imagined person not disclosed). Fiction and imagined contact are referred to here as imagination-based contact. This comparison was conducted in audiences from two countries with diverging levels of sexual prejudice, United Kingdom (UK, low-prejudice) and El Salvador (SV, high-prejudice). To this end, heterosexual participants were allocated to a fiction condition –a film trailer or a short story- or to an imagined contact task. For the purposes of this study, the fiction pieces and imagined contact tasks are collectively referred to as "stories", where type of story means fiction or imagined contact.

In this potential association between imagined-based contact and sexual prejudice, the role of engagement with the story as mediator, and of individual differences as moderators, were also examined. Engagement with the story was measured through two kinds of affective responses to imagination-based contact (Sad/Happy, Anxious/Calm), Transportation, Attributes, and Functions. Individual differences were measured through Right-Wing Authoritarianism (RWA), Social Dominance Orientation (SDO), Heterosexual identification, and General affect, plus country of origin of the participant. This potential relationship is illustrated in Figure 4.1.

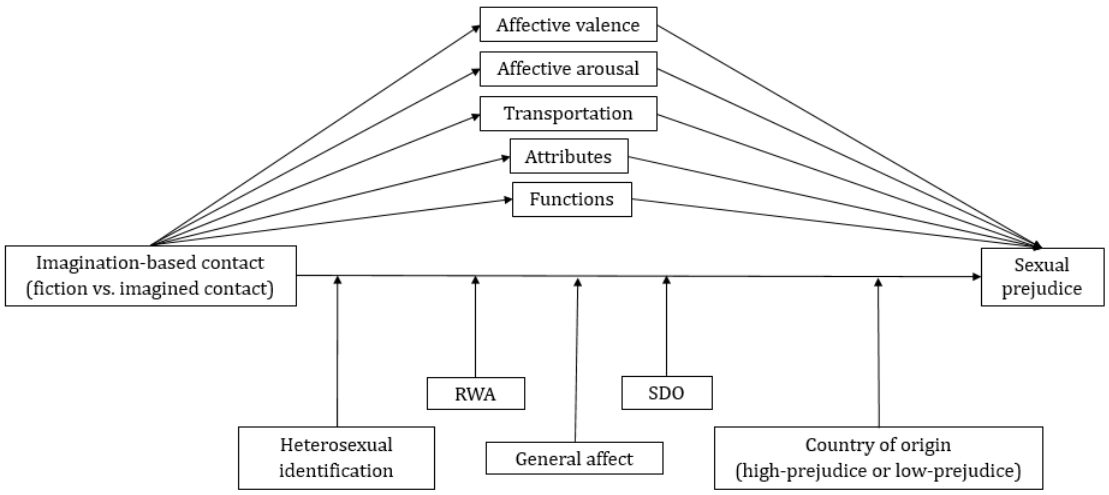


*Figure 4.1.* Proposed model of the relationship between imagination-based contact (fiction vs. imagined contact) and sexual prejudice, mediated by engagement with the story (Affective valence and arousal, Transportation, Attributes, and Functions), and moderated by individual differences (RWA, SDO, Heterosexual identification, General affect, and country of origin).

There were four fiction conditions, two film trailers and two short stories, all of which featured contact between LG and heterosexual characters. There were two imagined contact conditions, one which required participants to imagine an encounter with "a person who is gay",

and the other which did not allude to the person's sexual orientation ("a stranger" from here on in). The choice for these imagined contact conditions were based on the study's interest to compare sexual prejudice associated with: (1) Fiction versus with imagined contact, when both types of stories featured LG characters (presence of low-status character); and (2) Fiction with LG characters versus imagined contact with a stranger (presence/absence of low-status characters).

Four hypotheses were proposed for this study:

*$H_1$. Fiction exposure will be associated with lower sexual prejudice than imagined contact.* Imagined contact studies have shown that a more detailed elaboration of the imagined encounter can yield stronger attitudinal effects (Miles & Crisp, 2014). Fiction, as an elaborate account of events (Goldman, 2006), brings numerous elements to the attention of the participant in a highly structured manner (see Chapter 2). Therefore, it was expected that participants exposed to fiction featuring positive contact between gay and heterosexual characters would report significantly lower prejudice than those who imagine contact with either a gay person or a stranger.

*$H_2$. Engagement with the story will mediate the relationship between fiction and lower sexual prejudice.* Previous research shows that emotional engagement with the story is an important mediator between fiction and attitudinal change (Green et al., 2008; Nabi & Green, 2015; Quintero & Sangalang, 2016; see also Chapter 3). For this hypothesis, this engagement is also measured with Bodie et al.'s (2013) features (Attributes) and reasons why participants feel connected (Functions) to an imagined situation. It was expected that participants in the Fiction condition would show higher engagement with the story (measured by Affective valence, Affective arousal, Transportation, Attributes, and Functions) than those in the Imagined contact condition, which in turn would be associated with lower sexual prejudice.

*$H_3$. Individual differences will moderate the association between fiction exposure and lower sexual prejudice.* As described in Chapter 3, group membership of both audience members and story characters can play a moderating role in the relationship that is established between these two groups. A number of variables related to group membership were thus examined in this hypothesis. It was expected that participants in both the Fiction and Imagined contact conditions who scored higher in SDO, RWA, Heterosexual identity, and Negative affect, would report higher sexual prejudice.

*$H_4$. Country of origin of the participant will moderate the association between fiction exposure and lower sexual prejudice*. Two countries with dissimilar reported levels of sexual prejudice were compared, following Lee and Cunningham's (2014) assertion that effects of imagined contact with LGB people –and, by extension here, effects of LGB-related fiction- should be examined in different cultures. This hypothesis was based on the previous finding that those in higher prejudice contexts can benefit more from indirect contact (West et al., 2015), and in this study's hypothesised stronger effect of fiction than imagined contact ($H_1$). Hence, it was expected

that participants from a high-prejudice country would report lower sexual prejudice when exposed to fiction compared to imagined contact, but would report overall higher sexual prejudice than participants from a low-prejudice country.

## 4.2. Method

### *4.2.1. Participants*

Participants over 18 years old and heterosexual (identified through a screening measure) were recruited in two countries to answer an online questionnaire. Participants from the low-prejudice country, United Kingdom (UK), were contacted via the student and staff volunteer scheme at the University of Sheffield. Participants from the high-prejudice country, El Salvador (SV), were recruited using a snowball sampling method via social media and universities, given that there were no volunteer schemes available. All analyses include the whole sample, unless otherwise noted (see Results and Discussion for information about the socio-demographic characteristics of the UK and SV subsamples).

Of note, for this and the rest of the studies in this thesis (Chapters 5 to 7), the required sample size was calculated *a priori*, considering the power and effect size sought. However, due to difficulties in obtaining the number of participants needed (i.e. not enough volunteers responding to the call for participants, or removal of incomplete or invalid questionnaires, as explained in the Method section of each study), the sensitivity analysis is reported in these studies, to establish the minimum effect size that the sample obtained is able to detect.

The final sample comprised 248 participants, who were either university students or in full-time or part-time employment. The sensitivity analysis ($\alpha = .05$, power = .80) showed that the minimum effect size detected by this study was .16, which is a medium effect size (Selya, Rose, Dierker, Hederek, & Mermelstein, 2012). The mean age of the sample was 31.83 years (SD = 11.37), and 65.3% of participants were female. Over half of the sample (53.2%) reported not having a religious affiliation, and the most reported political positions were Moderate left (29.8%) and Centre (22.2%). 10.9% reported school as their highest level of education, while 48.4% reported an undergraduate degree as their highest education level. Out of the 89.1% of participants who reported having university studies, 50.0% were in the fields of Social Sciences and Humanities. One hundred and fifty one participants (60.9%) were from the UK and completed an English version of the questionnaire, 97 (39.1%) were from SV and completed a Spanish version.

### *4.2.2. Design and experimental materials*

The online questionnaire was set to randomly assign each participant to one of six stories: one of two film trailers, one of two short stories, imagined contact with a LG person, or imagined

contact with a stranger (control condition). These six stories comprised four conditions named Film trailer, Short story, Imagined contact and Control, which in turn were further grouped as Fiction conditions (film trailers + short stories) and Imagined contact (with a gay person + with a stranger).

The common feature of all the stories was the portrayal of positive contact between LG and heterosexual individuals, that is, getting help or support from others. For the Film trailer conditions, the stories were the trailers for the movies *Pride* and *Lilting*; for the Short story conditions, *Fakes* and *Grace*. Two stories were chosen for the Film trailer and Short story conditions to make sure that any potential differences in the comparisons were due to the presence of LG characters rather than to a quality of the medium or of the story itself. Pre-existing, rather than specially developed, stories were used for the study and were available online at the time of conducting the study. Participants who viewed the *Pride* film trailer were asked to first read a short paragraph describing the 1984-1985 UK miners' strike to contextualise the story; the *Lilting* film trailer did not have an introduction. The accompanying instructions for the film trailers asked participants to watch the trailer in its entirety, and to replay it if they wished. They were also asked to check that the audio in the computer was turned on. The instructions for the short stories asked participants to read the story carefully.

For the two imagined contact conditions, participants were asked to think of a social cause they cared about. This prompt aimed to set a goal to be shared between the participant and the imagined person, matching a commonality quality shown in the Fiction conditions. The experimental condition involved imagining contact with a gay person, while the control one fell in the category of contact with a non-outgroup member (Miles & Crisp, 2014). This second condition omitted the mention of sexual orientation for the imagined individual. The script presented to all participants in the Imagined contact conditions is below; words in italics were only shown to those in the condition of imagined contact with a gay person, while for those in the control condition, the same sentence ended in "conversation":

> Imagine yourself handing out informative flyers about this social cause to passers-by. Think specifically of when (e.g. next Thursday) and where (e.g. the bus stop) you would do this.
> Imagine someone approaches, notices what you are doing and offers to help you hand out the flyers. This person tells you that they share your concern about this cause and that it is important to show solidarity with others. You accept this person's help. As you both start handing out flyers, you start a conversation *and you learn that this person is homosexual*.
> Take a few minutes to imagine this conversation, and that as part of it you find out some interesting and unexpected things about this person.

Table 4.1 displays the characteristics of the stories presented to participants. Based on the

length of each story, maximum and minimum times to spend on these stories were estimated. These time estimations were used as a criterion to remove participants from the analysis (see Section 2.4). Reading or viewing times outside the established ranges would suggest that participants did not pay attention to the story, or failed to follow the instructions of the task.

There were three purposes to using film trailers and short stories in this study. First, to match the brevity of the imagined contact tasks, which tend to be a few minutes long (Miles & Crisp, 2014). Second, to emulate the brevity of real-life media exposure, in which people are in contact with messages in all types of media at a fast pace. It was of interest to examine if a brief exposure to LG characters could be associated with distinct responses towards LG individuals. Third, longer stimuli were expected to increase the likelihood of participants dropping out of the study, given that they were participating online.

*Table 4.1.* Information about the stories used for the fiction and imagined contact conditions

| Condition[1] | | Title | Synopsis | Length |
|---|---|---|---|---|
| Fiction | Film trailers | *Pride* (2014) | A group of gay men and lesbians raise funds to help a miners' community. | 2:30 minutes |
| | | *Lilting* (2014) | A man attempts to connect with the mother of his deceased same-sex partner. | 1:46 minutes (UK version), 2:18 minutes (SV version) |
| | Short story | *Fakes* By Sylvia Chutnik | Neighbours suspect that a kind and helpful man is gay. | 682 words |
| | | *Grace* By Isabel Roper | A police officer struggles to be open about her same-sex life partner with her colleagues at work. | 541 words |
| Imagined contact | Contact with a gay person | Imagined contact scripts based on Husnu and Crisp (2010), and Hodson, Dube, and Choma (2015). | Participants were asked to imagine (1) a social cause that they cared about, (2) getting help from a gay person to promote it, and (3) having a conversation with this person while they were working together. | Participants were asked to take a few minutes to imagine this encounter. A timer was set up in the page. |
| | Contact with a stranger | | Same script as above, but participants were asked to imagine getting help from a person they had never met. | |

[1] The original language of all materials used in this study was English. The translation process from English to Spanish for the SV sample is discussed in the Procedure section, but it should be noted that the two film trailers were presented in their original language with Spanish subtitles.

### *4.2.3. Measures*

The measures included in the questionnaire appear below in the order presented to the participants. The first three measures were presented before the story, and the remaining

measures afterwards. All scales used a 7-point response scale (1 = Not at all, 7 = Completely), unless otherwise noted.

*Sociodemographic questions*. This section included questions about age, gender, country of origin/ethnic background[11], political position, religious affiliation, highest level of education and field of education, and sexual orientation.

*Right-Wing Authoritarianism (RWA)* (Funke, 2005). This scale in its original form consists of 12 items. A subset of three were chosen for this study, to keep the length of the overall questionnaire short. The items were chosen on the basis that each measured one dimension of RWA: Aggression ("What our country really needs instead of more 'civil rights' is a good stiff dose of law and order"), Submission ("The real keys to the 'good life' are obedience, discipline, and virtue"), and Conventionalism ("The withdrawal from tradition will turn out to be a fatal fault one day"). These three items were summed and averaged; higher scores indicated higher support for authoritarianism. Cronbach's alpha was .69.

*Social Dominance Orientation (SDO)* (Ho et al., 2015). This scale consists originally of eight items, and four were chosen to represent each of its four dimensions: Pro-trait dominance ("An ideal society requires some groups to be on top and others to be on the bottom"), Con-trait dominance ("Groups at the bottom are just as deserving as groups at the top (reverse-coded)"), Pro-trait anti-egalitarianism ("Group equality should not be our primary goal"), and Con-trait anti-egalitarianism ("We should do what we can to equalize conditions for different groups (reverse-coded)". Cronbach's alpha was .59.

*Affective content of the story* (Poerio, Totterdell, & Miles, 2013). Two items measured the affective influence of the story on the participant in terms of valence (happy/sad), and arousal (anxious/calm): "What you just watched/read/imagined made you feel….". Response scale was 1 = Sad/Anxious, 7 = Happy/Calm. Bivariate correlation between these two items was $r = .45$.

*Attributes of the story* (Bodie et al., 2013). Nine items were constructed based on Bodie et al.'s (2013) characterisation of imagined interactions. These items measured (1) frequency of contact with situations or people similar to those depicted by the story; (2) discrepancy between experiences in the story and in real life; (3) dominance of the self, item: "I focused on myself and my thoughts during the watching/reading/imagination task"; (4) variety of content in the story; (5) retroactivity and (6) proactivity, that is, the story's resemblance to something that happened in the past or may happen in the future to participants or people they know; and specificity i.e. detail and distinctions perceived in the story, in three questions coding sensory channels: (7) visualising, (8) hearing and (9) feeling. Cronbach's alpha was .77.

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[11] Salvadorian participants were asked about their families of origin -Salvadorian or foreign-, given that the categorisation of race and ethnicity in this country differs from that used in the UK (Alvarenga, 2015; Effenberger, 2014).

*Functions of the story* (Bodie et al., 2013). These six items measured potential uses of the story for the participants: (1) catharsis; (2) conflict management; (3) compensation; (4) rehearsal; (5) maintenance of relationships; and (6) self-understanding. Example items: "What I just watched/read/imagined helps me to manage a conflict", "What I just watched/read/imagined helps me to rehearse for a future interaction". Cronbach's alpha was .90.

*Transportation scale* (Green & Brock, 2000). The original 11-item Transportation Scale related to reading (example item: "I was mentally involved in the narrative while reading it"), and this action was modified to refer to the specific condition, either watching, reading, or imagining. Three items were omitted as they were deemed to address a longer-lasting exposure to a story ("I wanted to learn how the story ended", "I found myself thinking of ways the story could have turned out differently", "The events in the story have changed my life"). Cronbach's alpha was .53.

*Positive and negative affect* (Lacosse, 2014). This measure contained three items related to overall positive affect (Happy, Enthusiastic, and Excited), and four related to overall negative affect (Annoyed, Upset, Distressed, Threatened). Participants were asked to report the extent to which they were experiencing each of these emotions at the moment of responding, and the negative affect subscale was reverse-coded to obtain a general affect score. Cronbach's alpha was .75.

*Heterosexual identification* (Doosje, Ellemers, & Spears, 1995). This four-item measure assessed participants' identification with other heterosexual individuals. The original scale asked about identifying with other Psychology students, and this group name was changed to "heterosexual individuals" for this study. Sample item: "I feel strong ties with heterosexual individuals". Cronbach's alpha was .83.

*Sexual prejudice* (Voci & Hewstone, 2003). This six-item scale originally measured prejudice towards immigrants, and it was modified to assess prejudice towards gay men and lesbians. Example item: "Gay men and lesbians living in our society have values and behaviours different from those required to be good citizens". Cronbach's alpha was .62.

*Agreement with same-sex civil partnership and marriage.* As a supplementary measure of sexual prejudice, participants were asked to mark their percentage of agreement (0 = Completely disagree, 100 = Completely agree) with both civil partnership and marriage for same-sex couples.

*Frequency of reading literary fiction and watching movies* (Rain & Mar, 2014). This was a two-item measure which assessed frequency of reading fiction and of viewing movies of all genres. The original measure was a 9-point response scale with five anchors ("Never", "Occasionally", "Roughly once a month", "Roughly once a week", "Roughly every day"). In this study, the response scale was reduced to seven points to match the response options from the rest of the measures. Two more anchors were added ("Roughly every two weeks", "Roughly a few days per week"), so that option responses ranged from 1 = Never, to 7 = Roughly every day.

*LGBT Acquaintances*. To measure previous contact with members from the target group, participants were asked whether they knew someone who was gay, lesbian, bisexual or transgender, and, if they did, how many people they knew and how close they were to them. The response scale for the latter question ranged from 1 = Not close at all to 7 = Very close.

*Aims of the study* (Turner, Crisp, & Lambert, 2007). The last two questions of the study asked the participants what they thought the research was about when they volunteered to participate (1 = Complex social relationships, 2 = How information is presented, 3 = Other, please explain), and if they thought that the research was looking at something other than what was stated in the information sheet (1 = No, 2 = Yes, please explain).

#### *4.2.4. Procedure*

The questionnaire was first developed in English for UK participants, and then it was translated to Spanish for SV participants. A bilingual translator in El Salvador revised and back-translated the Spanish version of the measures to English. The resulting Spanish-to-English version was discussed by the research team and it was considered equivalent to the English version.

The participant information sheet introduced this study as an investigation of complex social relationships to explore people's personal assessment of social interactions. Participants were assured that responses were anonymous and confidential, and that they had the right to withdraw their participation at any point before submitting their answers. Once the participant provided informed consent, the socio-demographic questions, and the SDO and RWA scales were presented. Then, one of the stories was displayed: a YouTube video for either film trailers, one of the short stories, or the imagined contact scripts. Afterwards, the rest of the measures were displayed, followed by the debriefing sheet. No incentives were offered in exchange of participation. The Psychology Ethics Committee at the University of Sheffield granted Ethical approval to conduct this study.

## 4.3. Results

#### *4.3.1. Distribution of participants across conditions*

A total of 570 participants responded to the questionnaire. Seventy-nine questionnaires were removed because respondents were gay or bisexual[12]. Participants who did not finish the questionnaire were then removed, along with those whose time spent on the page displaying the film trailer, short story or script was below or above the estimated time required to view, read or

[12] To avoid biases at the beginning of the questionnaire, the information sheet did not mention that only heterosexual participants were needed. Non-heterosexual participants responded to a shorter version of the questionnaire.

imagine the story (Table 4.1). This deletion criterion is described in Table 4.2, and it was established to make allowances for video loading for film trailers, fast reading times (5wps) for short stories, and either fast or immersive imagined contact. After these removals, 248 questionnaires remained for the analysis.

For this and the other four studies in this thesis (Chapters 5 to 7), a stringent time limit was set in an effort to control for participants who may not have paid sufficient attention to the fiction pieces, or, in Study 1, failed to focus on the imagined contact task. This time limit, whether maximum or minimum, could be implemented more easily in the fiction conditions, because the stimuli had a fixed length (in terms of time or words); and because, for written fiction conditions, estimated reading times could be calculated and measured in words per second. In the case of the imagined contact conditions in the present study, previous research provided estimated times to finish the task (Miles & Crisp, 2014), and the instructions in this study asked the participants to take a few minutes to imagine the conversation. The 3-minutes maximum limit was set based on these estimations. Participants who took longer than three minutes imagining contact may have immersed themselves thoroughly in that story, and thus their removal from the data set may signify missing stronger effects. Nevertheless, research on online data collection found that participants in online surveys are likely to skip instructions (Ramsey, Thompson, McKenzie, & Rosenbaum, 2016). Ultimately, the decision was made to keep those participants within the time limits established from average estimations in imagined contact research.

*Table 4.2.* Criteria for removal of responses based on time spent on the story

| Condition | | Minimum time[2] | Maximum time[2] | No. of participants removed |
|---|---|---|---|---|
| Film trailers | *Pride* | 150 seconds | 200 seconds (3 minutes) | 18 |
| | *Lilting* | 106 seconds | 200 seconds (3 minutes) | 15 |
| Short stories | *Fakes* | 136 seconds (2:16 minutes at 5 wps) | 600 seconds (10 minutes) | 26 |
| | *Grace* | 108 seconds (1:48 minutes at 5 wps) | 600 seconds (10 minutes) | 20 |
| Imagined contact[1] | With a gay person | 10 seconds | 200 seconds (3 minutes) | 6 |
| | With a stranger | 10 seconds | 200 seconds (3 minutes) | 6 |

[1] Miles and Crisp's (2014) findings suggest that imagined contact tasks tend to last one to two minutes, although some studies may require participants to spend over two minutes on the task.

2 For all materials except the film trailers, these reading times were estimated based on an average reading speed of three words per second (wps), calculated at https://www.edgestudio.com/production/words-to-time-calculator.

When participants began the questionnaire, they were randomly allocated to one of four conditions. As shown on Table 4.3, those assigned to the Film trailer condition viewed the movie trailer of *Pride* or *Lilting*. Participants assigned to the Short story condition read *Fakes* or *Grace*. The last two conditions consisted of imagining getting help from someone to spread a message about a cause; those in the Imagined contact condition were asked to imagine that the person helping them was gay, while those in the Control condition were asked to imagine a stranger.

*Table 4.3.* Number and percentage of participants by story and condition

| Condition | Story | Total by story | | Total by condition | |
|---|---|---|---|---|---|
| | | N | % | N | % |
| Film trailer | *Pride* | 36 | 14.5 | 78 | 31.5 |
| | *Lilting* | 42 | 16.9 | | |
| Short story | *Fakes* | 22 | 8.9 | 65 | 26.2 |
| | *Grace* | 43 | 17.3 | | |
| Imagined contact | Gay person | 49 | 19.8 | 49 | 19.8 |
| Control | Stranger | 56 | 22.6 | 56 | 22.6 |
| Total | | 248 | 100.0 | 248 | 100.0 |

The analysis were conducted using the data from the whole sample, as participants from both countries were recruited from a similar socio-demographic background (i.e. university settings). The potential differences in responses stemming from the country of origin of the participant were addressed in the fourth hypothesis.

### *4.3.2. Outlier removal*

For all five studies in this thesis (Chapters 4 to 7), outlier removal was carefully considered, for reading/viewing/imagining times, and for scores. In the first case, maximum and minimum times spent on the stimulus were estimated as proxy for the attention paid to the story. This criterion is further developed in the relevant subsection for all studies which were conducted online (i.e. section 4.3.1 in this chapter, see also Chapters 5 and 6). In the case of scores, values outside the data range displayed by the overall sample were removed. Outlier removal implies altering the raw data, which has been considered a questionable research practice due to its potential use to ensure significant results (Bakker & Wichert, 2014). However, a meta-analysis by Bakker and Wichert (2014) found that studies which excluded outliers did not report more significant results, that is, were no more associated with *p* values below .05, than those which did not exclude outliers. In this thesis, outliers were removed to decrease likelihood of either seeing or omitting effects based on non-representative cases within the samples.

The outlier removal method used in the studies of this thesis was the Interquartile Range (IQR) rule. Frequently used outlier detection rules work around mean differences and standard deviations (Pollet & van der Meij, 2017). This is a problematic approach for skewed distributions

–which appear frequently in this thesis– because skewed data is bound to present more outliers than normally distributed data (Pollet & van der Meij, 2017). The IQR is the difference between the first and third quartile, which remains unaffected by the introduction of extreme values. The IQR rule reduces the likelihood of removing data points in skewed distributions (i.e. biased data not produced by error), while it still allows to detect extreme values. In this procedure, the IQR results from subtracting the first quartile ($Q_1$) from the third quartile ($Q_3$), and multiplying this result by 1.5. The value of (IQR)1.5 is added to $Q_3$, and subtracted from $Q_1$, and data points greater than the former and less than the latter are removed. The percentiles for all measures of engagement with the story and intergroup attitudes, which constitute the basis to obtain the IQR, are shown in Table 4.4, along with the lower and upper values to detect the outliers.

The main variables for analysis were divided into two sets: mediators linked to story characteristics, and moderators linked to audience characteristics (Chapter 3). The first set of variables referred to dimensions of engagement with the story: Affect elicited (valence and arousal), Transportation, Attributes, and Functions. The second set of variables related to individual differences, namely RWA, SDO, General affect, and Heterosexual identification. Sexual prejudice was included in this second set of variables for the purposes of outlier removal and descriptive statistics.

*Table 4.4.* Percentiles and outliers (per IQR rule) for main variables[1]

| Measures | | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 10 | **25** | 50 | **75** | 90 | 95 | < | > |
| Engagement with story | Affective valence | 2.00 | 3.00 | **4.00** | 4.00 | **6.00** | 7.00 | 7.00 | 1 | 9 |
| | Affective arousal | 2.00 | 3.00 | **4.00** | 5.00 | **6.00** | 7.00 | 7.00 | 1 | 9 |
| | Transportation | 2.50 | 2.92 | **3.37** | 4.00 | **4.75** | 5.37 | 5.62 | 1.3 | 6.8 |
| | Attributes | 2.02 | 2.55 | **3.33** | 4.11 | **4.77** | 5.55 | 5.77 | 1.8 | 6.9 |
| | Function | 1.00 | 1.00 | **1.50** | 3.00 | **4.33** | 5.16 | 6.00 | -2.7 | 8.5 |
| Individual differences | RWA | 1.00 | 1.00 | **2.00** | 3.00 | **4.33** | 5.00 | 5.85 | -1.5 | 7.8 |
| | SDO | 1.00 | 1.00 | **1.25** | 2.25 | **3.18** | 4.00 | 4.38 | -1.6 | 6.1 |
| | General affect | 3.42 | 3.85 | **4.60** | 5.28 | **5.85** | 6.28 | 6.57 | 2.7 | 7.7 |
| | Heterosexual ID | 3.00 | 3.75 | **4.50** | 5.50 | **6.50** | 7.00 | 7.00 | 1.5 | 9.5 |
| | Sexual prejudice | 1.00 | 1.16 | **1.66** | 2.25 | **3.00** | 4.33 | 5.25 | -.4 | 5.0 |

[1]Upper and lower outlier values that surpass the minimum (1) and maximum (7) score result from applying the IQR rule to data with a skewed distribution.

Results from the IQR procedure lead to removing nine data points from Attributes; three data points from General affect; four data points from Heterosexual identification; and 17 data points from Sexual prejudice. The selected data points were not included in subsequent analysis.

### *4.3.3. Descriptive Statistics*

Table 4.5 shows the mean and standard deviation of all variables after removing the outliers, plus the Shapiro-Wilk statistic, in which a *p* value below .05 suggests that data does not

come from a normally distributed population. All variables, except Transportation and Attributes, showed values below .05. For these variables, robustness against non-normal distribution of the tests conducted was assumed.

*Table 4.5.* Means, standard deviations and normality distribution of main variables

| Measures[1] | | Mean | SD | Shapiro-Wilk[2] |
|---|---|---|---|---|
| Engagement with story | Felt happy or sad | 4.50 | 1.56 | <.001 |
| | Felt calm or anxious | 4.79 | 1.60 | <.001 |
| | Transportation | 4.08 | .93 | .404 |
| | Attributes | 4.13 | 1.03 | .180 |
| | Functions | 3.07 | 1.60 | <.001 |
| Intergroup attitudes | RWA | 3.11 | 1.45 | <.001 |
| | SDO | 2.32 | 1.08 | <.001 |
| | General affect | 5.20 | .88 | .004 |
| | Heterosexual ID | 5.52 | 1.22 | <.001 |
| | Sexual prejudice | 2.33 | .91 | <.001 |

[1]All scales had a response option range from 1 to 7. For all variables, a higher score indicates stronger presence of the variable, or positive affect in the case of Happy-sad, Calm-anxious, and General affect.
[2] $p < .05$ indicates non-normal distribution.

Besides the main variables for analysis, four additional questions were included to further explore the profile of the participants in case of finding differences between groups. The first and second questions addressed the frequency with which participants read fiction and watched films of all genres. For fiction, 31.9% of participants reported reading occasionally, and a combined 29.0% said they read a few days every week, or every day. On watching movies, 31.5% reported doing it roughly every week, and 19.4% roughly a few days every week. There were no significant differences among participants in the four conditions in their reported frequency of reading, $\chi^2$ (18, 231) = 21.95, $p$ = .234, or watching films, $\chi^2$ (18, 231) = 13.53, $p$ = .759.

The third supplementary question addressed previous contact with LGBTQ acquaintances. Nearly all participants (95.6%) said that they knew LGBTQ individuals, and when asked how many, the most frequent answer was that they knew seven individuals or more (39.1%). Regarding how close they were to these acquaintances, on a scale from 1 (not at all) to 10 (very close) points, the average was 5.71. Lastly, participants were asked to indicate their percentage of agreement with same-sex unions, resulting in an average of 81.10% of agreement with same-sex civil partnership, and 77.01% of agreement with same-sex marriage.

The social desirability questions at the end of the questionnaire covered what participants thought the research was about when they volunteered, and if they thought that the study was looking at something other than the stated purpose. Each of these questions had a multiple-choice response, with the option of adding comment in a text field. In the first question, 87.9% of participants thought the study was, as presented in the participant information sheet, about

complex social relationships. Out of the 9.7% that reported thinking it was something about else, one person described the real aim of the study: "The effect of the video shown on attitudes towards non-hetero individuals". For the second question, 60.1% of participants thought the research was looking at what was stated in the information sheet. Out of the remaining 39.9%, only one person reported "Attitudes to non-heterosexuals after previously imagining interactions with strangers".

The two participants who seemed suspicious of the real aim of the study were not removed from the database. The participants' awareness of the nature of the study, also notable in the language used (e.g. non-heterosexual, imagined interactions), can be grounds to suspect that they chose to respond to prejudice measures in a socially desirable manner. Nevertheless, the choice was made to keep these participants in the analysis, once it was found that they belonged to a low-prejudice sample. Low-prejudice individuals tend to show a degree of awareness of their own potential prejudice (see Discussion, Section 4.4). In this sense, these two participants' suspicion would not entail a significant deviation from the sample's overall low-prejudice responses.

#### *4.3.4. Correlations between measures*

Correlations between the measures involved in the analysis showed that sexual prejudice was significantly associated with most measures, except Affective arousal, and Heterosexual identification. In terms of individual differences, sexual prejudice correlated positively with RWA and SDO, as expected from previous literature, and negatively with general affect (i.e. higher sexual prejudice was linked to more negative affect). In terms of engagement with the story, higher sexual prejudice scores were significantly associated with negative affect, and lower scores in Transportation, Attributes, and Functions. These correlations are displayed in Table 4.6, suggesting that sexual prejudice is linked to other intergroup attitudes (RWA, SDO), negative affect, and lower engagement with the story. However, sexual prejudice did not correlate with neither affective arousal nor with heterosexual identification.

*Table 4.6.* Correlations between measures for intergroup attitudes and engagement with story

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. RWA | -- | | | | | | | | |
| 2. SDO | **.269**** | -- | | | | | | | |
| 3. Sad/Happy | .069 | -.065 | -- | | | | | | |
| 4. Anxious/Calm | .021 | -.017 | **.460*** | -- | | | | | |
| 5. General affect | .076 | **-.185**** | **.372**** | **.379**** | -- | | | | |
| 6. Transportation | -.066 | -.015 | .077 | .087 | .115 | -- | | | |
| 7. Attributes | -.031 | -.069 | **.212**** | **.180**** | **.185**** | **.506**** | -- | | |
| 8. Functions | .068 | -.045 | **.303**** | **.192**** | **.292**** | **.441**** | **.500**** | -- | |
| 9. Heterosexual identification | **.277**** | .065 | .067 | **.228**** | **.139*** | -.067 | .032 | .104 | -- |
| 10. Sexual prejudice | **.193**** | **.211**** | **-.193**** | -.109 | **-.165*** | **-.188**** | **-.299**** | **-.172**** | .068 |

* Significant at .05.
** Significant at .01.

The negative correlations between engagement with the story and sexual prejudice may indicate that negatives attitudes towards the LG people are linked to less immersion in a story featuring LG characters. To test this possibility, the correlations were further explored by dividing participants according to exposure to fiction (conditions 1 and 2) or imagined contact (conditions 3 and 4), shown in Table 4.7. It should be noted, however, that neither SDO nor RWA correlated with measures of engagement with the story (except for higher SDO linked to more negative general affect) (Table 4.6).

The resulting correlations between sexual prejudice, and RWA and SDO by condition, displayed in Table 4.7, indicate that for the fiction group, higher sexual prejudice was significantly related to lower transportation, and lower perception of attributes and functions in the story, that is, aspects of engagement with the story excluding affect. The imagined contact condition was only associated with affective valence, suggesting that higher sexual prejudice was linked to negative affect. These findings suggest that negative attitudes play a role in how personally engaging a story featuring LG characters can be for heterosexual audiences.

*Table 4.7.* Correlations between sexual prejudice and measures of engagement with the story by condition

| Measures | | Happy/sad | Calm/anxious | Affect | Transportation | Attributes | Functions |
|---|---|---|---|---|---|---|---|
| Sexual prejudice | Fiction | -.155 | -.062 | -.145 | **-.268**** | **-.374**** | **-.227**** |
| | Imag.contact | **-.226*** | -.156 | -.186 | -.040 | -.170 | -.051 |

* Significant at .05.
** Significant at .01.

### *4.3.5. Hypothesis 1: Fiction exposure will be associated with lower sexual prejudice than imagined contact*

The hypotheses in this study compared two conditions, Fiction and Imagined contact. The first two hypotheses established this comparison in terms of an outcome (sexual prejudice, Hypothesis 1) and of mechanisms (mediators, Hypothesis 2). However, there are six original conditions –two film trailers, two short stories, experimental imagined contact, and control

imagined contact–, and more focussed comparisons between these conditions are presented here before testing the hypotheses. This preliminary analysis was conducted to infer potential differences among the stories, beyond their fictional/imagined quality (e.g. the medium, the type of character, the emotional tone of the story; see Discussion section in this chapter).

Therefore, the six original conditions were compared first. Next, these conditions were grouped, first, as Film, Short story, Imagined contact, and Control imagined contact; and, second, as Fiction, Experimental imagined contact, and Control imagined contact. This progressive grouping of conditions was proposed to observe potential differences in the manipulation by subconditions; to observe, for instance, statistical differences between the two film trailers, or between the four fiction conditions. It was expected that, in case of finding no differences within subconditions, detecting these differences would support the decision to compare Fiction and Imagined contact as two groups. Alternatively, in case of finding differences (e.g. the effects of Experimental and Control imagined contact conditions significantly differed from one another), it would advise caution in interpreting the results of the hypothesis test.

The sample reported low sexual prejudice scores. Table 4.8 and Figure 4.2 show the distribution of mean scores across the six original conditions: two film trailers, two short stories, imagined contact, and control imagined contact. On a scale from 1 = Low prejudice to 7 = High prejudice, the Fiction condition had a mean of 2.39 (*SD* = .93), and the Imagined contact condition, a mean of 2.24 (*SD* = .87).

*Table 4.8.* Mean scores and SD for sexual prejudice by condition

| Condition | Sexual prejudice score | |
|---|---|---|
| | M | SD |
| Pride (Film trailer 1) | 2.12 | 0.68 |
| Fakes (Short story 1) | 2.50 | 0.99 |
| Lilting (Film trailer 2) | 2.52 | 1.00 |
| Grace (Short story 2) | 2.46 | 0.99 |
| Imagined contact (gay) | 2.37 | 0.91 |
| Imagined contact (stranger) | 2.13 | 0.83 |

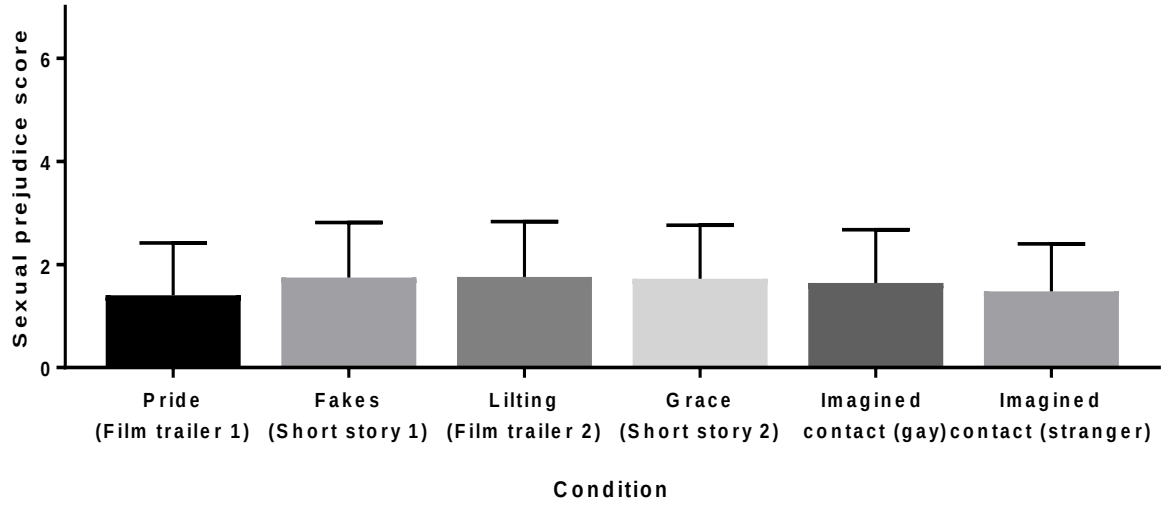


*Figure 4.2.* Mean and SD (in bars) of sexual prejudice scores by condition

A one-way ANOVA showed no differences in sexual prejudice reported by participants in the six original conditions, $F(5, 230) = 1.31$, $p = .162$. To better observe the potential differential effectiveness of the two manipulations compared to that of control, these six conditions were grouped into three: Fiction, Experimental Imagined contact, and Control Imagined contact. No differences in sexual prejudice scores were seen in this comparison, $F(2, 230) = 1.62$, $p = .200$. Lastly, a t-test was conducted between the two major conditions, Fiction and Imagined Contact, and no statistically significant differences in terms of sexual prejudice scores were found, $t(229) = 1.23$, $p = .218$. In summary, participants who read or viewed fictional narratives did not report less sexual prejudice than participants who engaged with imagined contact, whether in the experimental or the control version. Therefore, Hypothesis 1 was not supported[13].

### *4.3.6. Hypothesis 2: Engagement with the story will mediate the relationship between fiction and lower sexual prejudice*

Before conducting the test of this hypothesis, the engagement responses to the stories were compared by the four conditions. For Affective valence, participants in both imagined contact conditions reported significantly higher positive affect than those in the fiction conditions, $F(3, 227) = 11.86$, $p < .001$, $\eta_p^2 = .136$. For Calm-anxious, there were no significant differences between participants in the four conditions, $F(3, 226) = 6.38$, $p = .061$, and the same occurred for

[13] Agreement with legal unions for same-sex couples was added as a supplementary measure for sexual prejudice. As expected, higher sexual prejudice was associated with lower agreement with same-sex civil partnership, $r = -.462$ and same-sex marriage, $r = -.504$, while both agreements correlated positively with one another, $r = .725$; correlations significant at the .01 level. The analysis reported in Hypothesis 1 was also conducted with this agreement as the outcome, and it was non-significant.

Transportation, $F(3, 227) = .720$, $p = .541$. For Attributes, participants in the Imagined contact condition showed a significantly higher score (i. e. stimulus was rated as more vivid and/or more familiar) than participants in the film trailer and the short story conditions, $F(3, 225) = 5.74$, $p = .001$, $\eta_p^2 = .071$. Lastly, for Functions, participants in both Imagined contact conditions scored higher than those in the film trailer condition, $F(3, 226) = 9.25$, $p < .01$, $\eta_p^2 = .077$. Overall, these results, shown on Table 4.9 and Figure 4.3, indicate that participants in the two imagined contact conditions reported higher engagement with the story than did participants in the two fiction conditions.

*Table 4.9.* Means, standard deviations, significant differences and effect sizes for engagement with the story by condition

| | Condition | Mean[1] | Std. Deviation | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|
| Affective valence | Film trailer | 4.13* | 1.88 | <.001 | .136 |
| | Short story | 3.88* | 1.28 | | |
| | Imagined | 5.18* | 1.21 | | |
| | Control | 5.20* | 1.17 | | |
| Affective arousal | Film trailer | 4.77 | 1.58 | .061 | --- |
| | Short story | 4.50 | 1.57 | | |
| | Imagined | 5.36* | 1.59 | | |
| | Control | 4.78 | 1.65 | | |
| Transportation | Film trailer | 4.18 | .91 | .541 | --- |
| | Short story | 3.97 | 1.03 | | |
| | Imagined | 4.12 | .75 | | |
| | Control | 4.16 | .87 | | |
| Attributes | Film trailer | 3.89* | 1.06 | .001 | .071 |
| | Short story | 3.85* | 1.05 | | |
| | Imagined | 4.63* | 1.04 | | |
| | Control | 4.07 | 1.08 | | |
| Functions | Film trailer | 2.64* | 1.52 | .002 | .063 |
| | Short story | 2.83* | 1.50 | | |
| | Imagined | 3.62* | 1.57 | | |
| | Control | 3.40 | 1.60 | | |

[1] Mean difference is significant at $p = .05$.

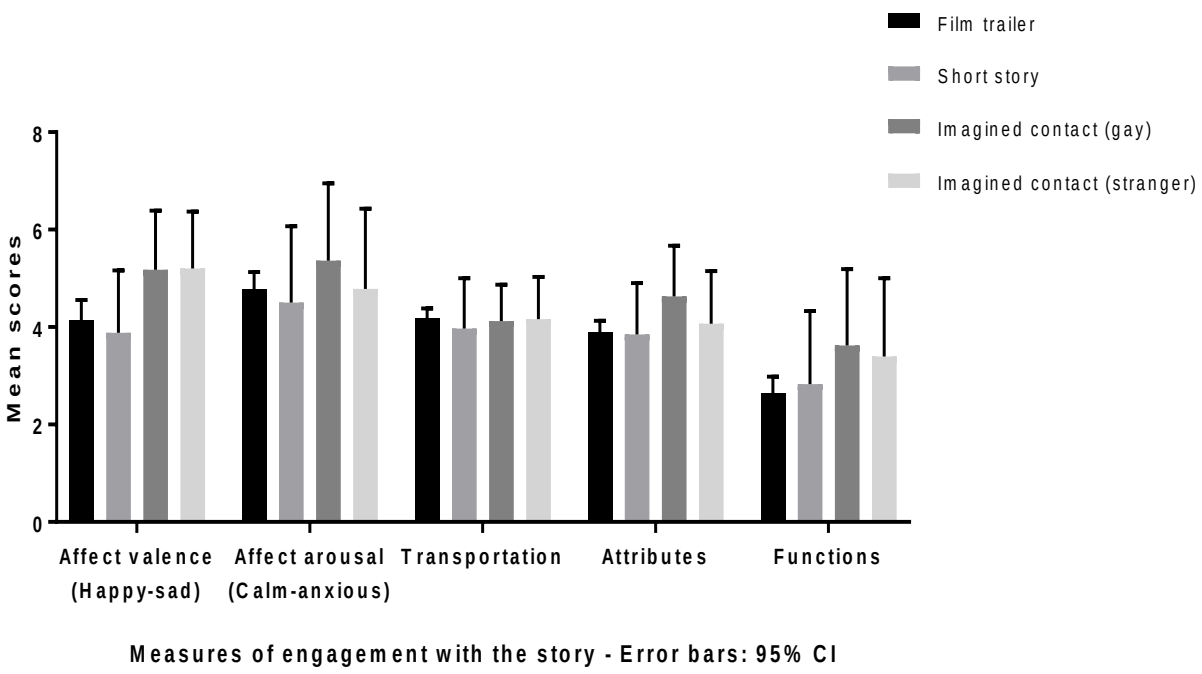


*Figure 4.3.* Mean scores for measures of engagement with the story by condition.

A similar analysis was conducted between the three groups: Fiction, Experimental imagined contact, and Control imagined contact. For Affective valence, participants in the Fiction condition reported significantly lower positive affect than those in the two imagined conditions, $F(2, 227) = 18.58$, $p < .001$, $\eta_p^2 = .142$. For Calm-anxious, participants in the Fiction condition reported feeling significantly less calm than those in the Experimental imagined contact one, $F(2, 227) = 3.49$, $p = .032$, $\eta_p^2 = .030$. For these two affective measures, there were no differences between the two imagined contact conditions. For Attributes, Experimental imagined contact showed a significantly higher score than both Fiction and Control, $F(2, 227) = 9.02$, $p < .001$, $\eta_p^2 = .075$. For Functions, Fiction was significantly lower than both Experimental and Control imagined contact, $F(2, 227) = 7.58$, $p < .001$, $\eta_p^2 = .063$. Lastly, there were no significant differences between these three groups for Transportation, $F(2, 227) = .171$, $p = .843$.

A further comparison was conducted by clustering the four conditions into the two main conditions, Fiction and Imagined contact. These values (means and SD) are shown on Table 4.10 and on Figure 4.4. This comparison supported the differences seen above in three measures of engagement with the story: Imagined contact presented significantly higher scores than Fiction for Affective valence, $t(228.80) = -5.90$, $p <. 001$, $d = .81$, Attributes, $t(227) = -3.25$, $p = .001$, $d = .43$, and Functions, $t(228) = -3.76$, $p <. 001$, $d = .50$.

*Table 4.10.* Mean scores for measures of engagement with the story and sexual prejudice by condition (Fiction or Imagined contact).

| **Condition** | | **Fiction** | | | **Imagined contact** | |
|---|---|---|---|---|---|---|
| **Variables**[1] | **Mean** | **SD** | **N** | **Mean** | **SD** | **N** |
| Affect valence (Happy-sad) | 4.02 | 1.65 | 136 | 5.19 | 1.18 | 95 |
| Affect arousal (Calm-anxious) | 4.65 | 1.58 | 135 | 5.05 | 1.64 | 95 |
| Transportation | 4.09 | 0.97 | 136 | 4.14 | 0.81 | 95 |
| Attributes | 3.87 | 1.05 | 135 | 4.34 | 1.09 | 94 |
| Functions | 2.72 | 1.51 | 136 | 3.5 | 1.58 | 94 |
| Sexual prejudice | 2.39 | .93 | 136 | 2.24 | .87 | 95 |

[1]All scales had response options from 1 to 7, where 7 indicated stronger presence of the variable (for Affect variables, a higher score indicated a more positive affect, i.e. happier, calmer).

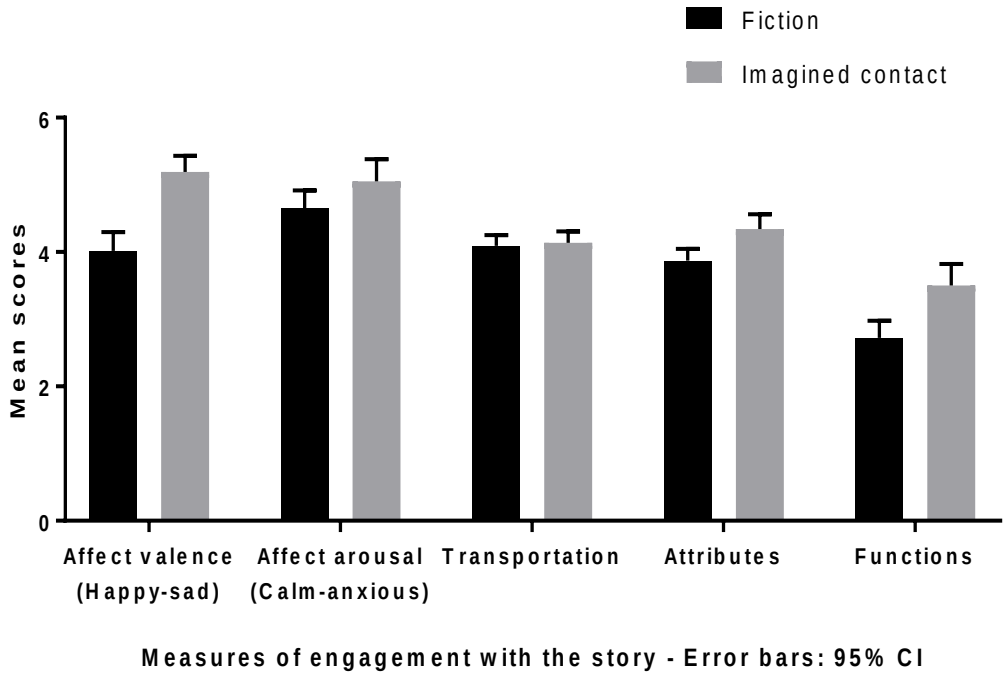


*Figure 4.4.* Mean scores for measures of engagement with the story by group Fiction or Imagined contact.

Hypothesis 2 tested the potential mediation of these five measures of engagement in the relationship between imagined-based contact and sexual prejudice. Hayes' (2013) PROCESS macro was used to test this mediation model (Model 4), as illustrated in Figure 4.5. Hayes' (2013) mediation model allowed to examine direct and indirect pathways through which imagination-based contact (antecedent variable X) might transmit an effect on sexual prejudice (consequent variable Y) through intermediary variables (M variables). For this analysis, imagination-based contact was coded 1 for Fiction, comprising film trailers and short stories, and 0 for Imagined contact with either a gay person or a stranger. Confidence intervals were of 95%.

The overall mediation model was significant, $R^2$ = .11, $F$(6, 220) = 4.83, $p$ <. 001. Examination of the indirect pathways showed that Imagined contact was a positive predictor of Affective valence, $\beta$ = -1.21, $SE$ = .19, $p$ <. 001, Attributes, $\beta$ = -.48, $SE$ = .15, $p$ <. 001, and Functions, $\beta$ = -.80, $SE$ = .21, $p$ <. 001. Type of story did not influence Affective arousal nor Transportation. From these mediators, Attributes was significantly linked to Sexual prejudice, $\beta$ = -.21, $SE$ = .07, $p$ < .001, as was Affective valence, $\beta$ = -.09, $SE$ = .44, $p$ < .001. These results suggest that negative affect elicited by the story, and a lower perception of attributes (i.e. content of the story was not vivid or personally relevant to the participant) were associated with higher sexual prejudice.

Type of story was not a direct predictor of Sexual prejudice, $\beta$ = -.05, $SE$ = .13, $p$ = .685, and the total effect model was not significant, $R^2$ = .01, $F$(1, 225) = 1.53, $p$ = .219, meaning that imagination-based contact was not associated with lower sexual prejudice. The indirect association between Type of story and Sexual prejudice via Affective valence was not significant, $\beta$ = .10, $SE$ = .06, CI [-.004, .23]. The indirect association between Type of story and Sexual prejudice via Attributes was significant, $\beta$ = .10, $SE$ = .05, CI [.04, .22], indicating that, compared to Fiction, Imagined contact was associated with lower Sexual prejudice with Attributes as a mediator. Overall, Hypothesis 2 was not supported.

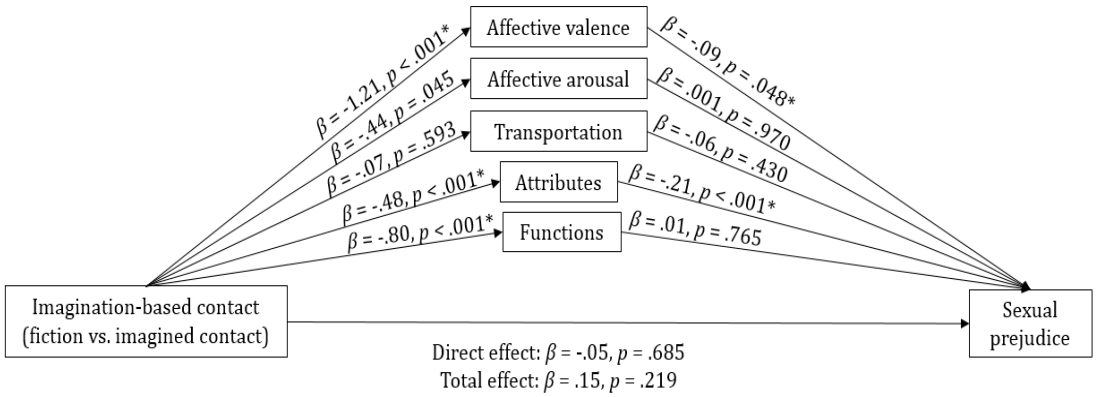


*Figure 4.5.* The mediating role of engagement with the story in the association between imagination-based contact (fiction vs. imagined contact) and sexual prejudice. *$p$ < .05.

### *4.3.7. Hypothesis 3: Individual differences will moderate the association between fiction exposure and lower sexual prejudice*

The third hypothesis tested whether participants' individual differences moderated the association between imagination-based contact and sexual prejudice. It was expected that participants scoring higher on SDO, RWA, and Heterosexual identity, and lower on General affect (i.e. negative affect) would present a higher Sexual prejudice score. The means and SD of these variables by condition are shown on Table 4.11.

*Table 4.11.* Mean scores for measures of individual differences (Right-Wing Authoritarianism, Social Dominance Orientation, General Affect, and Heterosexual Identification) and sexual prejudice scores by condition (Fiction or Imagined contact).

| **Condition** | **Fiction** | | | **Imagined contact** | | |
|---|---|---|---|---|---|---|
| **Variables**[1] | **Mean** | **SD** | **N** | **Mean** | **SD** | **N** |
| Right-Wing Authoritarianism | 2.81 | 1.41 | 136 | 3.25 | 1.36 | 95 |
| Social Dominance Orientation | 2.24 | 1.08 | 136 | 2.42 | 1.03 | 95 |
| General Affect | 5.10 | .96 | 136 | 5.22 | .92 | 95 |
| Heterosexual identification | 5.41 | 1.39 | 136 | 5.36 | 1.26 | 95 |
| Sexual prejudice | 2.39 | .93 | 136 | 2.24 | .87 | 95 |

[1]All scales had response options from 1 to 7, where 7 indicated stronger presence of the variable (for General Affect, a higher score indicated a more positive affect).

To test these potential moderators, Hayes' (2013) PROCESS macro was used to conduct a moderation analysis (Models 1 and 2). Hayes' (2013) moderation analysis examined the conditions of the association between Imagination-based contact on Sexual prejudice; that is, the extent to which this association depended on the four variables stated above. For RWA and SDO, Model 2 was used, which allowed to test two moderators simultaneously. For Heterosexual identification and General affect, Model 1 was used separately for each variable, because there is no theoretical grounds to include identification and affect in the same model. Confidence intervals were of 95% for the two models.

Figure 4.6 shows the statistical model with the four moderators, and the direct and indirect pathways for each in the relationship between Imagination-based contact and Sexual prejudice. Overall models were not significant for General affect: $R^2 = .03$, $F(3, 227) = 2.55$, $p = .056$, nor Heterosexual identification, $R^2 = .01$, $F(3, 227) = .90$, $p = .440$. On the other hand, the model testing RWA and SDO was significant overall, $R^2 = .08$, $F(5, 225) = 6.34$, $p <. 002$, although only the direct effect of RWA on Sexual prejudice was significant, $\beta = .14$, $SE = .07$, $p = .043$. This result is consistent with findings from the literature that establishes RWA is a strong predictor of sexual prejudice (Van der Toorn et al., 2017). Taken together, neither of the four variables tested was a moderator for imagination-based contact and sexual prejudice. Therefore, the third hypothesis was not supported.

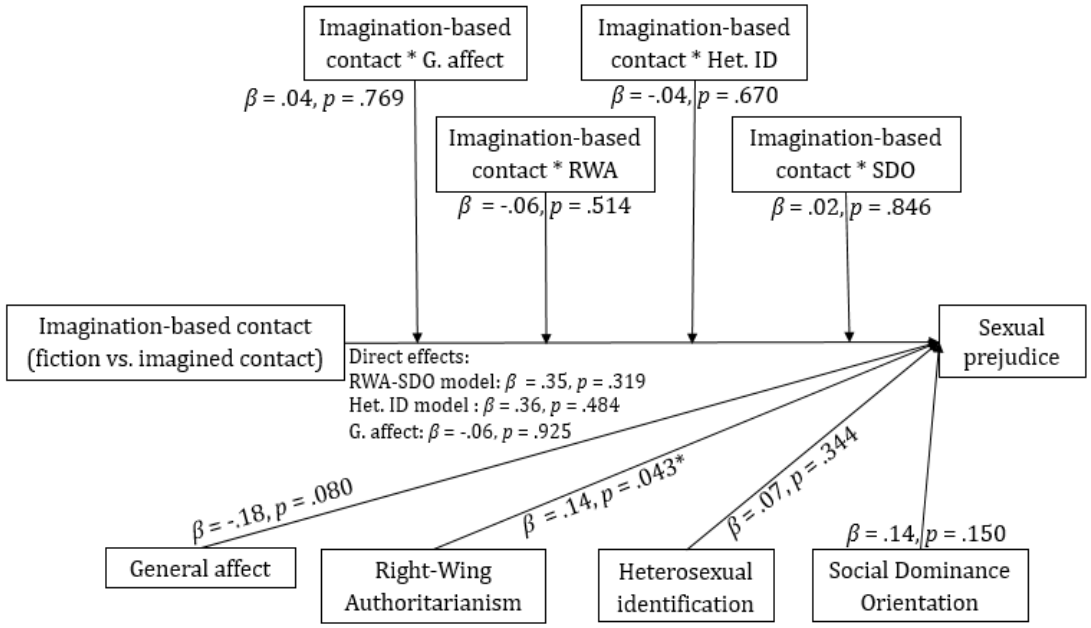


*Figure 4.6.* The moderating role of individual differences (RWA, SDO, General affect, and Heterosexual identification) in the association between imagination-based contact (fiction vs. imagined contact) and sexual prejudice. *$p < .05$.

### *4.3.8. Hypothesis 4: Country of origin of the participant will moderate the association between fiction exposure and lower sexual prejudice*

According to the last hypothesis of this study, it was expected that participants from a high-prejudice country would report lower sexual prejudice after fiction exposure compared to those from the same country who were assigned to the imagined contact task. However, it was also expected that these participants would present an overall higher sexual prejudice score than participants from a low-prejudice country.

The whole sample was divided into subsamples by country of origin of the participant, that is, the United Kingdom (UK) or El Salvador (SV). The subsamples significantly differed in age (UK: $M = 33.14$, $SD = 13.45$; SV: $M = 29.47$, $SD = 6.01$), $t(210.769) = 2.83$, $p = .005$, $d = .35$. They also differed significantly in religious affiliation, where 54.9% of SV participants reported having a religious affiliation, compared to 45.1% of UK participants, $\chi^2 = 20.68$, $p < .001$; and in highest level of education, where 56.9%, of the SV subsample had an undergraduate level, and 78.8% of UK participants had postgraduate level (compared to 21.2% of their SV counterparts), $\chi^2 = 29.54$, $p < .001$. There were no significant differences in gender, $\chi 2 = .91$, $p = .339$, nor in political position, where 1 = Far left and 7 = Far right, with both groups leaning towards the left (UK: $M = 3.21$, SD = 1.12; SV: $M = 3.46$, $SD = 1.12$), $t(191) = -1.51$, $p = .133$.

The subsamples also showed no significant differences in their reported frequency of

reading fiction, $t(229) = 1.81$, $p = .070$, with an estimated frequency of between two weeks and once a month; no differences in the frequency of watching movies, $t(229) = -.86$, $p = .389$, also with a mean frequency of roughly every two weeks. Over 95% in each subsample reported having a LGBT acquaintance, with no significant differences between countries in these responses, $\chi^2(1) = .48$, $p = .370$.

Furthermore, individual differences were examined by looking at RWA, SDO, Heterosexual identification, Sexual prejudice, and Agreement with same-sex unions. The means, standard deviations and statistical differences between subsamples in these measures are displayed in Table 4.12. All measures except Sexual prejudice showed significant differences between the two subsamples. UK participants scored higher than SV participants in SDO, while the SV subsample scored higher than its counterpart in RWA and Heterosexual identification, and reported lower Agreement with same-sex unions. It was expected that this difference between countries was seen not only in the correlates, but also in the outcomes, that is, sexual prejudice. Potential explanations for this discrepancy are addressed in the Discussion (Section 4.4).

*Table 4.12.* Means, standard deviations and statistical significance for individual differences by country

| Measures | Country | Mean | SD | t-test | | Cohen's d |
|---|---|---|---|---|---|---|
| | | | | t | Sig. | |
| RWA | UK | 2.79 | 1.36 | -2.70 | .007 | .36 |
| | SV | 3.30 | 1.42 | | | |
| SDO | UK | 2.48 | 1.09 | 3.07[1] | .002 | .41 |
| | SV | 2.05 | .96 | | | |
| Heterosexual identification | UK | 4.90 | 1.24 | -8.12 | <.001 | 1.08 |
| | SV | 6.17 | 1.09 | | | |
| Sexual Prejudice | UK | 2.34 | .85 | .06 | .95 | --- |
| | SV | 2.33 | .99 | | | |
| Agree with same-sex civil partnership | UK | 91.70 | 20.96 | 3.31[1] | .001 | .47 |
| | SV | 78.33 | 34.29 | | | |
| Agree with same-sex marriage | UK | 88.96 | 25.91 | 3.55[1] | .001 | .50 |
| | SV | 72.46 | 38.72 | | | |

[1] Equal variances not assumed per Levene's test, $p<.05$.

To test the fourth hypothesis, country of origin was tested as a moderator in the relationship between imagination-based contact and sexual prejudice. Hayes' (2013) moderation Model 1 was used, and Country of origin was coded UK = 1, SV = 0. The overall model (Fig. 4.7), was not significant: $R^2 = .01$, $F(3, 227) = .55$, $p = .651$, suggesting that Country of origin of participants did not interact with Imagination-based contact to create an effect on sexual prejudice. This finding aligns with Miles and Crisp's (2014) assertion that participants' country has no effect on imagined contact. Therefore, Hypothesis 4 was not supported.

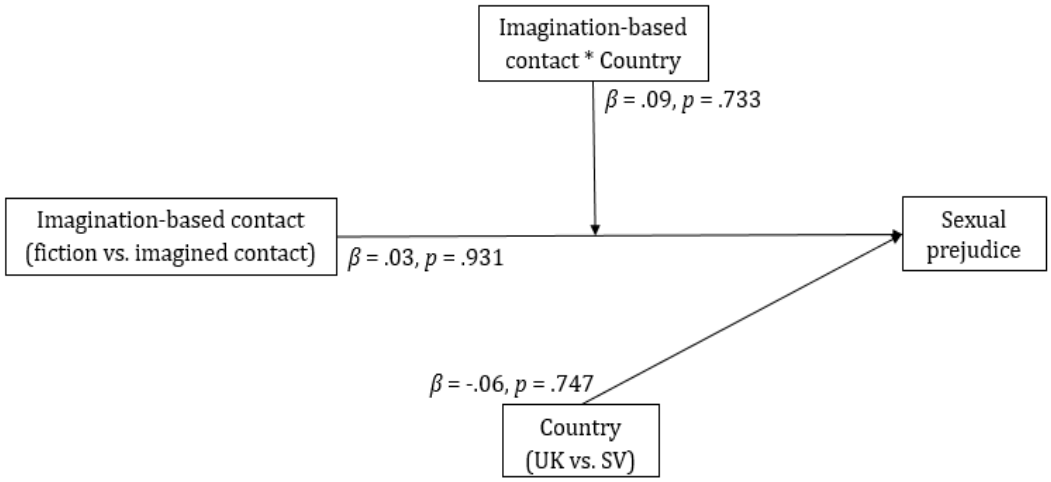


*Figure 4.7.* The moderating role of country of origin in the association between imagination-based contact (fiction vs. imagined contact) and sexual prejudice.

## 4.4. Discussion

This study examined the association between exposure to a fictional story featuring LG characters and sexual prejudice, and compared this relationship with that of imagined contact. The potential roles of engagement with the story as mediator, and individual differences and country of origin of participants as moderators, were also examined in this association.

### *4.4.1. Test of hypotheses*

The first hypothesis of this study proposed that participants in the Fiction condition would report significantly lower prejudice than those assigned to the imagined contact condition with either a gay person or a stranger. Results showed no significant differences in sexual prejudices scores in participants based on the condition to which they were assigned. Therefore, this hypothesis was not supported.

The second hypothesis was that engagement with a story would mediate the association between imagination-based contact and sexual prejudice, with fiction eliciting higher engagement than imagined contact. Engagement with the story was operationalised here through Affective valence and arousal, Transportation, Attributes (vividness of the story and familiarity with aspects of it), and Functions (social usefulness of the story). Participants in the fiction condition were expected to indicate more engagement with the story, and thus lower prejudice, compared to their counterparts with lower scores on engagement with the story, and with participants from the Imagined contact conditions.

Contrary to what was expected, imagined contact was rated more favourably than fiction in terms of engagement with the story: Participants in the imagined contact conditions, whether they imagined a gay person or a stranger, tended to report positive affect (happier, more calm),

and higher scores in the Attributes and the Function scales. The measure of Attributes probed how involved participants were in the story and how familiar it was for them (e.g. the resemblance of the narrative with something that happened to them or may happen to them; frequency of contact with situations or people similar to the ones featured in the story), while the Functions scale related to how useful the story could be in their life (e.g. catharsis, conflict management).

The higher scores in Attributes and Function from participants in the imagined contact condition could be due to imagined contact tapping into participants' real-life knowledge and experiences (or lack thereof) with LG individuals. Although knowledge about the outgroup appears to be less important than emotions for reducing negative attitudes (Pettigrew & Tropp, 2008), prior knowledge or personal experience regarding the subject of a story is crucial to process it (Green, 2004; van Laer, de Ruyter, Visconti, & Wetzels, 2014). According to Wheeler et al. (1999), this resemblance of familiarity is what makes the story more engaging and, in turn, more likely to affect beliefs.

Only Attributes had a significant relationship with sexual prejudice, that is, a lower score was linked to higher sexual prejudice after imagination-based contact, in favour of imagined contact. This result echoes findings by Green (2004), who asserted that participants who had a gay acquaintance or relative reported being more transported into a story about a gay man who experienced prejudice. In brief, it appears that imagined contact prompted a sense of familiarity and utility in participants more than fiction did. Comparisons between the imagined contact conditions showed that participants' responses did not differ based on whether contact involved a gay person or a stranger. In other words, the presence of a gay character did not seem to bear any weight in the reported engagement with the narrative; otherwise, imagined contact with a gay person would have evoked similar responses as fiction, and thus would have differed significantly from imagined contact with a stranger.

Another explanation for the participants' lower engagement with fiction, compared to imagined contact, is that initial contact with outgroup members can generate negative attitudes and behaviours (Asbrock et al., 2013; Golec de Zavala, Waldzus & Cypryanska, 2014; Solomon & Kurtz-Costes, 2018; Turner, Crisp, & Lambert, 2007). McInnis and Page-Gould (2015) suggested a "contact threshold", in the sense that initial contact can be associated with negative emotions and can even increase prejudice, which seems to be the case in direct and indirect contact with LG individuals (Carroll et al., 2012; Burrell, 2015; Dermody et al., 2013); this threshold may extend to the realm of fiction. Therefore, an initial encounter with fiction featuring LG characters – particularly when this contact is not expected nor actively sought– may give rise to these negative emotions, which in turn may interfere with the individual's engagement with the story. In contrast, the minutiae of the imagined encounter is left, indeed, to the participant's imagination. Imagined contact allows freedom to evoke previously-known settings, people, and events in one's

terms, even when following instructions on what to imagine, and particularly when following instructions in an environment outside the lab (Lemmer & Wagner, 2015).

The third hypothesis of this study was that participants in both conditions with higher SDO, RWA, Heterosexual identity, and negative affect would report higher sexual prejudice. It was expected that individual differences, including attitudes that imply an opposition to contact with other groups, such as RWA and SDO (Hoffarth & Hodson, 2018), would moderate the participants' engagement with the narrative. Overall, however, these variables seemed to be of no consequence in the relationship between imagination-based contact and sexual prejudice, and therefore this third hypothesis was not supported.

The last hypothesis of the study was that participants from a high-prejudice country, El Salvador (SV), would report lower sexual prejudice when exposed to fiction compared to imagined contact, but would report overall higher sexual prejudice than participants from a low-prejudice country, United Kingdom (UK). Of note, participants showed significant differences in sexual prejudice correlates based on their country of origin. UK participants scored higher in SDO, and SV higher in RWA, as expected from literature showing that the Salvadorian culture is strongly authoritarian (Córdova, Cruz, & Zechmeister, 2014). This difference suggests the likelihood of the SV subsample sustaining greater sexual prejudice than the UK (Van der Toorn et al., 2017), a likelihood also supported by their significantly lower agreement with same-sex unions. Nevertheless, both subsamples comprised participants who were also likely to report low sexual prejudice (e.g. over half of the overall sample, and country subsamples, were female and more liberal; see Chapter 2). The subsamples also did not differ in their frequency of exposure to fiction nor in previous contact with LGBT individuals. Overall, the findings did not support this hypothesis: sexual prejudice in SV participants was not significantly higher within fiction and imagined contact conditions, nor compared to that of UK participants.

### *4.4.2. Limitations and future research*

The first limitation of this study is the nature of the sample. Although the recruitment methods varied between the UK and SV samples, most participants were recruited in university settings, and overall, this was a low-prejudice sample. Regardless of their country of origin, participants tended to be female, with university studies in the fields of social sciences and humanities, and left-wing. Participants also reported low Right-Wing Authoritarianism and low Social Dominance Orientation, which were baseline measures taken as proxy for sexual prejudice. Lastly, most participants reported fairly regular contact with gay, lesbian, bisexual and/or transgender individuals. It remains unclear whether the findings from this study would differ in higher-prejudice samples, thus studies on fiction and social cognition should include participants from outside of university settings.

A second limitation, also related to the low-prejudice sample, is the possible tendency to respond in a socially desirable manner. Thinking of the outgroup can exacerbate negative emotions (Asbrock et al., 2013), yet, intellectually, people can recognise prejudice as inappropriate attitudes (Leyens et al., 2000) and respond accordingly; this may have been the case in this study (see also General Discussion, Chapter 8, for a comment on measuring different dimensions of prejudice). Low-prejudice individuals may be more concerned with their own evaluation and turn their attention to themselves instead of the out-group member (Vorauer, 2008). This concern can be seen in some of the answers to the second social desirability question at the end of the questionnaire, where some respondents stated that they did not agree with the study and with the researcher referring to social relations with gay people as "complex relationships" (the words used to introduce the study), implying that there was nothing complex or difficult about interacting with gay men and lesbians. This limitation can be overcome by including indirect measures of prejudice, as alternatives to self-reports.

A third limitation was that this study was conducted online. Web-based recruitment and survey administration have been shown to be as effective and reliable as in-site data collection (Ramsey et al., 2016). However, in this modality of data collection, it is difficult to guarantee that participants have effectively invested their time in viewing, reading, or imagining the story as requested. Time spent on the story was measured in this study, and research can benefit from including questions about the content of the story, but neither guarantee completely that a remote participant has complied with instructions. It may therefore be advisable to conduct experimental studies that assess the effects of fiction on social cognition in person rather than online.

A fourth limitation was the characteristics of the fictional stories used. There were differences in the core themes and qualities of each film trailer and short story, as they were actual works of fiction and not materials designed for this study. For instance, while both film trailers depicted contact with, and prejudice towards gay men and lesbians, each had a very distinct mood: *Pride* transmitted an uplifting message about solidarity between groups, while *Lilting* explored the aftermath of a loved one's death. Analysis of these nuances between stories, and their potential influence on the overall results, were omitted in this study to prioritise the comparisons between fiction and imagined contact with the focus on the presence of LG characters. These nuances could be pursued in depth in future research to understand the distinct responses they elicit in heterosexual audiences. Another limitation related to the stimuli was that the stories may have been too brief (three to four minutes) to elicit a degree of immersion in the story that would in turn be associated with lower sexual prejudice. For instance, the mean levels of Transportation were close to the mid-point of the scale for all conditions (see Table 4.8); a change in attitudes prompted by fiction exposure may require a more immersive experience than the average reported by participants in this study.

A fifth limitation pertains to the imagined contact task. This condition required that participants imagined a social cause that they cared about and getting help from someone (gay or stranger) to promote it. Making the participant think about themselves in a prosocial position, plus the aforementioned self-consciousness in low-prejudice individuals, may have caused a self-affirmation effect (Lehmiller, Law, & Tormala, 2010). In other words, participants imagined a situation which was personally relevant for them, which in turn may have been linked to more positive affect.

Two last limitations of this study refers to the scales used. First, there were no pre-post measures which would allow to speak of an effect of imagination-based contact on sexual prejudice. Second, the Attributes and Functions scales, based on Bodie et al.'s (2013) work, were not built following rigorous psychometric standards. These scales examined features of imagined interactions that were deemed important to better understand imagination-based contact, but they require further study to ensure they are valid and reliable.

### *4.4.3. Conclusions*

Contrary to what was expected in this study, participants in the imagined contact conditions reported higher engagement with the story than participants in the fiction conditions; one aspect of this engagement, familiarity with the narrative, was associated with lower sexual prejudice. However, sexual prejudice was not associated with whether the story was fictional or imagined, and with or without LG characters, nor to individual differences of the participants, including their country of origin.

Lower engagement with the fictional narratives portraying LG characters may be related to a "contact threshold" (McInnis & Page-Gould, 2015) in the sense that initial contact can be associated with negative emotions, and can even increase prejudice. This is a disadvantage of fiction for eliciting positive initial responses, compared to imagined contact, but it can be an advantage on the long run. Fiction can prepare heterosexual individuals for an actual encounter with LGB peers, by depicting characters and situations that come close to real-life interactions, and which are likely to involve features outside the individual's control. For this reason, high-status groups who encounter fictional low-status characters may require longer exposure times to fiction, and a certain degree of quality of the story to cross the mediated contact threshold. In other words, the story needs to immersive enough so that audience members take it as a frame of reference for their beliefs (Green, 2004).

## A LOOK AHEAD: FICTION EXPOSURE AND PREJUDICE BASED ON GENDER IDENTITY

The next four studies in this thesis continue examining the association between fiction exposure and prejudice, addressing a number of limitations from Study 1. Most importantly, these

studies address another type of prejudice towards sexual and gender minorities, prejudice towards transgender people. Compared to the advancement in visibility in terms of sexual orientation, gender identity issues have become a matter of public interest in the last decade, and open rejection of transgender individuals remains socially acceptable (Green et al., 2018; Hoffarth & Hodson, 2018).

The next chapter reports Studies 2 and 3. Moving away from imagination as mental contents that are exclusive to the individual, these studies explored social representations about transgender people and their relation to fiction. Specifically, these studies investigated how cisgender participants defined the concept "transgender", and whether these definitions were linked to exposure to transgender fictional characters. Building on the limitations of Study 1, these studies were conducted in the lab and/or established criteria to estimate whether participants read or viewed the stories; explored language-based measures as complements to traditional self-reports; used more focussed and immersive stories; and measured a form of engagement with the story that is unique to fiction, "becoming the character".

# CHAPTER 5
# STUDIES 2 AND 3. TRANSGENDER-RELATED FICTION AND TRANSNEGATIVITY: THE ASSOCIATION OF FICTION EXPOSURE WITH SEMANTIC NETWORKS, EXPERIENCE-TAKING, AND CISGENDER IDENTIFICATION

> If she snorts and says, "Sure you want to do this?", if she bitterly says, "Welcome to being a woman!", if she says, "Hon, I know exactly what you're going through," swallow and shutter windows in your heart.
>
> —Casey Plett, *How to stay friends*

The quote above comes from a young transgender woman who is bracing herself to hear, once again, misconceptions about her gender identity from a loved one. She is the protagonist of one of the stories used in Study 2, reported in this chapter. This quote hints at a non-transgender (i.e. cisgender) character being puzzled by someone "deciding to become" another gender, and ignoring the particular social risks that come with transitioning. There is an increasing body of research on these and other misconceptions about transgender people. This research enquires about prevailing stereotypes (e.g. Gazzola & Morrison, 2010), their negative impact on relationships between cisgender and transgender individuals (e.g. Trans Media Watch, 2010), and interventions to improve these relationships (e.g. McDermott et al., 2018).

The two studies reported in this chapter align with the three questions above. Studies 2 and 3 focussed on prejudice towards transgender people, a gender identity minority which has gained social visibility in the last decade, but remains a target of socially and state-sanctioned discrimination, as described below. The aim of these studies was to examine the responses of cisgender readers to transgender fictional characters, and they are grouped in one chapter due to a common thread: the lens of social representations. Social representations were used in both studies to observe the social knowledge (i.e. information about social realities and groups) that audiences take away from a fictional story. Furthermore, these two studies overcome methodological limitations of Study 1 (Chapter 4), related to the quality and equivalency of stories used, the environment in which the study was conducted, and the specificity of the mechanisms and outcomes measured.

This chapter begins by presenting the theoretical foundations of the studies. This section covers relevant literature on transnegativity, fiction as contact and its mechanisms linked to lower prejudice, and a description of the approach used to investigate social representations: semantic

networks. This section is followed by Study 2, an online qualitative experiment (Ravasio, Guttormsen-Schar, & Tscherter, 2010) which aimed to compare sets of words that cisgender readers associated with the concept "transgender" (i.e. semantic networks) after reading fiction with either cisgender or transgender characters. Next, Study 3 is reported, which measured participants' transnegativity after reading a story with either cisgender or transgender characters, in a lab setting. It was expected that experience-taking would mediate ($H_1$), and cisgender identification would moderate ($H_2$) the association between fiction exposure and transnegativity. It was also expected that semantic networks would significantly differ between participants based on the type of character they read ($H_3$). For both studies, their method, results, and discussions are reported. This chapter ends with a general discussion that integrates findings from Studies 2 and 3.

## 5.1. Transnegativity, fiction exposure, and semantic networks

### *5.1.1. Transnegativity and the difficulty to promote direct contact with transgender people*

Estimates of the World Health Organization (Vijay, 2014) indicate that transgender people make up less than 1% of the worldwide population. The term "transgender" is an umbrella term to refer to individuals whose gender identity or expression does not conform to the social expectations for their assigned sex at birth (e.g. transgender, intersex, or gender variant; Clarke et al., 2010; Gressgård, 2010; Kuper, Nussbaum, & Mustanski, 2011). Despite this comparatively low number, transgender people, and gender-variant people in general, have existed throughout all epochs and cultures, fulfilling social roles like any other society members (Dittman & Meecham, 2006; Gressgård, 2010; Lester, 2017). In contrast, the term cisgender describes people whose gender identity and gender expression correspond with their assigned sex at birth (Tebbe, Moradi, & Ege, 2014).

There are mixed findings on the state of attitudes towards transgender people. Some reports show that these attitudes have improved since the 2010s. For instance, a 2017 online survey, conducted in 16 countries from North and South America, Asia, and Europe (IPSOS, 2018) showed that 60% of respondents supported the protection of transgender rights. However, IPSOS (2018) clarified that the characteristics of those who participated in this survey had the socio-demographic profile expected for low-prejudiced people (i.e. people residing in urban areas, with more wealth, and higher formal education, see correlates of transnegativity in Chapter 2). In contrast, there is evidence that the existence of transgender people has been erased or rejected through history (Deshane, 2013), and it continues to this day. Transgender individuals tend to receive less support from friends and family members, and to be more vulnerable as targets for hate crimes than cisgender members of sexual and gender minorities (Walters, Paterson, Brown, & McDonnell, 2017). Moreover, there is a generalised anti-transgender climate in social and

political institutions, which frame transgender people as a threat to normative values and expectations regarding gender and sexuality (Flores, 2015; Gazzola & Morrison, 2014). On these grounds, transgender individuals are characterised as "perverts" or non-human by the law and the media (Broockman & Kalla, 2016; Levasseur, 2015; Wodda & Panfil, 2014). Therefore, this minority faces high levels of stigma, hostility, discrimination, and public opposition to their civil rights (Greene, Benner, & Pear, 2018; Mizock & Mueser, 2014; Tee & Hegarty, 2006).

Prejudice towards transgender people is called transnegativity (Chapter 2). This type of prejudice encompasses not only negative affective responses towards transgender individuals, such as rejection, fear, and discomfort, but also includes core beliefs regarding gender (Acker, 2017; Brassel, 2015; Broockman & Kalla, 2016; McDermott et al., 2018; Tebbe, Moradi, & Ege, 2014). A study by Gazzola and Morrison (2014) reported that cisgender people hold a number of negative transgender stereotypes, ranging from mental illness, abnormality, being gay, and having undergone genital surgery (Gazzola and Morrison, 2014). Additionally, gender bias co-occurs with transnegativity, as transgender women are more stigmatised than transgender men (Brassel, 2015; Kuper et al., 2011). The most extreme form of transnegativity is known as "trans panic" (Barret & Sheridan, 2017; Lee & Kwan, 2014), which promotes the vision of transgender people, especially transgender women, as deceitful and sexual deviants. The "trans panic defence" has been used in court cases, not often successfully (Wodda & Panfil, 2014), as argument to justify the murder of a transgender woman by a cisgender/heterosexual man (Lee & Kwan, 2014).

In the last decade, researchers have developed self-report measures of transnegativity and its correlates (Billard, 2018; Case & Stewart, 2013; Hill & Willoughby, 2005; Kanamori, Cornelius-White, Pegors, Daniel, & Hulgus, 2017; Nagoshi et al., 2008; Walch et al., 2012; Winter et al., 2009). These studies have found medium to high levels of transnegativity among university students majoring in helping professions (Acker, 2017), overall negative attitudes towards transgender rights (Flores, 2015), and transnegativity in heterosexual, gay, lesbian and bisexual samples (Warriner, Nagoshi, & Nagoshi, 2013).

Researchers have shown that increased contact between cisgender and transgender individuals can help reduce cisgender people's level of transnegativity (Hoffarth & Hodson, 2018; McDermott et al., 2018). However, according to Hoffarth and Hodson (2018), transgender people rarely disclose their gender identity due to the severity of prejudice and stigma that surrounds it, hence intergroup contact can have a limited effect. Furthermore, casual interactions and first-time encounters between cisgender and transgender individuals can result in threats and violence from the former to the latter (Miller & Grollman, 2015). Hence, contact researchers have explored alternatives to direct contact with transgender people.

### *5.1.2. Fiction as indirect contact with transgender people*

Researchers have positioned fiction as a form of indirect contact (Chapter 2). The growing literature on this subject shows that audiences from high-status groups can improve their attitudes towards low-status groups by engaging with fictional narratives (Fong, Mullin & Mar, 2013; Kidd & Castano, 2013, 2016; Vezzali et al., 2012). Findings show that fiction improves empathy (Bal & Veltkamp, 2013) and theory of mind (Black & Barnes, 2015; Kidd & Castano, 2013, 2016), and reduces gender stereotypes (Abad & Pruden, 2013; Fong, Mullin, & Mar, 2015). Examples of groups that have been characterised as low-status groups in this type of research are immigrants (Vezzali et al., 2012), gay men and lesbians, and refugees (Vezzali et al., 2015), and Arab-Muslims (Johnson, 2013; Johnson, Jasper et al., 2013).

Studies that use fiction as contact with transgender people are scarce, focussing on parasocial contact, including diverse forms of mass media which are not necessarily fictional portrayals. For instance, Schiappa et al. (2005) found that individuals exposed to a comedic routine by transgender comedian Eddie Izzard reported lower prejudice towards "transvestite" individuals[14]. McDermott et al. (2018) found that a combined intervention of a panel presentation with transgender speakers and exposure to a trans-related film reduced self-reported transnegativity in a sample of female university students. Hoffarth and Hodson (2018) also explored parasocial contact, which they called media contact, in a study measuring direct and indirect contact with transgender people and transnegativity. These researchers operationalised media contact with transgender individuals as the frequency of watching three TV shows (two fictional ones, and one non-fictional) with prominent transgender characters. This study showed that greater "media contact" with transgender individuals was associated with lower transnegativity.

One point from the results above that requires special attention is the quality of media representation of the low-status group. Media studies have shown that transgender media representation is improving, in quantity and quality (GLAAD, 2016, 2017a), which may be linked to the increase in acceptance of transgender people. Yet, traditionally, media characterisations of this minority has tended to portray its members as deviant and abnormal, because most of these characterisations are developed by cisgender creators (Miller, 2012; Ryan 2009). In a 2010 survey in the United Kingdom, transgender respondents reported that portrayals of transgender individuals in the media were still absent or mostly negative; respondents linked negative portrayals to the mistreatment they received in real life (Trans Media Watch, 2010). Hence, in the

[14] The terminology used in Schiappa et al.'s paper is reproduced here. Transvestite and transgender are not synonyms, but the latter term was not as widely used at the time of Schiappa et al.'s (2005) study. Furthermore, since the publication of Schiappa et al.'s study, Eddie Izzard has come out as transgender, and that is how he is identified in this thesis.

two studies of this chapter, the portrayal of fictional transgender characters come from transgender authors.

From the findings above, fiction seems to help reduce prejudice in high-status audiences, as long as it provides sensible (i.e. positive or complex, see Chapter 2) portrayals of low-status group members. This effect of fiction on prejudice reduction is mediated by mechanisms found in more traditional forms of indirect contact, two of which are addressed in Study 3 in this chapter. Vezzali et al. (2012) and Brown and Paterson (2016) highlight these two mechanisms as, one, the overlap between the ingroup and outgroup, that is, an inclusion of the other in the self; and two, reduced ingroup identification.

### *5.1.3. Mechanisms of fiction as contact: Experience-taking and ingroup identification*

Researchers have categorised fiction as parasocial contact (McDermott et al., 2018; Schiappa, Gregg, & Hewes, 2005). However, high-status audience members (readers, from here on in) can do more than respond to low-status characters as if interacting with them face to face. Fiction offers the possibility for readers to position themselves in a story as if they were the characters, allowing them to gain social information that may otherwise not be accessible (Oatley, 2016b). It is this simulation of the viewpoint of "the other" which seems to improve attitudes towards low-status group members after reading fiction (Vezzali et al., 2015).

One form of simulation in fiction reading is experience-taking. Kaufman and Libby (2012) defined experience-taking as the simulation of the narrative through adopting the character's mindset. Most research on immersion into a story has focussed on transportation, the immersion into the story as a whole (Green & Brock, 2000), and perspective-taking (Galinsky & Moskowitz, 2000), the cognitive ability to identify or infer the other's point of view (Bischoff & Perskin, 2014) (Chapter 3). Experience-taking expands on these two constructs by capturing not only the readers' emotional and cognitive engagement with a story, or their adoption of a character's standpoint, but also their experience of the story *as if* they were the character.

There is little research on experience-taking, but findings so far suggest that this process can be linked to improved cognitive performance and to decision-making outcomes. Smith (2014) found that participants who reported higher experience-taking after reading a story about a character who solved a word puzzle, showed enhanced performance in a word puzzle presented afterwards, compared to participants low in experience-taking. However, perceived similarity with the character mediated between the story and experience-taking. Hawkins and Scherr (2017) found that viewers who reported high experience-taking after watching a crime drama had a higher evidentiary threshold (i.e. required more evidence) before reaching a verdict in a mock trial. In this case, this higher evidentiary threshold resulted from the interaction between experience-taking and frequency of viewing crime dramas. These findings suggest that

experience-taking may require complementary processes, such as the similarity to the character (Smith, 2014) or frequency of exposure (Hawkins & Scherr, 2017) to have an effect. Sestir and Green (2010) hypothesised that the changes that experience-taking may cause in the audience are related to traits and self-concept, rather than to attitudes.

The literature suggests certain characteristics of a story which make it more likely to be engaging. Two of these characteristics are featured in the stories used in the present studies. The first characteristic, as described by Kidd and Castano (2016), is that stories should be literary fiction, that is, narratives showcasing aesthetic qualities and character development, which encourage readers to position themselves within the story and its characters (Black & Barnes, 2015a; Kidd & Castano 2013, 2016). These fictional stories tend to be endorsed by critics and experts as of high quality (Kidd & Castano, 2016). A second characteristic that appears to make fictional stories more likely to engage readers is the use of first-person pronouns (Smith, 2014). First-person pronouns encourage higher immersion into the story by mapping information directly into a first-person experience (Hartung, Burke, Hagoort, & Willems, 2016), hence a narrative in the first person might evoke a stronger sense of closeness to the character than second and third person perspectives (Kaufman & Libby, 2012).

A second mechanism found in fiction which can account for its effect as indirect contact is the reduction of readers' identification with their own group. This reduction is linked to experience-taking inasmuch as simulating the character's viewpoint implies a merger between the self and the character (Kaufman & Libby, 2012). Vezzali et al. (2012) found that Italian adolescents who read a novel on intercultural themes, compared to those who read non-intercultural novels or did not read a novel at all, reported lower identification with other Italian individuals. This reduced identification, in turn, related to improved attitudes towards immigrants. It has yet to be explored, however, if pre-existing ingroup identification in readers can affect the extent to which they engage with a story featuring outgroup characters.

### *5.1.4. Semantic networks: Exploring social representations*

The consequences of engaging with fiction on social cognition have been measured mainly through self-report scales (Fong, Mullin & Mar, 2015; Johnson, 2013; Kaufman & Libby, 2012; Małecki et al., 2016; Vezzali et al., 2015), theory of mind tasks (Kidd & Castano, 2013, 2016), and, less frequently, through behavioural outcomes (Johnson, Cushman, et al., 2013; Koopman, 2015). These measures explain specific attitudinal outcomes that result from fiction engagement. However, fiction is mostly—though not exclusively—a language-based stimulus (Chapter 2), and research has yet to probe the possibility that the influence of fiction on social cognition occurs, at least partially, via language (Howarth, Kalampalikis, & Castro, 2016). Johnson (2013) stated that attitudinal changes following fiction exposure may be related to changes in the words that readers

associate with a target (e.g. an outgroup member), but the literature has yet to further probe this hypothesis. The present studies address this gap regarding the role of language in the relationship between fiction and prejudice.

A starting point to understanding how language shapes realities is semantic cognition, the mental processes through which people acquire, represent, store, and access concepts (Abraham & Bubic, 2015); in other words, the ways people construct meaning. According to Hoffman (2018), the meanings of words and properties of objects are built through experience, they shape individuals' understanding of the world, and guide their behaviours (Jefferies, 2013; Lambon, Jefferies, Patterson, & Rogers, 2017). Abraham and Bubic (2015) argue that semantic cognition is also the foundation for processes of imagination and simulation. This form of cognition, the authors explain, comprises conceptual knowledge, "the what-system" of information processing, necessary to build representations of possibilities.

To better understand how these meanings are developed and shared between individuals and groups, Moscovici (1988) proposed the theory of social representations. This theory establishes that concepts, declarations and explanations of phenomena originate in everyday experiences, and are built by the interactions between individuals and social groups. Moscovici (1988) regarded social representations as a precondition for attitudes, since a favourable or unfavourable stand towards something occurs only after it has been perceived and evaluated. In this manner, events and objects that are unknown are assimilated into more familiar perspectives. Moscovici (1988) exemplified this assimilation with a scientific term that becomes assimilated into everyday language and thinking as individuals exchange content: "[The 'Acquired Immune Deficiency Syndrome'] merges into a single word, the terrifying AIDS, which carries a tremendous symbolic and imaginary meaning with it" (Moscovici, 1988, p. 215; see also Schoeneman, Schoeneman-Morris, Obradovic, and Beecher-Flad, Liesl, 2010, for an account of the social representations of AIDS in Abnormal Psychology Textbooks).

As is the case in the two studies presented in this chapter, the study of social representations is at times concentrated on psychological meanings (Liberman & Lopez, 2016; Orellana, Sepulveda, & Denegri, 2013). The notion of psychological meanings emphasises that the social representations under study are limited to the personal definitions of an object, provided by individuals whose experiences with that object may not be representative of the overall social group to which they belong (e.g. one student's experience may not be the same as all university students).

Social representations can be accessed through associative networks called semantic networks (Flores et al., 2015). Semantic networks are concept maps, spatial representations of words and their connections with other words that build a knowledge structure stored in the semantic memory (Liberman and Lopez, 2016). Such knowledge is shared between individuals

and groups as patterns of interconnected ideas (Markova, 2017). In simpler terms, semantic networks are associations between words that provide meaning to a given phenomenon (Flores et al., 2015; Valdez, 1998). According to Hinton (2017), associative networks rely on semantic memory and on their automatic activation. In a semantic task reported by Gawronski and De Houwer (2014), participants were shown words that presented stereotypically male or female occupations (e.g., nurse, doctor), followed by male or female pronouns (e.g., he, she), and participants had to classify the pronouns as male or female as quickly as possible. Participants were faster in responding to the male and female pronouns on stereotype-compatible trials (e.g., nurse-she, doctor-he) than stereotype-incompatible trials (e.g., nurse-he, doctor-she). This latter finding exemplifies Hinton's (2017) notion of implicit stereotype (Chapter 2), unconscious stereotypical associations which are based on the associations prevalent in one's culture (e.g. "young is good, old is bad").

Research using semantic networks covers a wide array of subjects, such as eating disorder symptoms (DuBois et al., 2017), influence of mood on self-concept (Flores et al., 2015), social representation of an Everyday Hero (Keczer et al., 2016), psychological meaning of coauthorship among scientists (Liberman & Lopez, 2016), psychological meanings of specific eating habits (Orellana et al., 2013), and pattern recognition in fiction and non-fiction texts (Stevanak, Larue, & Carr, 2010). The methodologies used in these studies mix quantitative and qualitative approaches to diverging degrees, from a descriptive scope (i.e. psychological meaning) to using mathematical criteria, to establish the semantic networks. In the present two studies, the cognitive organisation of concepts and their subjective interpretation, that is, how words associate to give meaning to an object (Flores et al., 2015), are examined through the Natural Semantic Network technique (NSNT) (Flores et al., 2015; Keczer et al., 2016; Liberman & Lopez, 2016; Orellana et al., 2013; Valdez, 1998).

In the present studies, it is hypothesised that, in the context of fiction, semantic networks may reflect engagement with the narrative. Reading fiction is an active process which, amongst other things, encourages readers to fill in the gaps in the text, switch points of view from their own to others' (Hartung et al., 2016), and encode the information that the characters encounter (Gunraj et al., 2017). In fulfilling these demands of fiction, the reader grows on an experiential level (Demir, 2014), and perhaps even on the semantic one: Flores, Medrano, and Conn (2015) proposed that a cognitive or affective change about a given stimulus is accompanied by a change in the definition of that stimulus. In this line, Muth, Rahab, and Carbon (2015) showed that changes in perception about art objects, particularly those that are open for interpretation, emerge from semantic changes (e.g. a sudden shift in evaluative valence towards a vase when its monetary value is revealed). Illustrating this finding in fiction research, Johnson, Jasper, et al. (2013) reported that White participants who read a narrative about an Arab-Muslim character

reported more positive semantic associations regarding Arab-Muslims (e.g. *warm*), which in turn were linked to lower implicit prejudice towards this group. These researchers thus posited that changes in semantic networks regarding a low-status group are linked to implicit prejudice reduction.

Therefore, research that attempts to connect fictional experiences to real-world interactions can benefit from including the readers' social representations about the characters featured in the stories. The theory of social representations (Moscovici, 1988) declares that concepts originate from everyday experiences and from interactions between social agents. If fiction provides information to readers about a given social stimulus (Mar & Oatley, 2008), then, in the case of these studies, semantic networks about the concept transgender may differ between readers exposed to transgender fictional characters, and readers exposed to control characters.

### *5.1.5. Overview of Studies 2 and 3*

Studies 2 and 3 address a gap in the literature on the socio-cognitive impact of fiction: the potential of language to reflect the impact that a story has on readers. There is little Psychology research that focusses on whether cognitive and emotional effects of fiction can be seen on a semantic level (i.e. a change in the meaning of a concept). Further knowledge about changes in language related to fiction exposure can help characterise fiction as contact: It can support the role of fiction as a way to bring together ingroup and outgroup members, and to change perceptions from one group to the other.

The studies in this chapter address fiction exposure and transnegativity in two ways. Study 2 examined social representations in the context of fiction, in particular, whether the semantic networks for the concept "transgender" differed between readers exposed to either transgender or cisgender characters in a fictional story. Study 3 also examined semantic networks, but expanded on Study 2 by including cisgender identification and experience-taking as potential mechanisms that account for the association between fiction exposure and transnegativity.

## Study 2. Transgender fictional characters and psychological meanings of the term "transgender": A Natural Semantic Networks approach

This study explored the semantic networks that cisgender participants built around the concept "transgender", after reading fiction featuring either transgender or cisgender characters. Specifically, this study investigated (1) the psychological meanings that a sample of university students attributed to the concept "transgender"; and (2) whether the meanings ascribed to this concept varied between participants who read a story with a transgender character and those who read a story with cisgender characters. To this end, cisgender participants were recruited to read a story online, which featured two types of characters.

This study was conducted with the assistance of an undergraduate Psychology student. The student became involved in Study 2 as part of the 2017 University of Sheffield Undergraduate Research Experience (SURE) scheme. Under the supervision of the author of this thesis, this research assistant conducted the activities of reviewing relevant literature, data collection and analysis, and dissemination of the results.

## 5.2. Method

### *5.2.1. Participants*

Eighty-two university students responded to an online questionnaire presented as a study on reading fiction and speed of word association. This was a non-probability sample, and recruitment was conducted through the University of Sheffield's student volunteer mailing list, and leaflets and printed ads posted on noticeboards on campus. The criteria to participate in this study was to be enrolled at the University of Sheffield, at undergraduate or postgraduate level. Unbeknownst to participants, they also had to be cisgender, for which they were screened at the start of the questionnaire (see Section 5.2.3). Participants who did not finish the questionnaire, presented low reading times (Table 5.2), or had incorrect answers to the two questions about the story, were removed from the analysis.

The final sample consisted of 40 students with a mean age of 23.48 years (*SD*=5.69). Forty-two participants from the total sample were dropped based on the criteria used to check that participants read the story, explained in Section 5.2.2 (see also Discussion of Study 2, Section 5.4). All participants stated that they identified with the gender they were assigned at birth, but due to a technical fault, they were not asked to report their gender. Fifty-seven point five percent of participants were undergraduate students, and the most reported fields of education were Social Sciences and Humanities (35%), and Engineering and Computer Sciences (22.5%). Most participants were White (52.5%) and heterosexual[15] (85%), and were between the centre and far left on the political spectrum (79.2%). Over two thirds of the sample (67.5%) said they did not know anyone who was transgender. Table 5.1 displays this sociodemographic make-up of the sample.

[15] Lesbian, gay, and bisexual (LGB) participants were retained in the sample because prejudice based on gender identity (i.e. towards transgender people) is independent of one's sexual orientation (Warrington et al., 2103; Worthen, 2013)

*Table 5.1*. Sociodemographic characteristics of the sample

| N | 40 | |
|---|---|---|
| Mean age | 23.48 (SD = 5.693). | |
| Ethnic background | White | 52.5% |
| | Asian/Asian British | 12.5% |
| | Black/African/Caribbean/Black British | 7.5% |
| | Latin American/Hispanic | 7.5% |
| | Arab | 15.0% |
| | Other, please specify | 2.5% |
| | Mixed/ Multiple ethic groups | 2.5% |
| Political position | Far left | 2.5% |
| | Left | 15.0% |
| | Moderate left | 17.5% |
| | Centre | 12.5% |
| | Moderate right | 7.5% |
| | Right | 5.0% |
| | No affiliation | 40.0% |
| Religious affiliation | Yes | 42.5% |
| | No | 57.5% |
| Level of education | Undergraduate | 57.5% |
| | Postgraduate | 42.5% |
| Field of education | Arts | 12.5% |
| | Social Sciences and Humanities | 35.0% |
| | Engineering and computer sciences | 22.5% |
| | Natural sciences | 12.5% |
| | Medical sciences | 17.5% |
| Sexual orientation | Heterosexual | 85.0% |
| | Bisexual | 12.5% |
| | Other – unspecified | 2.5.% |
| Know someone who is transgender | Yes | 32.5% |
| | No | 67.5% |

### *5.2.2. Design and stimuli*

The design of this study was a qualitative experiment. As described by Ravasio et al. (2010), a qualitative experiment observes structures, relations, or circumstances in an experimental setting, and derives conclusions from these observations. In this study, participants were randomly assigned to read one of two stories, and then they were asked to write down a set of words they associated with the term "transgender".

Table 5.2 describes the two stories used in this study. For the experimental condition (trans-fiction), the story *How to stay friends* was used. This story featured a transgender character dealing with social relationships after her transition, and it was written by Canadian writer Casey Plett. The book containing this story was the winner of the 2015 Annual Lambda Literary Awards in the category of Transgender fiction (Lambda Literary, 2015). Lambda Literary Foundation is an organisation based in the United States which recognises LGBTQ-related published works. In

contrast, the control condition (cis-fiction) was the story *The bet*, written by Russian author Anton Chekhov. This story featured cisgender characters only, and it revolved around a conflict between two men. Djikic et al. (2009a) also used a story by Chekhov, who is considered one of the best authors of short stories in history (Boyd, 2004; Steiner, 2001).

Both stories were chosen due to the acknowledgement of their high quality, signalled by an award-winning status for *How to stay friends* (Lambda Literary, 2015), and by a wide literary recognition for the author of *The bet* (Boyd, 2004; Steiner, 2001). The stories were also chosen to match one another in length. Using a words-to-time calculator, the expected ranges of reading time for each story were estimated; average reading speed in 17 languages, including English, is estimated at 184 ± 29 words per minute (Trauzettel-Klosinski, Dietz, & the IReST Study Group, 2012). Time values above a reading speed of five words per second (wps) would strongly suggest speed-reading or skimming, a practice discouraged when reading fiction (Maloney, 2009). The 5wps reading speed was established as the lowest reading time accepted to include a participant in the analysis.

*Table 5.2*. Description of stories presented to participants

| Condition | Title and author | Synopsis | Length | Lowest acceptable reading time[1] |
|---|---|---|---|---|
| Story with a transgender character (trans-fiction) | *How to stay friends* Casey Plett | A trans woman reunites with her ex-girlfriend six months after transitioning. | 2,960 words | 592 seconds (9 min, 52 seconds) |
| Story with a cisgender character (cis-fiction) | *The Bet* Anton Chekhov | A man reflects on a 15-year long bet with another man who became his prisoner. | 2,884 words | 576 seconds (9 min, 36 seconds) |

[1] Reading times calculated at: https://www.edgestudio.com/production/words-to-time-calculator

### *5.2.3. Measures*

The measures are presented here in order of appearance in the questionnaire, but the Natural Semantic Networks technique is described in Section 5.2.4.

*Socio-demographic information.* This was the only set of questions presented before the story. It included questions on age, identification with gender assigned at birth, ethnic background, political orientation, religious affiliation, level and field of education, and sexual orientation.

*Manipulation check.* Djikic et al. (2009a) used two questions, how artistic and how interesting stories were for the participants, to check that both texts in their study were equivalent in terms of interest elicited and artistic merit. In this study, after reading the story,

participants were also asked to rate how artistic and how interesting it was. Response options ranged from 1 = Not at all, to 7 = Very much.

*Natural Semantic Networks (NSN)*. This procedure is described in Section 5.2.4.

*Genderism and Transphobia Scale (GTS)* (Tebbe et al., 2014). This scale assesses negative attitudes and propensity for violence towards transgender people with two factors: genderism and transphobia (GTS), and gender-bashing. Only the first factor was used in this study, with 17 items, two of which were reverse-coded. Example item: "People are either men or women". Response options ranged from 1 = Completely disagree, to 7 = Completely agree, where a higher score showed higher transnegativity. Tebbe et al. (2014) reported a Cronbach's alpha of .95 for the GTS factor. In this study, alpha was .97.

*Transgender acquaintances.* Participants were asked if they knew someone who was transgender, with response options "Yes" and "No". If they answered yes, they were asked to provide the number of transgender people they knew.

### *5.2.4. Natural Semantic Network Analysis*

The Natural Semantic Network (NSN) analysis (Flores et al., 2015; Liberman & Lopez, 2016; Orellana et al., 2013; Valdez, 1998) provides the degree of relevance of words, termed definers, within the semantic network for a specific concept.

In this study, after responding to the manipulation check questions, participants were presented with the concept "transgender", and four other filler concepts that were included in one of the stories ("autumn", "mother", "millionaire", "philosopher"). For each of these concepts, participants were asked to (1) write down three to five definer words they associated with each concept, and (2) rank those definers by importance, from 1 = Most important to 5 = Least important. Participants were asked to write single words (nouns, pronouns, adjectives, verbs), and to refrain from writing full sentences. The five concepts were presented in the same order to all participants, and "transgender" was the third concept on the list.

The definers that were central to the concept "transgender" in this sample were obtained through the following procedure (Flores et al., 2015; Liberman & Lopez, 2016; Orellana et al., 2013):

1. The total number of words provided by participants to define the concept "transgender" was obtained. This number is known as the *J* value. The *J* value for the whole sample in this study was 119.
2. The semantic weight of each definer, known as centrality indicator or *M value*, was calculated. The frequency of appearance of a definer within the network was multiplied by the reverse ranking it was assigned, i.e. when a definer was ranked at 1, the number of times it appeared in that position was multiplied by 5. When a definer

was ranked at 2, the frequency of appearance in that position was multiplied by 4, and so on. Several participants can provide the same definer but give it a different rank. These frequency-by-importance products were summed for each definer to obtain their *M* value.

3. The 10 definers with the highest *M* values made up the *SAM cluster,* the core of the semantic network. There is no formal agreement on the number of definers that the SAM cluster should include, but the number fluctuates between 10 and 20 (Liberman & Lopez, 2016).
4. The *Semantic Distance* value is a percentage for each definer in the SAM cluster. This percentage indicates the degree of coincidence among participants regarding the definer and its semantic weight. The definer with the highest *M* value represents the 100%, and it is known as the *core* definer of the concept, which points to a meaning that is likely shared by most participants. The *essential attributes* range from 99% to 79%. *Secondary attributes* range from 78% to 58%; *peripheral attributes* from 57% to 37%; 36% and below are considered *personal meanings*. The lower the percentage of a definer, the farther it is from the core attribute, meaning that the definer likely derives from individual experiences with the concept rather than from commonly shared ones.

### *5.2.5. Procedure*

Potential participants were contacted using the University of Sheffield's volunteer mailing list, in addition to handing out leaflets and posting ads on noticeboards in university premises. The study ad was an invitation to answer an online questionnaire about reading fiction and speed of word association, informing that participation entailed reading a short story and responding a word association task. The printed ads contained a shortened URL and a telephone-readable barcode (QR code) for easy access to the questionnaire.

At the start of the questionnaire, participants read the participant information sheet, which stated the aims and procedure of the study, as well as the guarantee of anonymity and confidentiality of their data. Those who agreed to participate began the questionnaire by answering socio-demographic questions. Because the ad did not state that participants should be cisgender, to avoid raising suspicions as to what the study was about, one of the first questions presented in the questionnaire asked whether the participants identified with their gender assigned at birth, with the options "Yes" or "No". If the second option was chosen (i.e. participant identified as transgender), participants were directed to a debriefing sheet, thanking them for their interest and explaining that their profile did not match the criteria for the study.

After the socio-demographic questions, participants were shown one of the stories. The questionnaire software was set up to present one of the two short stories randomly. Participants were told that reading was not timed, and were encouraged to read the story thoroughly, as two questions about the content of the story would follow. After reading, participants were asked to write down three to five definers that they associated with the concept "transgender", and with four other filler concepts, and to rank each word by importance from 1 = Most important to 5 = Least important. Afterwards, participants responded to the Genderism and Transphobia Scale (Tebbe et al., 2014), and were asked if they had acquaintances who were transgender. Lastly, the debriefing sheet was displayed stating the purpose of the study.

Participants did not receive any incentive in exchange for their participation. The study was approved by the Psychology Ethics Committee of the University of Sheffield.

## 5.3. Results

After removal of participants who did not finish the questionnaire or who presented low reading times, the trans-fiction condition comprised 40% of the sample (16 participants), and the cis-fiction condition, the remaining 60% (24 participants).

### *5.3.1. Manipulation check and quantitative analysis*

The manipulation check questions probed how artistic and interesting participants perceived the story to be. In terms of artistic merit, there was no significant difference between the trans-fiction condition ($M$ = 5.00, $SD$ = 1.31) and the cis-fiction condition ($M$ = 5.13, $SD$ = 1.32), $t(38) = -.292$, $p = .771$. However, the cis-fiction story was rated as significantly more interesting ($M$ = 5.42, $SD$ = 1.53) than its trans-fiction counterpart ($M$ = 4.25, $SD$ = 1.69), $t(38) = -2.264$, $p = .029$, $d = .72$.

The Genderism and Transphobia Scale (GTS) (Tebbe et al., 2014) was included in this study to explore explicit transnegativity in this sample, although this type of measure was not suitable for comparison with semantic networks. On average, results from the GTS suggested that participants had low transnegativity, and there was no significant difference in the scores between the trans-fiction condition ($M$ = 2.94, $SD$ = 1.16) and the cis-fiction condition ($M$ = 2.93, $SD$ = 1.98), $t(38) = -.292$, $p = .975$.

A correlational analysis between the manipulation check questions and the GTS showed that artistic merit of the story negatively correlated with transnegativity, $r(40) = -.369$, $p = .019$. In other words, perceiving the story to have lower artistic quality was linked to higher transnegativity, although a causal link between both variables cannot be established here. When examined separately, neither condition showed this relationship as significant. However, in this analysis, the trans-fiction condition showed a negative correlation between how interesting the

story was and transnegativity, $r(16) = -.572$, $p = .021$. The same correlation was non-significant for the control group, $r(24) = -.013$, $p = .095$. That is, participants who reported that the story with transgender characters was less interesting, also tended to report higher transnegativity scores.

### *5.3.2 Natural Semantic Networks analysis*

Out of the 40 participants with valid questionnaires, two were removed from the Natural Semantic Networks (NSN) analysis because they left the word association task blank. The results reported here come from the final sample of 38 participants.

The total number of definers in the semantic network (*J* value) was 119. For the trans-fiction condition, the J value was 52, and for the cis-fiction condition, 85. Calculation of the average J value showed that participants in the trans-fiction condition reported an average of 3.25 words, and those in the control group 3.54 words.

Table 5.3 displays the semantic network obtained for the whole sample. The core definer of the concept transgender was “Change”. Definers that come close to the core meaning, known as essential attributes of the concept, were “Hormones”, “Weird”, “Brave/Courage”, and “Difficult”. Secondary attributes included “Sex/Sexuality”, “Gay”, and “Confuse/confused”, while peripheral attributes were “Man/Men” and “Different”.

*Table 5.3.* Main definers of the concept "Transgender" reported by the overall sample

| SAM cluster[1] | M value | Semantic distance | Type of attribute |
|---|---|---|---|
| Change | 19 | 100% | Core |
| Hormones | 18 | 94.74% | Essential |
| Weird | 18 | 94.74% | Essential |
| Brave/Courage | 16 | 84.21% | Essential |
| Difficult | 16 | 84.21% | Essential |
| Confuse/Confused | 14 | 73.68% | Secondary |
| Gay | 13 | 68.42% | Secondary |
| Sexuality/Sex | 13 | 68.42% | Secondary |
| Man/Men | 11 | 57.89% | Peripheral |
| Different | 10 | 52.63% | Peripheral |

[1] N = 38, J value = 119.

This semantic network was split by condition to examine the SAM clusters of the trans-fiction and the cis-fiction conditions separately. Table 5.4 shows the SAM cluster for the trans-fiction condition, where the core definer of the concept transgender was "Difficult". The essential attributes were "Hormones", "Weird", and "Brave/courage"; this last attribute was composed of two words, grouped as one as they were deemed synonyms (Merriam-Webster, n.d.-b). This cluster did not contain any secondary attributes. Peripheral attributes were "Man", "Different" and "Strong", while personal meanings were "End of world" and "Friend".

*Table 5.4.* Main definers of the concept "Transgender" as reported by participants in the trans-fiction condition.

| SAM cluster[1] | M value | Semantic distance | Type of attribute |
|---|---|---|---|
| Difficult | 16 | 100% | Core |
| Brave | 14 | 87.50% | Essential |
| Change | 14 | 87.50% | Essential |
| Confused/Confuse | 14 | 87.50% | Essential |
| Hormones | 14 | 87.50% | Essential |
| Man | 8 | 50.00% | Peripheral |
| Different | 6 | 37.50% | Peripheral |
| Strong | 6 | 37.50% | Peripheral |
| End of world | 5 | 31.25% | Personal |
| Friend | 5 | 31.25% | Personal |

[1] N = 15, J value = 52.

For the cis-fiction condition (Table 5.5), the core attribute of the concept "Transgender" was "Weird", followed by the essential attribute "Gay". Secondary attributes were "Identity", "Unnatural", "Interesting" and "LGBT". Lastly, peripheral attributes were "Lesbian", "Sex/Sexuality", "Gender" and "Unknown".

*Table 5.5.* Main definers of the concept "Transgender" as reported by participants in the control condition.

| SAM cluster[1] | M value | Semantic distance | Type of attribute |
|---|---|---|---|
| Weird | 14 | 100% | Core |
| Gay | 13 | 92.86% | Essential |
| Identity | 10 | 71.43% | Secondary |
| Unnatural | 10 | 71.43% | Secondary |
| interesting | 9 | 64.29% | Secondary |
| lgbt | 9 | 64.29% | Secondary |
| Lesbian | 8 | 57.14% | Peripheral |
| Sexuality/Sex | 8 | 57.14% | Peripheral |
| Gender | 7 | 50.00% | Peripheral |
| unknown | 7 | 50.00% | Peripheral |

[1] N = 23, J value = 85.

## 5.4. Discussion of Study 2

The semantic networks obtained in this study suggested that some of the definers reported by participants in the trans-fiction condition may be linked to the content and themes of the story, most notably "Difficult" and "Brave". In contrast, the core definers from participants in the cis-fiction condition were in line with transgender stereotypes found by Gazzola and Morrison (2014), such as "Weird" and "Gay". For the whole sample, the two most frequently reported definers were "Change" and "Hormones", an expected finding, as being transgender does involve significant life changes over time (Levitt & Ippolito, 2014b) and may include hormone therapy (Shah & Radix, 2016). However, these definers may also reflect misconceptions about transgender people (Kuper, 2011; Trans Media Watch, 2010). The Discussion section of this chapter (Section 5.7) delves deeper into possible explanations for these semantic networks in connection to relevant literature on transnegativity.

The exploratory nature of this study limited the scope of its findings and their interpretation, and some of these shortcomings were corrected in Study 3. One important limitation was the large number of participants dropped from the original sample. Study 2 was an online study, and the criteria regarding reading times and questions about the story was used as evidence to confirm that participants read the story. Conducting a similar study in a controlled

setting (i.e. the lab), would encourage participants to read the story as requested, and would thus help avoid loss of data.

A second limitation of Study 2 relates to the stories used. Both stories used were of high quality (i.e. literary fiction, Kidd and Castano, 2013), but they ultimately were considered not equivalent due to characteristics beyond the narrative, which rendered them uneven for comparison beyond the gender identity of the characters. That is, each story was published in divergent periods and contexts (*The bet*, Russia, 1889; *How to stay friends*, United States, 2014), which may impact the language, style, and tone of the narrative, and subsequently, the readers' engagement experience. In addition, *The bet* was written in third person, and *How to stay friends* in first person. Participants also rated the stories as not equivalent in terms of how interesting they were, with the *The bet* scoring higher than *How to stay friends*. There were no significant differences regarding the artistic level of each story, yet transnegativity and artistic merit correlated negatively. Study 3 aimed to correct some of these shortcomings by using stories narrated in the first person and written by contemporary authors.

Lastly, Study 2 examined social representations in a qualitative manner. Study 3 replicated the use of the Natural Semantic Network Technique, but included a quantitative measure of the difference between conditions. Furthermore, it added measures of factors proximal to the reader (cisgender identification) and to the reading experience (experience-taking), to better explain the potential association between fiction and reduced transnegativity.

## Study 3. Exposure to transgender fictional characters and attitudes towards transgender people: The role of ingroup identification and experience-taking

Study 3 examined the intermediary role of readers' experience-taking and cisgender identification in the association between fiction and transnegativity. Experience-taking was examined as a mediator, and cisgender identification as a moderator in this relationship. The aim of this study was to investigate cisgender readers' (1) ability to simulate the mindset of a transgender fictional character, (2) their identification with the cisgender ingroup, and (3) semantic networks related to the concept "transgender". This study was pre-registered in Aspredicted.com under the name *Effect of fictional characters on attitudes towards transgender people* (#8778).

To investigate the relationship above, participants were asked to read one of two stories featuring transgender characters (trans-fiction), or one of two stories featuring cisgender characters (cis-fiction). The following hypotheses were proposed (Fig. 5.1):

*$H_1$. Experience-taking will mediate the effect of encountering a transgender fictional character on transnegativity.* A number of studies (Hawkins & Scherr, 2017; Kaufman & Libby, 2012; Smith, 2012) have found that experience-taking links fiction exposure with socio-cognitive

outcomes, but it has yet to be tested whether this construct can be associated with attitudes towards others (Sestir & Green, 2010). This hypothesis thus stated that participants in the trans-fiction condition would report higher Experience-taking compared to those in the control condition, which, in turn, will be associated with lower transnegativity.

*$H_2$. Cisgender identification will moderate the effect of encountering a transgender fictional character on experience-taking, and on transnegativity.* Similar to $H_1$ in Study 1 (Chapter 4), this hypothesis tested the interaction between the type of story and participants' identification with their own group. This latter variable has been linked to a merger between the reader's self and the character (Kaufman & Libby, 2012), with the degree of identification varying based on the character's group membership (Vezzali et al., 2012). Therefore, it was expected that participants with greater Cisgender identification would show lower associations between exposure to trans-fiction and transnegativity, directly and via Experience-taking.

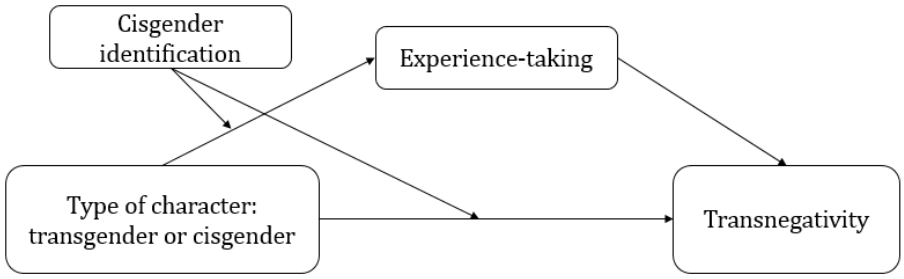


*Figure 5.1*. Proposed model of the relationship between exposure to fictional characters (transgender or cisgender) and transnegativity, mediated by experience-taking, and moderated by cisgender identification.

A secondary aim of this study was to observe whether cisgender readers exposed to transgender fictional characters reported different semantic associations with the concept "transgender" than cisgender readers exposed to cisgender characters. Based on the experience with the Natural Semantic Networks in Study 2, a third hypothesis was proposed:

*$H_3$. The content of the semantic network for "transgender" will significantly differ between cisgender readers exposed to transgender characters and those exposed to cisgender characters.* Research has shown that cognitive changes in response to a stimulus can be seen on a semantic level (Flores et al., 2015; Muth et al., 2015). Similarly, in the field of fiction as contact, Johnson, Jasper et al. (2013) proposed that reading fiction can change the semantic networks related to the content of the story (e.g. an outgroup protagonist). This third hypothesis builds from this literature, as well from the qualitative results from Study 2 (in this Chapter), which suggested that there might be a relationship between fiction exposure and semantic changes.

## 5.5. Method

### *5.5.1. Participants*

Potential participants had to be over 18 years old and cisgender; the latter was checked based on the two-step method to measure transgender identity (Reisner et al., 2014): asking for the person's gender, and whether their current gender matched the one they were assigned to at birth. A total of 80 participants took part in the study, all of whom were undergraduate and postgraduate students from the University of Sheffield, recruited through the university's student volunteer mailing list and the Psychology Department's online participation scheme. From the total sample, one participant requested to withdraw their data; two more participants were removed, one for leaving all questions blank, and the other for failing the two questions about the story (see below). The final sample consisted of 77 participants. A sensitivity analysis ($\alpha = .05$, power = .80) showed that the minimum effect size detected by the study was .36.

Participants had a mean age of 20.49 ($SD = 4.82$). All participants but one, who left this specific question blank (who was kept in the sample), identified as cisgender, the majority of whom were female (83.1%), White (71.4%), and heterosexual (88.3%). Nearly half of the sample (46.8%) reported a political position on the left or moderate left. Seventy-five percent of participants did not have a religious affiliation, and 88.4% studied in the fields of Science and Social Sciences. Table 5.6 displays the socio-demographic profile of the sample. In addition, 27% of participants reported not knowing anyone who was transgender. From those who did, 52% reported knowing one or more transgender persons, and the remaining 21% did not state the number of transgender people they knew.

*Table 5.6*. Sociodemographic characteristics of the sample.

| N | 77 | |
|---|---|---|
| Mean age | 20.49 (SD=4.79). | |
| Gender | Male | 16.9% |
| | Female | 83.1% |
| Ethnic background | White | 71.4% |
| | Other/Prefer not to say | 28.6% |
| Political position | Far left | 2.6% |
| | Left | 32.5% |
| | Moderate left | 14.3% |
| | Centre | 9.1% |
| | Moderate right | 6.5% |
| | None | 26.0% |
| | Prefer not to say | 9.1% |
| Religious affiliation | Yes | 19.5% |
| | No | 75.3% |
| | Prefer not to say | 5.2% |
| Level of education | Undergraduate | 83.1% |
| | Postgraduate | 16.9% |
| Field of education | Arts and Humanities | 6.5% |
| | Engineering | 1.3% |
| | Science | 41.6% |
| | Social Sciences | 46.8% |
| | Other | 3.9% |
| Sexual orientation | Heterosexual | 88.3% |
| | Gay/lesbian | 5.2% |
| | Bisexual | 5.2% |
| | Prefer not to say | 1.3% |

### *5.5.2. Design and materials*

This study used a between-subjects experimental design, in which participants were randomly assigned to one of four conditions: one of two stories with transgender characters (trans-fiction condition), or one of two stories with cisgender characters (cis-fiction condition). Two stories of each type of character were used to control for content of the story. The study was conducted in person, and the stories were presented in print. Participants completed the measures on a computer (see Procedure, Section 5.5.4).

As discussed in Chapter 3, research has shown that reading performance and comprehension are independent of the medium in which the text is presented (Margolin, Driscoll, Toland, & Little, 2013; Porion, Aparicio, Megalakaki, Robert, & Baccino, 2016; Schroeders & Wilhelm, 2010). In the present studies, the stories were presented in print following research suggesting that paper may be a better medium than screens for readers: to digest elaborate texts (Stoop, Kreutzer, & Kircz, 2013), to demonstrate reading accuracy over speed (Lenhard et al., 2017), and to spend more time on the material (Ackerman & Goldsmith, 2008).

All four stories used in this study were written by contemporary authors, published in anthologies in 2012 (Table 5.7), and narrated in the first person. Both stories with transgender characters, specifically transgender women, came from *The Collection: Short Fiction from the Transgender Vanguard*, winner of the 2013 Annual Lambda Literary Awards in the category of Transgender fiction. The two control stories came from *PEN O. Henry Prize Stories 2012*, a collection published annually with 20 short stories from the United States and Canada. Because data collection was conducted in person, the calculations of reading times were omitted, with the total time of participation (on average, 20 minutes) used instead as a measure of satisfactory performance.

*Table 5.7*. Description of stories presented to participants

| Condition | Title and author | Synopsis | Length |
|---|---|---|---|
| Story with transgender characters | *Birthrights*<br>M. Robin Cook | A husband is caught by his wife trying on women's clothes | 3204 words |
| | *I met a girl named Bat who met Jeffrey Palmer*<br>Imogen Binnie | A woman contacts a message board user who met her idol | 5213 words |
| Story with cisgender characters | *Eyewall*<br>Lauren Groff | A woman recalls her past amid a hurricane | 4101 words |
| | *The Vandercook*<br>Alice Mattison | A man sees his wife overtaking his family's print-shop | 5615 words |

### *5.5.3. Measures*

The following measures were used and are presented here in the order of appearance in the questionnaire. The first two set of questions were presented before the story:

*Socio-demographic information.* Participants were asked to indicate their age, gender and identification with gender assigned at birth (Reisner et al., 2014), ethnic background, political orientation, religious affiliation, level and field of education, and sexual orientation. When asked about identification with gender assigned at birth, the definition of cisgender and transgender was provided. A potential priming effect due to presenting these definitions beforehand was expected, but two filler group identity measures (described below) were added to reduce awareness or suspicion about the focus of the study.

*Cisgender identification* (Doosje, et al., 1995). This group identification scale contained four items, and the version in this study assessed the extent to which participants identified with other cisgender individuals, e.g. "I am glad to be cisgender", "I feel strong ties with cisgender individuals". Response options ranged from 1 = Completely disagree, to 7 = Completely agree. Cronbach's Alpha for this scale was .89. Two filler measures were added to assess identification with ethnic background and field of education, which had also been asked in the socio-demographic section. These two measures used the same four items for cisgender identification, but the questions showed the ethnic background and field of education reported by the participant (e.g. "I am glad to be *Asian/Asian British*", "I am glad to be from the Faculty of *Science*").

*Questions about the story.* To assess whether participants paid attention to the story, they were asked two questions. One question was about the content of the specific story they read (e.g. "The narrator bought an expensive coffee for the interviewee"), with response options "True" and "False". The second question, presented to all conditions, was about the character's gender identity: "Was the protagonist cisgender or transgender?". Response options were "cisgender", "transgender", and "I'm not sure".

*Manipulation check (Djikic et al., 2009a).* The items developed in Study 2 were used here (see Section 5.2.3 for details).

*Experience-taking (Kaufman & Libby, 2012)*. Participants completed the 7-item measure which assesses the simulation of a character's thoughts, emotions, behaviours, goals and traits as if they were the participants' own. An example item was: "I found myself feeling what the character in the story was feeling". The response scale went from 1 = Completely disagree to 7 = Completely agree. Cronbach alphas reported by Kaufman and Libby (2012) in their studies ranged from .80 to .92, and in this study, it was .87.

*Natural Semantic Networks (NSN) (Valdez, 1998)*. Participants were presented with the concept "transgender", and four other filler concepts that were addressed in the other stories ("Manager", "Wife", "Meditation", "Hurricane"). This NSN procedure was the same as that in Study 2 (Section 5.2.4). The five concepts were presented in the same order for all participants, and "transgender" was the third concept on the list.

*Genderism and Transphobia Scale (Tebbe et al., 2014).* The items developed in Study 2 were also used here (see Section 5.2.3 for details). Cronbach's alpha in this study was .87.

*Transgender acquaintances.* These questions were described in Section 5.2.3 of this chapter.

### *5.5.4. Procedure*

This study was advertised as research on reading literary fiction and word association. The call for participants requested that students who had taken part in a previous online study on

fiction and speed of word association (Study 2) refrained from participating in this one. As in Study 2, the ad did not state that participants should be cisgender, but the questionnaire was set up to terminate for those who identified as transgender. In this case, the message displayed explained that the participant did not match the criteria to be part of the study; the purpose of the study was displayed, and it was also stated that the researcher was available to answer questions about the study. No participants identified themselves as transgender.

Data was collected in a small testing room in the Psychology Department, where participants responded to the questionnaire sitting at a computer. There were four A4 size envelopes nearby the participants on one side of the computer, and each contained one of the stories. The names of the stories were not written outside the envelopes and these instead were identified with a letter: A (*Birthrights*), B (*Girl named Bat*), C (*Eyewall*), and D (*Vandercook*). The researcher explained to participants that, as they advanced in the questionnaire, the screen would show one of the four letters, and that was the envelope, and the story, assigned to them to read.

Participants read the information sheet and provided informed consent, then moved on to the socio-demographic questions and the ingroup identification scales. Afterwards, the screen displayed A, B, C, or D randomly, plus the instruction for participants to take the envelope with the given letter and to read the story it contained. They were instructed to read the story thoroughly and take their time to do so, reading it as they would for leisure. Once they finished reading the story, participants advanced to the next pages of the questionnaire to answer the manipulation check questions, the experience-taking scale, the word association task, the transnegativity scale, and the questions about transgender acquaintances.

At the end of the questionnaire, participants could opt to enter a prize draw to win one of three £20.00 Amazon vouchers. To enter the prize draw, participants were asked to provide their University of Sheffield e-mail address, which was kept separate from their responses to ensure anonymity. In a second wave of data collection, undergraduate Psychology students received instead credit for their participation. When participants reached the end of the questionnaire, the debriefing sheet was displayed stating the purpose of the study. This study was approved by the Psychology Ethics Committee of the University of Sheffield.

## 5.6. Results

### *5.6.1. Distribution of participants by condition*

The trans-fiction condition comprised the two stories with transgender characters *Birthrights* and *Girl named Bat*, and a combined 46.8% of participants read one of them. The remaining 53.2% of participants were in the cis-fiction condition, encompassing the stories with cisgender characters *Eyewall* or *Vandercook*. Table 5.8 shows the number and percentage of participants who read one of the four stories.

All stories were followed by two questions to assess that participants had paid attention to what they were reading. The first question was story-specific, and the second one was the same for all four conditions, which asked if there were any transgender characters in the story. One participant was removed due to failure to answer both questions correctly.

*Table 5.8*. Participants per condition.

| Condition | | Number of participants | Percent of participants per condition | |
|---|---|---|---|---|
| Trans-fiction | *Birthrights* | 18 | 23.4 | 46.8 |
| | *Girl named Bat* | 18 | 23.4 | |
| Cis-fiction | *Eyewall* | 20 | 26.0 | 53.2 |
| | *Vandercook* | 21 | 27.2 | |
| Total | | 77 | 100 | 100 |

### *5.6.2. Manipulation check*

The manipulation check was made up of two questions: "How interesting was the story?" and "How artistic was the story?" (Djikic et al., 2009a). The answers to these questions were expected to be equivalent between all conditions, thus ensuring that potential differences that emerged in the analysis would not be due to these two quality aspects of the story.

Outliers for the manipulation check questions were removed based on the interquartile range (IQR) rule for outliers. In this procedure, the IQR is obtained by subtracting the first quartile ($Q_1$) from the third quartile ($Q_3$), and this result is multiplied by 1.5. The value of (IQR)1.5 is added to $Q_3$, and subtracted from $Q_1$, and data points greater than the former and less than the latter are removed. The percentiles for the two measures above, used to obtain the IQR, are shown in Table 5.9. Using the IQR rule, The Interesting measure showed no outliers. For the Artistic measure, there were sixteen data points either below a score of 2.5 or above 6.5, which were the cut-off values for outliers. These data points were removed from subsequent analysis.

*Table 5.9.* Percentiles for manipulation check questions

| Variables | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | **25** | **50** | **75** | 90 | 95 | < | > |
| Interesting | 1.90 | 2.00 | 4.00 | 5.00 | 6.00 | 7.00 | 7.00 | 1 | 9 |
| Artistic | 2.00 | 2.00 | 4.00 | 5.00 | 5.00 | 6.30 | 7.00 | 2.5 | 6.5 |

Table 5.10 displays the mean scores and standard deviations of both manipulation questions for all stories. Before conducting the ANOVA to test the equivalency of scores between the four groups, the ANOVA assumptions were examined for both Interesting and Artistic questions. The Shapiro-Wilk statistic showed a non-normal distribution of the data for the Interesting question in the *Vandercook* group ($p$ = .006), and for the Artistic question in the three

conditions: *Birthrights* ($p$ = .001), *Eyewall* ($p$ = .004), and *Vandercook* ($p$ = .002). The ANOVA is generally a robust test and it can be used when assumptions of normality have been violated. Therefore, these scores were left as reported here for the focal analyses.

*Table 5.10*. Mean scores and SD of manipulation check questions by condition.

| Condition | | Means and SD of manipulation check questions (N=61) | | | |
|---|---|---|---|---|---|
| | | Interesting | | Artistic | |
| | | Mean | SD | Mean | SD |
| Trans characters | *Birthrights* | 4.87 | 1.18 | 4.67 | .81 |
| | *Girl named Bat* | 4.57 | 1.22 | 4.71 | .99 |
| Cis characters | *Eyewall* | 4.38 | 1.04 | 5.31 | .63 |
| | *Vandercook* | 4.80 | 1.18 | 4.42 | .90 |

The ANOVA for the manipulation check questions showed no significant differences in how interesting each story was, $F(3, 57) = 1.53$, $p$ = .216. For how artistic the story was, however, there was a significant difference, $F(3, 57) = 2.83$, $p$ = .046, $\eta 2$ = .130, between the control stories, with *Eyewall* rated as more artistic than *Vandercook*. There were no differences in how interesting the stories with transgender characters were, compared to one another, nor compared to the control stories.

To further test differences in the ratings of interest and artist merit reported by participants, a t-test was conducted between the trans-fiction condition and the cis-fiction condition. No significant differences were found when comparing both conditions in terms of interest elicited by the stories, $t(59) = -.49$, $p$ = .622, and their artistic merit, $t(59) = -.39$, $p$ = .692. These two conditions were the main focus of the analysis to test the hypotheses of this study.

### *5.6.3. Outlier removal for variables involved in the hypotheses*

The three main variables in this study were Cisgender identification, measured before participants were assigned a story to read, and Experience-taking and Transnegativity as post-story measures. These three variables were explored to remove outliers with the IQR rule as used with the manipulation check questions. The percentiles for these three measures, used to obtain the IQR, are shown in Table 5.11.

*Table 5.11*. Percentiles for Cisgender identification, Experience-taking, and Transnegativity

| Variables | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | **25** | **50** | **75** | 90 | 95 | < | > |
| Cisgender identification | 3.00 | 4.45 | 5.12 | 5.75 | 6.25 | 6.75 | 7.00 | 3.43 | 8.00 |
| Experience-taking | 2.08 | 3.00 | 3.57 | 4.42 | 5.28 | 5.85 | 6.60 | 1.00 | 7.85 |
| Transnegativity | 1.00 | 1.05 | 1.29 | 1.64 | 2.11 | 3.14 | 3.32 | .06 | 3.34 |

Using the IQR rule, Experience-taking showed no outliers. For Cisgender identification, four data points below a score of 3.43 were shown as outliers, and for Transnegativity, the three highest data points, above 3.34, were shown as outliers. These data points were removed from subsequent analysis.

### *5.6.4. Correlations*

Correlations between all variables are displayed in Table 5.12, with significant correlations flagged. The first correlations of note were that transnegativity correlated with political position (1 = Far left, 7 = Far right)[16] and Cisgender identification. In line with the literature on correlates of transnegativity (Chapter 2), there were significant associations between higher conservative views and higher cisgender identification, and higher conservative views and higher transnegativity. Also in accordance with research, gender correlated with cisgender identification, showing that male participants tended to identify more strongly with being cisgender than their female counterparts.

Experience-taking correlated positively with how interesting and how artistic the story was. In agreement with findings on fiction engagement, the simulation of a character's mindset appears to be associated with a higher quality of the story. It cannot be established, however, whether a higher-quality story prompts higher experience-taking, or higher experience-taking makes the reader perceive the story as of higher quality. Transnegativity did not correlate with any of these fiction-related measures.

[16] In a complementary analysis, political position was controlled for in the relationship between type of character and transnegativity score. Political position showed no significant effect on transnegativity on its own, $p = .172$, nor in its interaction with type of character, $F(5, 59) = .770$, $p = .575$.

*Table 5.12*. Correlations between measures[1].

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Age | – | | | | | | | | |
| 2. Political position | -.089 | – | | | | | | | |
| 3. Level of education | **.609**** | -.030 | – | | | | | | |
| 4. Gender | -.103 | .212 | -.034 | – | | | | | |
| 5. Sexual orientation | -.002 | -.082 | .043 | .196 | – | | | | |
| 6. Interest elicited by story | -.047 | .045 | -.040 | .091 | .166 | – | | | |
| 7. Artistic merit of story | -.055 | .000 | -.095 | .040 | .161 | **.630**** | – | | |
| 8. Cisgender identification | -.141 | **.289*** | -.048 | **.339**** | .058 | .113 | .105 | – | |
| 9. Experience-taking | -.021 | .055 | -.009 | -.011 | .224 | **.547**** | .315** | -.045 | – |
| 10. Transnegativity | .015 | **.302**** | .171 | .027 | -.143 | .021 | .093 | .177 | -.036 |

* Correlation is significant at .01 level (2-tailed)

** Correlation is significant at .05 level (2-tailed)

[1] Religious background and Knowing someone who identified as transgender did not correlate with any other measures and have been omitted from this table.

### *5.6.5. Relationship between Cisgender identification, Experience-taking and Transnegativity*

Data exploration for Cisgender identification, Experience-taking, and Transnegativity, showed that the Shapiro-Wilk statistic presented a non-normal distribution for Cisgender identification and Transnegativity, both $p < .001$. Therefore, these scores were left as reported here for the analyses, relying on the ANOVA's robustness when assumptions of normality have been violated.

Table 5.13 and Figure 5.2 show the means and standard deviations for Cisgender identification, Experience-taking and Transnegativity, for the trans-fiction and the cis-fiction conditions. Comparisons between these two conditions showed no significant differences in Cisgender identification, $t(70) = .88$, $p = .381$, and Transnegativity, $t(70) = .71$, $p = .479$. For Experience-taking, there was a significant difference in scores, with participants who read control stories scoring higher in experience-taking than those who read trans-fiction stories, $t(70) = -2.84$, $p = .006$, $d = .67$. Of note, a floor effect was observed in transnegativity, that is, the majority of the sample scores were gathered at the lower limit of the transnegativity scale, with $M = 1.73$, $SD = .61$, where the minimum possible score was 1. These low scores may prevent from finding significant differences after an experimental manipulation (Hessling, Schmidt, & Traxel, 2011).

*Table 5.12.* Means and SD of Cisgender identification, Experience-taking and Transnegativity by condition.

| Measure | Condition | Mean score[1] | SD |
|---|---|---|---|
| Cisgender identification | Trans-fiction | 5.71 | .97 |
| | Cis-fiction | 5.48 | 1.22 |
| Experience-taking | Trans-fiction | 4.01 | .95 |
| | Cis-fiction | 4.75 | 1.23 |
| Transnegativity | Trans-fiction | 1.78 | .63 |
| | Cis-fiction | 1.68 | .59 |

[1] All three scales had response options from 1 to 7, where 7 indicated stronger presence of the variable.

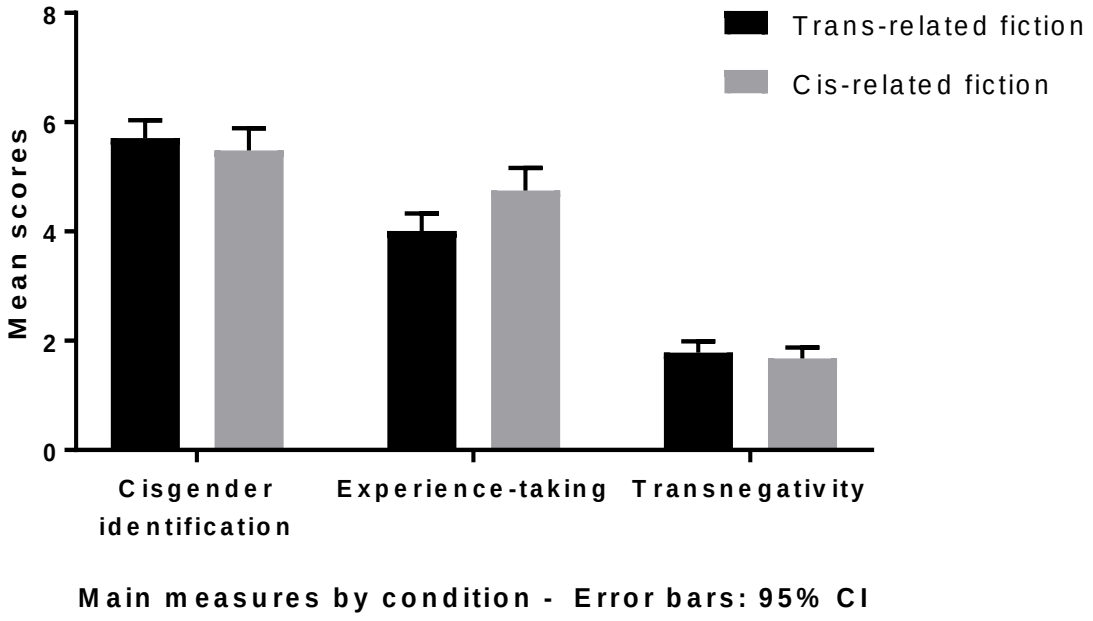


*Figure 5.2*. Mean scores for Cisgender identification, Experience-taking, and Transnegativity, compared by condition: trans-fiction or cis-fiction. Error bars show 95% confidence interval.

### *5.6.6. Test of hypotheses*

The first hypothesis of this study was that Experience-taking would mediate the effect of a transgender fictional character on transnegativity. To Hypotheses 1, a mediation model was tested using Model 4 from the PROCESS macro (Hayes, 2013) (Chapter 4). Model 4 examined the relationship between the independent variable X "Type of character", dependent variable Y "Transnegativity", and the mediating variable M "Experience-taking". The means and SD of the variables involved in the analysis for Hypotheses 1 and 2 are reported on Table 5.12.

Findings from Model 4 (Figure 5.3) showed that Type of character had a significant effect on Experience-taking, $\beta$ = -.74, $SE$ = .26, $p$ = .005, $R^2$ = .10, $F(1, 70)$ = 8.09, $p$ = .005. This result is in line with research showing that a story featuring an ingroup character (i.e. a cisgender character)

was associated with higher experience-taking. However, Experience-taking did not have a significant effect on Transnegativity $\beta$ = -.01, $SE$ = .06, $p$ = .935. The indirect model with Experience-taking as the mediator was not significant $\beta$ = .004, $SE$ = .04, CI [-.07, .12], and neither was the total effect model, $R^2$ = .01, $F(1, 70)$ = .51, $p$ = .479. Overall, encountering a cisgender character was associated with higher Experience-taking, but Experience-taking was not associated with Transnegativity. Therefore, Hypothesis 1 was not supported.

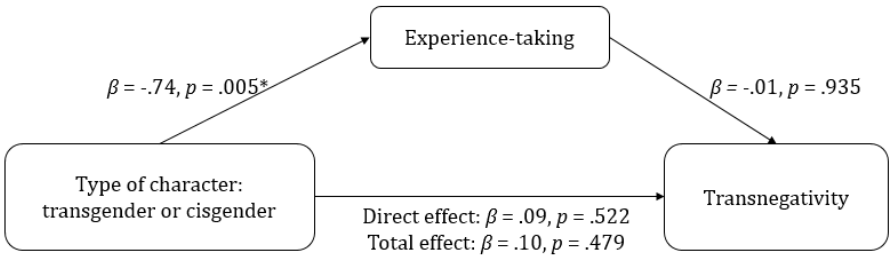


*Figure 5.3*. The mediating role of experience-taking in the association between type of fictional character (transgender or cisgender) and transnegativity. *$p$ < .05.

To test Hypothesis 2, a moderated mediation model was tested using Model 8 from the PROCESS macro (Hayes, 2013). Model 8 examined the overall relationship of these variables plus the moderator W "Cisgender identification". Before testing this overall relationship in Model 8, a first-stage moderation (Model 1) with variables X – W – M was conducted separately, but the resulting information is included here in the final model. A 95% confidence interval (CI) was used to examine indirect effects. An indirect path's confidence interval was considered significant at $p$ < .05 when it did not overlap 0.

The second hypothesis of this study was that cisgender identification would moderate the effect of type of character on experience-taking and on transnegativity. One assumption for this second hypothesis was that cisgender identification would be moderate to high among participants, by virtue of belonging to that group (Cuhadar & Dayton, 2011; Turner, 1994). The individual's identification with their own group is recognised in contact (Voci & Hewstone, 2003) and in fiction (Adarves-Yorno et al., 2008; Kaufman & Libby, 2012; Payne & Dal Cin, 2015) as an important moderator of the relationship between contact and prejudice. This assumption of moderate to high cisgender identification was met, with the mean score of 5.56 for the overall sample out of a theoretical maximum of 7. The resulting model is shown in Figure 5.4.

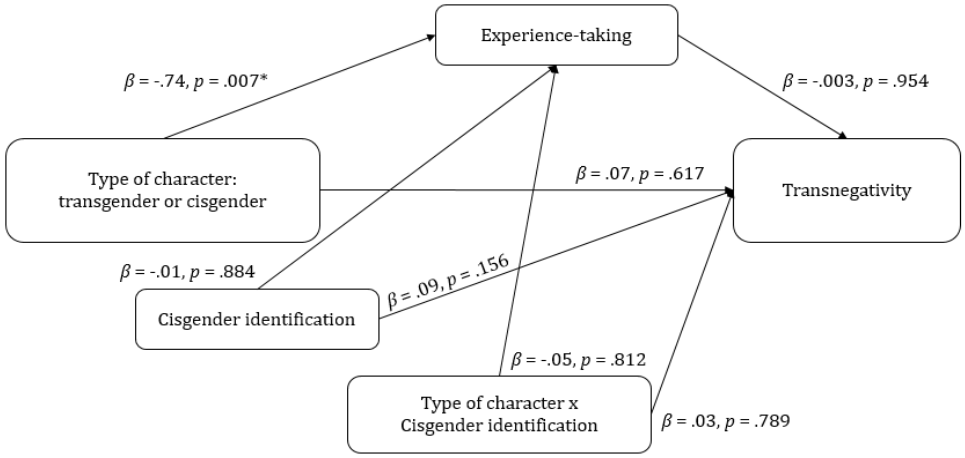


*Figure 5.4*. The moderating role of cisgender identification in the association between type of fictional character (transgender or cisgender) and transnegativity, and experience-taking. *$p$ < .05.

Results of Model 8 show that there was no interaction between Cisgender identification and Type of character to influence Experience-taking, $\beta$ = -.05, $SE$ = .24, $p$ = .812, or on Transnegativity, $\beta$ = .03, $SE$ = .13, $p$ = .789. Cisgender identification alone also did not have any effect on Experience-taking, $\beta$ = -.01, $SE$ = .12, $p$ = .884, nor Transnegativity $\beta$ = .09, $SE$ = .06, $p$ = .156. The moderated mediation model was not significant, $R^2$ = .04, $F(4, 67)$ = .64, $p$ = .635. Thus, Hypothesis 2 was not supported.

### *5.6.7. Semantic networks*

The third hypothesis of this study stated that the content of the semantic networks for "transgender" would differ between those who read a story with transgender characters, and those who read a story with cisgender characters. To make this comparison, a Natural Semantic Networks Analysis (Valdez, 1998) was conducted, followed by a Chi Square Test contrasting the three definers with highest semantic weight in each condition.

All participants were asked to provide three to five definers that they associated with the concept "transgender". The total number of definers reported by participants, called *J value*, was 148. In cases where different participants reported the same word with variations –such as nouns varying in number (singular or plural), conjugations of the same word (confuse, confused), or synonyms– these words were grouped as a single definer. The exception to this procedure was the set of words that related to categorising sex and gender: *male, man, female*, and *woman*, which were treated as four separate definers. Literal definitions of male and man, and of female and woman, address the two words in each pair as synonyms of one another. At the same time, their literal definitions tend to distinguish male and female as biological concepts related to sexual characteristics, while man and woman are defined as social categories derived from those

characteristics. Participants were asked to provide words they associated with "transgender", but analyses did not explore whether they answered with a literal (a dictionary-type definition) or a connotative (personal associations) meaning in mind. Therefore, the aforementioned four words were examined separately.

The SAM cluster is the set of definers with highest values in the semantic network. For the whole sample, the core definer associated with the concept of transgender was "Change" ("Changed" was reported by one participant). Essential attributes of this concept were "Confused/Confusion", and "People/Person". Secondary attributes to define transgender, according to these results, included "Identity", "Male", "Gender", "Female" and "Man". Peripheral attributes that made the SAM cluster were "Sex/Sexuality" and "Different". These results are displayed in Table 5.14.

*Table 5.14.* SAM cluster obtained for the concept "Transgender" from the overall sample

| **SAM cluster[1]** | **M value** | **Semantic weight** | **Type of attribute** |
|---|---|---|---|
| Change | 45 | 100% | Core |
| Confused/confusion | 40 | 88.89% | Essential |
| People/person | 38 | 84.44% | Essential |
| Identity | 35 | 77.78% | Secondary |
| Male | 34 | 75.56% | Secondary |
| Gender | 33 | 73.33% | Secondary |
| Female | 32 | 71.11% | Secondary |
| Man | 31 | 68.89% | Secondary |
| Sex/sexuality | 26 | 57.78% | Peripheral |
| Different | 24 | 53.33% | Peripheral |

[1] N=77, J value = 148.

The semantic networks by condition are displayed in Table 5.15; only the first five definers of each SAM cluster are displayed. In the trans-fiction condition, the core definer of "transgender" was "Change", followed by the essential attributes "Gender" and "Female". For the cis-fiction condition, the core definer was "Confused/confusion"; there were no essential attributes and there was one secondary, "People/person", followed by peripheral attributes "Male", "Identity" and "Different". "Male" and "Identity" overlap between the two conditions.

*Table 5.15.* The first five definers in the SAM cluster for "transgender" by condition

| Condition | SAM cluster | M value | Semantic weight | Attribute |
|---|---|---|---|---|
| Trans-fiction | Change | 31 | 100% | Core |
| (N = 36, J value = 84) | Gender | 24 | 77.42% | Essential |
| | Female | 20 | 64.52% | Essential |
| | Identity | 17 | 54.84% | Secondary |
| | Male | 15 | 48.39% | Secondary |
| Cis-fiction | Confused/Confusion | 34 | 100% | Core |
| (N = 41, J value = 100) | People/Person | 25 | 73.53% | Secondary |
| | Male | 19 | 55.88% | Peripheral |
| | Identity | 18 | 52.94% | Peripheral |
| | Different | 16 | 47.06% | Peripheral |

To test the third hypothesis, the first three definers provided by participants in each condition (Table 5.15) were compared between conditions. That is, two sets of definers were compared to one another, to test if there were significant differences in their M values (frequency of appearance by ranking of importance) in terms of the story that the participant read.

A chi-square test was performed and no relationship was found between the type of story read and the three highest ranked definers in the trans-fiction condition: Change, $\chi^2$ (1, 77) = 3.17, $p$ = .126; Gender, $\chi^2$(1, 77) = 1.62, $p$ = .291; or Female, $\chi^2$(1, 77) = .31, $p$ = .726. Likewise, the definers provided by participants in the control condition were not associated with the story read: Confused/Confusion, $\chi^2$(1, 77) = 1.95, $p$ = .203; Person/People, $\chi^2$(1, 77) = .21, $p$ = .742; or Male, $\chi^2$(1, 77) = .009, $p$ = 1.00. These results suggest that definers that participants provided were not associated with the story they read. Therefore, Hypothesis 3 was not supported.

## 5.7. Discussion of Study 3

The three hypotheses that examined the association between fiction and transnegativity were not supported. Transnegativity scores presented a floor effect (i.e. the means were close to the lower extreme of the scale, indicating low prejudice), and it may have been the case that these scores were too low and showed not enough variance to be susceptible to a significant change after brief exposure to a story (Hessling, et al., 2011). In other words, transnegativity levels did not differ between participants in the trans-fiction condition and those in the cis-fiction condition. Neither Experience-taking (Hypothesis 1) nor Cisgender identification (Hypothesis 2) were predictors of transnegativity, and semantic networks regarding the concept "transgender" did not seem to be associated with the type of character presented (Hypothesis 3).

One important limitation of this study relates to the transgender status of the characters. One of the two questions to make sure that participants read the story was whether there was a transgender character in the story. A few participants answered this question incorrectly, but their data remained for analysis as their content-specific question was correct. This consideration was due to the likelihood of confusion in those who read *Birthrights*, given that the transgender identity of the character may not have been obvious, and for those who read *Vandercook*, where a secondary character is gay, since some participants may have conflated sexual orientation with gender identity.

## 5.8. General discussion

The two studies reported in this chapter examined three mechanisms that were expected to be involved in the relationship between fiction exposure and transnegativity: Semantic networks, experience-taking, and ingroup identification. Specifically, Study 2 explored the potential association between reading a story featuring transgender characters and semantic networks related to the concept "transgender". Study 3 re-used the semantic networks technique while investigating experience-taking as a mediator, and cisgender identification as moderator, in the potential relationship between fiction exposure and transnegativity.

### *5.8.1. Main findings from Study 2: Social representations of the concept "transgender"*

Study 2 compared the semantic networks that cisgender university students constructed around the word "transgender" after reading a short story with either transgender or cisgender characters. The scope of this study cannot demonstrate a causal influence of the fiction content: the qualitative experiment approach, as Ravasio et al. (2004) explained, seeks to establish structures in terms of dependency (i.e. semantic networks related to fiction exposure), but it does not test the causality of the resulting observations. Overall, findings from Study 2 suggested that the meanings which readers assigned to the concept of "transgender" were at least partially caused by exposure to transgender fictional characters.

The first research question in Study 2 probed the meanings of "transgender". The two highest-ranked definers for the whole sample are discussed here. The rest of the attributes are not addressed; the more distance there is between a definer and the core features of the concept, the more the definer is likely to stem from individual experiences rather than socially shared ones. The non-probabilistic sample and the lack of complementary information (e.g. an interview with participants) prevents a more in-depth analysis of personal experiences. The highest-ranked definers, in contrast, are thought to be more likely to be shared among the sample.

The semantic network obtained from the whole sample showed that the main definer of the concept transgender was "Change". Transgender individuals have pointed to the significant

life changes that are caused by coming out as transgender (Levitt & Ippolito, 2014b), but Norton and Herek (2013) have questioned the limited way in which cisgender people understand this change. Specifically, Trans Media Watch (2010) stressed that the social representation of change attributed to transgender people means "sex change", framed by the media as a desire "to become somebody else" (Trans Media Watch, 2010, p. 10) rather than as the confirmation of an existing identity. Furthermore, Norton and Herek (2013) and Lester (2018) posit that being transgender goes beyond the desire for, or the act to undergo, a sex change. Rather, these authors, as well as Kuper (2011), have emphasised the multiplicity of gender identities and expressions across the transgender spectrum.

The second most predominant definer in the semantic networks reported by participants across both conditions was "hormones", which may be related to the notion of sex change suggested above. In addition, Gazzola and Morrison (2014) found that cisgender participants assume that the use of hormones and surgery is a salient feature of a transgender individual's experience. In reality, some transgender clients may opt for hormone therapy (Shah & Radix, 2016) as part of their transition, but not all transgender individuals wish to take hormones or undergo surgery (Kuper, 2011; Lester, 2018).

Some of the essential and secondary attributes in the semantic networks from both types of stories are discussed below, as they make up the clusters of the trans-fiction and cis-fiction conditions. However, it must be noted that the three secondary attributes in the semantic network for the whole sample, "Confuse/Confused", "Gay", and "Sex/Sexuality" echo transgender stereotypes found by Gazzola and Morrison (2014).

The second research question of Study 2 enquired whether the meanings ascribed to the word "transgender" varied between readers of a story with a transgender character and those who read a story with cisgender characters. For the trans-fiction condition, the definer "Difficult" was the core attribute. A stereotype in line with this trait was not found in the literature (e.g. in the exploration of transgender stereotypes held by cisgender people, by Gazzola and Morrison, 2014)). The trans-fiction story described the obstacles that the narrator, a young transgender woman, experienced during and after transitioning, so it was hypothesised that this core attribute referred to circumstances surrounding the character rather than to a personal quality that defined the character, or transgender people as a whole.

The essential attributes of the concept "transgender" in the trans-fiction condition were "Brave", "Change", "Confused", and "Hormones". The possible explanations for the use of "Change" have been discussed above, but this word also conveys a major theme of *How to stay friends*, and this word is mentioned twice in this story, referring to currency and to getting a new phone number. Although "Brave" is not explicitly mentioned in the story, it may be linked to its content, particularly to the stance of the narrator as she faces difficult situations. The words

"Confuse/Confused" and "Hormones", besides relating to transgender stereotypes (Gazzola & Morrison, 2014), also appear in the story: Respectively, there is a mention of confusion as to whom (the narrator or her companion) should sample the wine the waiter brings to the table, and a memory of the narrator when she was "two months on hormones".

For the cis-fiction condition, the core attribute for "transgender" was "Weird", a definer that was not mentioned by participants in the trans-fiction condition. Gazzola and Morrison (2014) reported that cisgender participants believe that transgender people are "odd", "weird", "different", descriptions that resembled the stereotype of abnormality. The only essential attribute in this semantic network was "Gay", which Gazzola and Morrison (2014) found that is another predominant stereotype, one that usually explains being transgender as a fetishist desire or resulting from the need to find a partner. Furthermore, studies on the perception of transgender people find that the public tends to conflate sexual orientation with gender identity (Carroll, 2012; Gazzola & Morrison, 2014; Trans Media Watch, 2012; see also Chapter 2). Although there is evidence that prejudiced individuals understand the conceptual differences between prejudice towards sexual and gender minorities (Tee & Hegarty, 2006), transgender interviewees have reported (Levitt & Ippolito, 2014) that they are often labelled gay and thus are discriminated against on the basis of sexual prejudice, which conflates with prejudice towards transgender people and gender nonconformity.

Overall, results of Study 2 suggested that the semantic networks for "transgender" were susceptible to influence from exposure to a story with or without transgender characters. The semantic network from the trans-fiction condition seemed to be linked to concepts and themes addressed in the story. On the other hand, participants in the cis-fiction condition, having read a story without transgender characters, seemed to rely more on stereotypes to define the concept of transgender.

The Natural Semantic Network technique was again used in Study 3, with the same procedure but with the addition of a new quantitative test to transcend the limitations of qualitative interpretation in Study 2. Other limitations of this study and recommendations for future research are addressed in a subsequent section.

### *5.8.2. Main findings from Study 3: Cisgender identification and experience-taking in trans-related fiction*

The first hypothesis of Study 3 was that experience-taking would mediate the effect of the type of character in the story –transgender or cisgender– on transnegativity. Higher experience-taking was linked to a higher quality of the story, and it was significantly higher for cisgender participants who encountered cisgender characters, compared to those who encountered transgender characters. This was expected, as Kaufman and Libby (2012) demonstrated that an

ingroup fictional character prompts higher experience-taking than outgroup ones. However, neither type of character nor experience-taking seemed to be associated with transnegativity, hence this hypothesis was not supported. It may have been the case in this study that transnegativity scores were too low to be impacted any further by a short story. Alternatively, as Sestir and Green (2010) posited, identification with fictional characters may be associated with self-concept changes, rather than to changes in attitudes towards others.

Based on Kaufman and Libby's (2012) finding that group membership is involved in the engagement with the character, the moderation model in the second hypothesis of Study 3 examined ingroup identification. This hypothesis stated that cisgender identification would moderate the effect of type of character on (1) experience-taking, and (2) transnegativity. This hypothesis was not supported, suggesting that cisgender identification prior to encountering a story with a transgender character does not play a role in how cisgender readers engage with a transgender character, or on their attitudes towards transgender people. Besides the possibility of a floor effect in transnegativity scores, it may be the case that ingroup identification is not necessarily linked to negative attitudes towards an outgroup (Brewer, 1991), at least in a low-prejudice sample like the one in this study. Furthermore, Bergh et al. (2010) showed that making a social identity salient does not prompt variation in personality variables nor prejudice levels. If such was the case in this study, it appears that factors proximal to the readers' group membership may be secondary in the relationship between fiction exposure and reduced prejudice.

The third and last hypothesis of Study 3 stated that the semantic networks for "transgender" would differ between participants who read a story featuring transgender characters, and those who read a story with cisgender characters. After running the Natural Semantic Network Technique in Study 2, Study 3 took a step further to test whether there was any statistical difference between participants in the trans-fiction and the cis-fiction condition in terms of the highest-ranked definers provided in each conditions. This statistical difference would suggest an association between the presence of a transgender character and the meanings assigned to the concept "transgender". This hypothesis was thus not supported.

The analysis of the semantic networks in Study 3 showed that the highest-ranked definers for the whole sample were "Change" (core definer), "Confused/confusion", and "People/person" (both essential attributes). Similar to Study 2, the core definer for the concept of transgender in the whole sample was "Change". This definer, and the following one, "Confused/Confusion", as previously explained, may relate to the stereotype that transgender people are not sure about who they are, or to cisgender people's confounding of gender identity and sexual orientation (Gazzola & Morrison, 2014; Norton & Herek, 2012). On the other hand, there is evidence that the awareness of one's gender identity appears in early childhood, and this is true for both cisgender and transgender children (Olson et al., 2015; see also Chapter 2). Researchers have found that

transgender people report confusion in the early stages of their identity development, but due to comparing themselves to others who do fit "the norm" (Levitt & Ippolito, 2014a). The third highest-ranked attribute, "People/Person" has not been reported in transnegativity research. Following Kunst, Thomseon, Sam, and Berry (2015), and considering this was a low-prejudice sample, this definer may reflect the participants' intention to establish a common identity and to demystify transgender individuals.

Overall, Studies 2 and 3 provided a snapshot of the defining properties of the concept "transgender" according to two samples of university students. Some of these definers appear to reflect traditional ideas about transgender people ("Change", "Confusion"), and others may stem from the low-prejudice nature of the sample ("People/person"). Additionally, Study 3 supported previous findings showing that readers' experience-taking is higher when they share group membership (Kaufman & Libby, 2012; Smith, 2014). This latter results suggested that neither identification with ingroup characters, nor with the ingroup as a whole, is associated with prejudice towards an outgroup.

### *5.8.3. Limitations and future studies*

The first major limitation for Studies 2 and 3 was the floor effect seen in transnegativity scores. It cannot be concluded whether the non-significance of the results were due to a generalised lack of effect of fiction on the variables examined, or due to there not being any substantial levels of transnegativity to target. One possible reason for the low transnegativity scores is the characteristics of the sample. Participants in Study 3 were predominantly female, and in both studies they were university students, reported a liberal background, and the majority came from the fields of Social Sciences and Humanities. Research shows that these traits are consistently linked to lower transnegativity (Acker, 2017; Brandelli et al., 2015; Norton & Herek, 2012; Nagoshi et al., 2008; Tebbe & Moradi, 2012).

Research findings from other university samples partially align with the low transnegativity found in Studies 2 and 3. Acker (2017) found that 45% of 600 undergraduate students majoring in helping professions (social work, nursing, psychology, and occupational therapy) reported moderate to high levels of transnegativity. In another study, McDermott et al. (2018) reported very low transnegativity in a sample of female university students, which comes close to the scores obtained in Studies 2 and 3. In McDermott's (2018) study, however, the existing low transnegativity was reduced further through a combination of direct (e.g. panel of transgender speakers) and mediated contact intervention. The latter included both fictional and non-fictional narratives, that is, targeting participants' subjective experiences as well as objective knowledge (i.e. facts) about transgender people. In this regard, Brown and Paterson (2016) underscored the idea that using stories as indirect contact has stronger effects when combined

with nonfiction-based interventions. Therefore, future studies on fiction and transnegativity with low-prejudice samples should consider interventions that include other forms of contact besides fictional stories.

Another reason for low transnegativity scores may come from socially desirable responses. In Studies 2 and 3, the transnegativity scale was presented after the word association task. In Study 3, the definitions of transgender and cisgender were presented at the beginning of the questionnaire, and this emphasis may have drawn participants' attention to this subject. Study 5 (Chapter 7) aimed to reduce likelihood of social desirability by using an implicit association task, and recruiting participants whose individual characteristics are signalled in the literature as correlates of transnegativity, such as being male, or identifying as right-wing (Nagoshi et al., 2008; Norton & Herek, 2012; Warriner et al., 2013).

A second limitation was the lack of equivalency in content for the stories. The focus of all stories used in Studies 2 and 3 was the ingroup-outgroup membership of the characters. Other aspects of the stories were also sought to be equivalent (e.g. first-person narrator in Study 3), but the stories can vary in a myriad of features that account for the readers' engagement with the characters. For instance, in Study 3, the two stories with transgender characters varied in the emphasis that the narrative placed on gender identity: In *Girl named Bat*, the protagonist happens to be transgender, while in *Birthrights*, being transgender is what drives the story. The nuances of the stories used in fiction research should be acknowledged when interpreting the results, to detect the elements that make a fictional narrative potentially influential. Despite this difficulty of achieving content equivalence, from the experience of this thesis it is encouraged that researchers use pre-existing fiction rather lab-crafted narratives, in the study of fiction as contact. Using real-world materials can increase the likelihood of ecological validity, in the case of potentially significant findings, and helps ensure that high-status group audiences are responding to narratives and characters that appropriately represent the real-life experiences of low-status groups.

A third limitation of the studies in this chapter reflects the difficulty of interpreting results from a semantic network analysis. First, there is the difficulty of establishing the participant's intention behind using a specific word (Johnson-Laird et al., 1984). The word "Change", for instance, was predominantly featured in all semantic networks, and previous research on transgender issues helped shed a light on what its frequent mention may mean. However, the participant's intention behind mentioning that definer, in terms of what it means to them and whether its use was personally endorsed, remains unclear. Future research on the effects of fiction on social representations should include a variety of quantitative and qualitative methods to obtain more information about the definers reported by participants.

Another difficulty regarding the Natural Semantic Networks Technique is its scope. This technique was not used here to investigate how the definer words relate to one another (e.g. DuBois et al., 2017), but to examine their individual relation to the main concept, in a specific sample (Liberman & Lopez, 2016; Orellana et al., 2013). Hence, these studies referred to psychological meanings rather than social representations. Previous literature suggests that some of these meanings might generalise to others populations (e.g. "Change"; Gazzola & Morrison, 2014; Trans Media Watch, 2010), but quantitative approaches are required to test this assertion, and to link semantic network to other measures (i.e. scales, factual knowledge). Using statistical analysis and models (DuBois et al., 2017; Flores et al., 2015; Steyvers & Tenenbaum, 2005) and mathematical criteria (Stevanak, Larue & Carr, 2010), semantic networks can provide complex information on the concepts of interest.

Connected to the above, there is the need to investigate whether potential semantic changes remain over time, that is, the amount of exposure and cognitive mechanisms required for an unknown object (for instance, an outgroup whose members are characterised as "weird") to become assimilated into a familiar perspective. Muth et al. (2015) posited that the meaning attributed to an object is constantly changing and that it evolves from the individual's interaction with the environment. Thus, researchers should establish the extent to which reading fiction influences readers in at least two ways: (1) how do high-status group readers construct and modify the meanings they attribute to low-status group characters/members; and (2) whether these meanings can be transmitted from some high-status members to others, to the point that these meanings become shared knowledge by the wider social group.

A fourth limitation of Studies 2 and 3 is one of the most pressing issues in fiction research: Making sure that participants read the story. Study 2 had the constraint of being conducted online; therefore there was no control over the participants' reading behaviour. This limitation was overcome by conducting Study 3 in a lab setting, which ensured an environment that eliminated distractions and encouraged participants to keep their focus on the story. From the three studies reported so far in this thesis, it is recommended that fiction studies are conducted face-to-face, and that measures include calculations of reading times and/or content-specific questions. Likewise, researchers should explicitly discourage speed-reading in participants (Maloney, 2009), asking them instead to read the story as they would in their leisure time.

Future studies can benefit from the findings in Study 3 and the existing literature on experience-taking (Kaufman & Libby, 2012; Sestir & Green, 2010; Smith, 2014). Results show that ingroup readers report higher experience-taking when the character also belongs to their ingroup. For the purposes of using fiction as contact, fictional narratives might then show contact between ingroup and outgroup characters, i.e. fiction portraying vicarious contact, as an alternative to showing outgroup protagonist as done in Study 3. In cases when fiction is used to

encourage ingroup members to simulate themselves as outgroup members in a story, one way to take advantage of experience-taking, according to Kaufman and Libby (2012), is to reveal the outgroup membership of the character later on in the text.

Lastly, two limitations about Studies 2 and 3 which can be improved by future research relate to the increasing awareness of transgender issues in mainstream media since the early 2010s. The first limitation of this kind is that, when participants were asked if they knew someone who was transgender, the question did not specify whether this should be someone they personally knew or to media personalities. Ultimately, this question explored whether participants were aware of the existence of specific transgender individuals. Researchers may wish to separate the potentially distinctive influence of direct contact and parasocial contact in the future. For instance, in a study about contact and sexual prejudice, Herek and Capitanio (1996) distinguished knowing that someone is gay via "common knowledge" (e.g. "people know") versus via direct disclosure, that is, when gay individuals come out directly to their heterosexual peers, which may signal a relationship that involves intimacy and trust. In the study of transnegativity, it can be expected that the latter form of "knowing someone" who is transgender would be associated with lower transnegativity, which in turn may prompt a more positive reception of (positive/complex) transgender fictional characters.

The second limitation linked to the public's increasing awareness of transgender issues is that providing a definition of transgender may have primed participants or activated a social desirability bias in Study 3. However, the aim of presenting this terminology was to clarify the meaning of cisgender, a term which might be less familiar to participants than transgender, and indeed to prime the notion of ingroup and outgroup in terms of gender identity. While the public visibility of transgender issues is increasing, the public may still not be familiar with related concepts such as "cisgender". Therefore, researchers should present clear definitions of the social groups involved in the studies, to make sure participants respond to in an informed manner.

#### *5.8.4. Conclusions*

Participants in Studies 2 and 3 who read a fictional story with transgender characters did not report lower levels of transnegativity, compared to those who read a story with cisgender characters. In Study 3, participants identified more strongly with cisgender characters, and with their cisgender group, than with their transgender counterparts. However, this identification was not associated with transnegativity levels, suggesting that identification with one's own group is not necessarily linked to negative responses to outgroup characters/members, at least in low-prejudice samples.

In terms of semantic networks, the analysis from Study 2 suggested that meanings ascribed to the concept "transgender" might be modified by exposure to transgender fictional

characters. However, the quantitative analysis of semantic networks in Study 3 did not support this conclusion. Nevertheless, the semantic networks in Studies 2 and 3 showed the terms with which cisgender participants characterised transgender individuals. Semantic networks provide access to the meanings that individuals hold about specific concepts (Flores et al., 2015; Valdez, 1998), and in these studies, some of the definers that participants provided reflected traditional ideas about transgender people ("Change", "Hormones"), while others seemed motivated by acceptance ("Person/People").

### A LOOK AHEAD: EXPERIENCE-TAKING AND FICTION EXPOSURE IN TRANSGENDER AUDIENCES

The study of fiction exposure as mediated contact, like any other prejudice reduction intervention (Dixon et al., 2013; Paluck & Green, 2009), focusses on attitude changes experienced by high-status group members. The next study (Chapter 6) focussed on a different question. The purpose of this study was to expand the understanding of fiction not only as a vehicle to bring together high-status and low-status groups, but as a way for low-status members to gain social knowledge about themselves. Therefore, Study 4 examined engagement of transgender audiences with mass media and fiction, and whether aspects of their self-concept were involved in this engagement.

# CHAPTER 6
# STUDY 4. EXPOSURE TO TRANSGENDER CHARACTERS IN FICTION, EXPERIENCE-TAKING, AND IDENTITY CONGRUENCE IN TRANSGENDER AUDIENCES

> PAIGE: I know you don't want what happened to you to happen to somebody else. I always win.
> JOANNA: I believe that.
> PAIGE: Good. I need you to believe that. We've got this.
>
> —*Her Story*, Episode 1

The conversation above involves two women. Joanna was denied entry into a shelter because she is transgender; Paige, also a transgender woman, is the lawyer working on her case. This scene, and the TV show it comes from, *Her Story* is a far cry from the traditional negative depictions of transgender people in mass media (Miller, 2012; Ryan, 2009; Whitney 2018a, 2018b). According to the show's website[17], transgender women in the media have rarely been shown as "complex characters who laugh, struggle, and grow, who share strength in sisterhood, who seek and find love"[18].

While the focus of this thesis is the use of fiction as mediated contact, that is, a way of bringing together members of two groups, the study reported in this chapter expands on the possibilities of fiction beyond prejudice reduction. Tausch et al. (2015) encouraged investigating forms of contact that motivate both high-status and low-status groups to demand social change, and research has shown that fiction might be a form of contact that answers this call. Fiction can influence attitudes towards others (Johnson, 2013; Kaufman & Libby, 2012; McLaughlin & Rodriguez, 2017), but it is also a safe venue for individuals to explore their own emotions, and strengthen aspects of their sense of identity, and their perceived place in the world (Djikic et al., 2012; Koopman & Hakemulder, 2015; Richter et al., 2014).

The aim of Study 4 was to compare transgender participants' level of experience-taking based on a character's gender identity (transgender or cisgender), and whether this response depended on the participants' degree of comfort with their gender identity (i.e. identity congruence). A secondary aim of this study was to explore the participants' perception of media

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[17] http://www.herstoryshow.com/about/

[18] Transgender media representation has improved over the years in which the studies of this thesis were conducted. Alongside *Her Story* and other shows that cast transgender actors (GLAAD, 2016, 2017b), the 2018 TV show *Pose* premiered on American television. It featured five transgender actors as regulars in the series, and was considered one of the best TV shows of the year by several media outlets, including Time Magazine (Berman, 2018).

transgender representation, and their engagement with overall media and fiction. The first section in this chapter presents the theoretical framework of the study, addressing media representation and self-perception processes in transgender individuals, and the impact of short-term and long-term engagement with media and fiction. It was expected that transgender participants would report higher experience-taking when they encountered transgender characters in a fictional story, compared to encountering cisgender characters (Hypothesis 1), and that congruence would moderate this effect of character on experience-taking (Hypothesis 2). To test these hypotheses, participants viewed or read two stories, one with transgender characters and one with cisgender characters, and reported their degree of transportation and experience-taking for both stories. The last sections of this chapter report these findings, showing that congruence was not associated with experience-taking, while exploring participants' long-term exposure to media and fiction, and their assessment of transgender media representation. The implications of these results for research about fiction and low-status group audiences are also discussed.

## 6.1. Transgender representation, congruence and the impact of fiction on the self

### *6.1.1. Identity formation and representation in the media and fiction: the case of transgender people*

In recent years, studies have sought to explore gender identity in transgender populations. Much of the research conducted about transgender people comes from clinical samples (Kuper et al., 2011), which set out the narrative that this group is driven by the desire for sex reassignment. Moving away from medical fields, researchers have documented the diversity of life experiences and identities among transgender people. Some researchers have relied on self-reports (Kozee, Tylka & Bauerband, 2012; Kuper et al., 2011; Lester, 2017; Levitt & Ippolito, 2014a, 2014b), and others on measuring implicit attitudes, specifically, participants' implicit associations regarding their gender identity (Olson et al., 2015; Prunas, Bini, & Hartmann, 2015). Overall, this research has established that transgender people show gender identity-affirming responses that are indistinguishable from those of cisgender participants, often since their infancy (Fast & Olson, 2017; Olson & Gülgöz, 2017).

The development of gender identity requires models from which to gain knowledge about the self (Richter et al., 2014), and part of the individuals' gender identity socialisation derives from media exposure (Abad & Pruden, 2013). From a social psychological standpoint, the influence of media can be explained as part of the individual's tendency to seek out self-knowledge (Festinger, 1954). In this search, individuals are more likely to take similar others as a standard of comparison and a source of information for self-evaluation (Richter et al., 2014). Furthermore, according to Bandura (2011), media is a form of mass communication that can provide information directly, or it can provide guidance by connecting individuals to social networks and

communities. Most people have access to this sort of information, meaning that they have access to representations of their sex and gender experiences, but this is usually not the case for transgender people (Levitt & Ippolito, 2014).

The process by which transgender people develop their gender identity often occurs in a context of isolation, stigma, and harassment (Levitt & Ippolito, 2014a). Transgender people are exposed to severe discrimination and marginalisation (Breslow et al., 2015), society's opposition to recognise their civil rights (Mizock & Mueser, 2014; Tee & Hegarty, 2006) and life-threatening conditions (Lee & Kwan, 2014), which are often associated with minority stress and high suicide risk (Tebbe & Moradi, 2016). Prejudice towards transgender people, or transnegativity, also manifests in the media, where transgender characters are traditionally absent or depicted negatively in mainstream narratives (Miller, 2012; Ryan, 2009), which transgender people have reported as linked to abuses they experience on an everyday basis (Trans Media Watch, 2010).

Mass media can exert a strong influence on the values and stereotypes that individuals hold about others. According to Raley and Lucas (2006), minority groups that are negatively portrayed in the media are more likely to be targets of negative attitudes from the public. To analyse the quality of representation of minority social groups in the media, Clark (1969, cited by Raley & Lucas, 2006) proposed four stages of representation: (1) *non-representation*, or outright exclusion from media narratives; (2) *ridicule*, in which formerly non-recognized social groups are portrayed as objects of derisive humour; (3) *regulation*, when the minority group is represented only in limited socially acceptable roles; and (4) *respect*, when members of the minority group are presented in both positive and negative roles of everyday life. The documented representations of transgender people in the media (e.g. Miller, 2012) in past decades demonstrate that there have been few, and poorly represented, models of transgender experiences. Transgender participants in Kuper et al.'s (2011) study about gender identity also reported lack of models, as well as lack of language to accurately describe and communicate their sense of sex and gender.

Current media studies have shown that transgender representation is improving, in quantity and quality, in Western mass media (GLAAD, 2016, 2017b). From their study in the realm of lesbian media representation, Soto-Sanfiel et al. (2014) asserted that individuals from sexual and gender minorities can better understand themselves by encountering peers in the media to whom they can relate. Levitt and Ippolito (2014a) also established that encountering transgender-specific narratives in fiction is beneficial for transgender people. Participants in Levitt and Ippolito's (2014a) study reported that learning about other transgender people's experience helped them realise that there was indeed a category in which they fit, and which reflected and validated their own experiences. To date, however, there is no known empirical investigation to understand the extent to which individuals' self-perception influences their responses to fictional representations of members of their own group.

This study examines one aspect of self-perception in transgender individuals, congruence, in relation to engagement with fictional characters. Kozee et al. (2012) defined transgender congruence (congruence from here on in) as the degree to which transgender individuals feel genuine, authentic, and comfortable with their external appearance and gender identity. This construct is thus a measure of the person's current satisfaction with the correspondence between actual and ideal aspects of their self-concept (i.e. self-image, self-reflection, and self-expression (Kozee et al., 2012). Kozee et al. (2012) found that congruence in transgender individuals correlates positively with satisfaction with life, and negatively with anxiety. The literature on the relation between self-perception and narratives has examined readers' self-perception in terms of salience during (Kaufman & Libby, 2012) or after (Richter et al., 2014) reading stories with characters with the same or different group membership. This study investigated whether participants' pre-existing self-perception (i.e. degree of congruence) played a role in their degree of engagement with characters who are like, or unlike them. There is no known work that tests the interaction between identity-building processes and media representation of one's group; this study thus investigates the implications of identity congruence for the individual's relationship with media and fiction contents.

### *6.1.2. Impact of fiction on self-perception: The role of experience-taking and long-term fiction exposure*

Fiction is an opportunity, for authors and audiences, to simulate social experiences (Mar & Oatley, 2008). Through fictional narratives, people can experience multiple alternative situations, personas, and identities that cannot be encountered in daily life. Research shows that these experiences can produce significant changes in individuals (Kaufman & Libby, 2012), related to processes of personality growth and maturation (Djikic et al., 2009b; Koopman & Hakemulder, 2015). For instance, Machado and Silva (2012) asserted that fiction helps readers understand and evaluate their emotions and explore their own sense of identity. Other studies have found that people who are exposed to fiction can experience changes in emotion and even in self-perceived personality traits (Djikic et al., 2009a, 2009b; Djikic, Oatley, and Carland, 2012). Richter et al. (2014), and Sestir and Green (2010) showed that audience members can either distance themselves from fictional characters, or temporarily adopt the perceived traits of fictional characters with whom they identify.

For these processes to arise from exposure to fiction, the audience –readers or viewers– should be emotionally invested in the story; that is, individuals should achieve a degree of engagement with the story and with the mind of the characters (Kidd & Castano, 2016; Oatley, 2016b). Researchers have conceptualised this engagement with a story as "transportation" (Appel et al., 2007; Green & Brock, 2000; Green et al., 2008; Johnson, 2013; Quintero & Sangalang, 2016;

see also Chapters 3 and 4). Transportation into a story, whether fictional or non-fictional, has been linked to changes in how readers perceive themselves. For instance, Richter et al. (2014) conducted a study with female participants about the influence of non-fictional narratives on the self. Results from this study showed that women who were more transported into the story, a first-person narrative about motherhood, tended to report more femininity traits (e.g. tender, caring) than those who read the same narrative but were less transported.

The concept of transportation, however, does not assess the vantage point that the reader adopts within the story. To fill this gap, Kaufman and Libby (2012) proposed the term experience-taking, the immersive simulation of the mindset and persona of a character in a story, experiencing the narrative as the protagonist does. Sestir and Green (2010) had also addressed experience-taking, although they defined this term as identification with the character. Experience-taking involves a reduction of the activation of the self-concept, and it reflects an experientially driven process (Kaufman & Libby, 2012; Sestir & Green, 2010). In contrast, transportation is necessary but not sufficient for experience-taking to occur, as the reader may remain a mere spectator of the story.

Research on experience-taking (reviewed in Chapters 3 and 5) has found a number of conditions needed for the reader to benefit from simulating the characters' mindset. Kaufman & Libby (2012) showed that readers report higher experience-taking when they belong to the same group as the character, and when they have a reduced state of self-concept accessibility, that is, they perceive their own identity as less salient. Subsequent studies by Hawkins and Scherr (2017), and Smith (2014) added the conditions that readers or viewers should perceive similarities with the character and be familiar with the story, meaning that they have encountered the story frequently (e.g. watching multiple episodes of a TV series). These findings also showed that, when these conditions were met, experience-taking enhanced the readers' subsequent performance in problem-solving (Smith, 2014) and decision-making tasks (Hawkins & Scherr, 2017) following exposure to a story.

Besides the immediate effects of fiction on self, linked to transportation and experience-taking, research has established that long-term fiction exposure can account for sustained changes in self-perception over time (Djikic et al., 2009a, 2009b; Djikic et al., 2012). In terms of written fiction, Schmidt and Retelsdorf (2016) have pointed out the importance of reading habits as a reflection of a sense of personal identity or style. In other words, people with a habit of reading – including fiction– learn about authors when searching for books of interest, learning about their preferred genres, and by discussing reading tastes and interests with other people or consulting book reviews. As a consequence, exposure to print has been measured through the recognition of names of authors (Mar et al., 2006; Stanovich & West, 1989). Repeated exposure to print, as a proxy for fiction reading, may provide the readers with more opportunities to identify with

characters. This perception of similarity between reader and character, in turn, can lead readers to self-describe using the traits of the character, which can result in changes in their overall self-perception (Sestir & Green, 2010).

### *6.1.3. Overview of Study 4*

The literature on the effects of fiction on social cognition has paid little attention to how audiences from a disadvantaged group relate to media portrayals of their own group. At the time of conducting this study, there is no known research addressing media experiences of transgender audiences, comparing responses to transgender-specific contents, and to general media contents, which traditionally present cisgender-related narratives. Further exploration of these media experiences can shed a light on the content that media-based interventions should include to reach out to disadvantaged groups. Therefore, the present study sought to (1) compare the degree of experience-taking in transgender audiences, after exposure to both transgender and cisgender fictional characters, and (2) to establish whether congruence moderated these responses. Participants' long-term exposure to media and fiction, their assessment of transgender media representation, and trait affect were also evaluated as correlates of the main variables analysed.

To this end, participants were asked to either view or read two fictional stories, each presented one week apart. One of the stories featured transgender characters, and the other cisgender characters. The stories were told through video (web-series) or text (short stories). Research findings suggest that the medium in which a story is displayed does not influence how involved audiences become with the story, compared to the appeal of the characters (Black & Barnes, 2015a); hence, two types of media were included to corroborate this finding.

The following two hypotheses were tested:

$H_1$: *Encountering transgender characters in a story will elicit higher experience-taking in transgender participants, compared to encountering cisgender characters, irrespective of the medium in which the story is presented*. Similar to $H_1$ in Study 3 (Chapter 5), this hypothesis tested experience-taking as a process linked to reading fiction and dependent of the group membership of both the audience member and the story character (Kaufman & Libby, 2012).

$H_2$: *Congruence will moderate the effect of type of character (transgender or cisgender) on experience-taking*. The basis for this hypothesis consists of two findings from the literature. The first one is that individuals tend to take similar others as a standard of comparison (Richter et al., 2014). The second one is that research on socio-cognitive effects of fiction show that exposure has a stronger effect on those who present a sort of disparity, such as lower tendency to perspective-taking (Johnson, Jasper et al., 2013), or lower self-concept accessibility (Kaufman & Libby, 2012). This hypothesis thus states that the quality of self-perception (high or low) can play a role in the participants' degree of engagement with characters who are like, or unlike them. It was then

expected that participants with lower congruence would show a stronger association between encountering a transgender character and experience-taking, than when encountering a cisgender character.

## 6.2. Method

### *6.2.1. Participants*

The participation criteria for this study were that individuals reported (1) a minimum age of 18 years, and (2) identification as transgender. Potential participants were recruited online by contacting LGBTQ (lesbian, gay, bisexual, transgender, and queer) and trans-specific organisations, mailing lists, Facebook groups, and discussion forums. The recruitment ad stated that this was a study of "fiction exposure, transgender representation in the media, and the experience of immersion in a story". The ad also stated that participation entailed reading or viewing two stories online, each presented a week apart, and responding to a brief questionnaire after each story.

Eighty-two participants completed the Time One (T1) questionnaire, and 31 of them returned to complete the Time Two (T2) questionnaire a week later. T1 and T2 responses were matched using the code made up from letters and numbers (called ID from here on in) that each participant generated at the end of T1, and which was requested at the start of T2. Three participants were removed for displaying reading times lower than three minutes (Section 6.2.2). The final sample was 28 participants. A sensitivity analysis for repeated measures with within-between interaction ($\alpha = .05$, power = .95) showed that the minimum effect size detected by this study was $f = .15$, considered a medium effect size (Selya et al., 2012).

Table 6.1 displays the socio-demographic characteristics of the final sample. Participants' ages ranged from 19 to 70 years old ($M = 41.82$, $SD = 16.96$), and 46.4% identified as transgender woman (assigned male at birth and transitioned to her female gender identity), 14.3% as transgender man (assigned female at birth and transitioned to his male gender identity), and 39.9% as non-binary or agender (did not identify with a single gender or any gender at all). Most participants (96.4%) reported their political position to be in the range from far left to centre, while 82.1% reported having an undergraduate or higher level of education, with the majority in the Social Sciences and Humanities (32.1%). Nearly 43% of participants reported their sexual orientation as other than heterosexual, gay/lesbian or bisexual, i.e. asexual, queer, pansexual, or polyamorous.

*Table 6.1*. Sociodemographic characteristics of the sample

| N | 28 | |
|---|---|---|
| Mean age | 41.82 (*SD*=16.69). | |
| Gender | Trans woman | 46.4% |
| | Trans man | 14.3% |
| | Non-binary, agender | 39.3% |
| Ethnic background | White | 96.4% |
| | Other | 3.6% |
| Political position | Far left | 10.7% |
| | Left | 57.1% |
| | Moderate left | 17.9% |
| | Centre | 10.7% |
| | Moderate right | 3.6% |
| Religious affiliation | Yes | 28.6% |
| | No | 71.4% |
| Level of education | School | 17.9% |
| | Undergraduate | 46.4% |
| | Postgraduate | 35.7% |
| Sexual orientation | Heterosexual | 7.1% |
| | Gay/lesbian | 21.4% |
| | Bisexual | 28.6% |
| | Other | 42.9% |

### *6.2.2. Design and materials*

This study had a mixed design, with repeated-measures and random assignment to a type of medium (web-series or short story). Data was collected using an online questionnaire. Participants were randomly assigned to one of two conditions based on type of media in which the stories were presented: web-series or short story. Each participant in either of these conditions was exposed to two types of characters, transgender and cisgender, one randomly presented at T1, and the other at T2 one week later. A repeated measures ANCOVA (Field, 2012) was used to examine the effect of type of character on experience-taking, by type of media, and whether transgender congruence interacted with type of character to produce this effect.

The stories used in this study are presented in Table 6.2. For the web-episode condition, the story with transgender characters was an episode of *Her Story*, and the one with cisgender characters was an episode of *Darwin*. For the short stories, the story with transgender characters was *To finish the row*, by author Suzie Chase, and the one with cisgender characters, *Colours*, by author Nathan Webber. All stories were matched for estimated length and for content showing

social relationships, either romance or friendship, between the characters in the story. The web-episode and the short story featuring transgender characters were also chosen because they were created by transgender authors. At the time of writing this thesis, all four stories were available online.

*Table 6.2*. Characteristics of the stories used in this study

| Between-participants factor | Within-participants factor | Synopsis | Length of stimulus |
|---|---|---|---|
| Web-episode | Trans characters: *Her Story* (episode 1). | The life of two transgender women in Los Angeles. | 8:00 minutes |
| | Cis characters: *Darwin* (episode 1). | The life of a failed "life coach" and his family. | 8:26 minutes |
| Short story | Trans characters: *To finish the row*. | A conversation between an elder and a trans woman. | 1,551 words |
| | Cis characters: *Colours*. | A romantic relationship examined through a song. | 1,627 words |

Participants were excluded from the analysis if they did not reach the end of the questionnaire, only responded to T1, provided incorrect answers to the two story-specific questions, or had reading/viewing times below the minimum acceptable. The two web-series episodes had a fixed length, 480 and 506 seconds. Participants whose viewing times were below these thresholds were removed from the sample because they would suggest that participants skipped part of the stories; no participants were removed in the web-series conditions. For the two short stories, estimates from a web-based words-to-time calculator (see Chapter 4, Table 4.2) determined that the average reading time of these stories would be 517 and 542 seconds, at an average reading speed of three words per second (3wps). Times based on a 5wps reading speed were established as the lowest reading time accepted to include a participant in the analysis, because lower time values would suggest speed-reading or skimming, a practice discouraged when reading fiction (Maloney, 2009). For all time values, however, an additional three to five seconds were allowed to consider the loading of the stimulus on the page. Maximum acceptable values to exclude participants from the analysis were not established, with the assumption that some participants might take a break from reading or viewing the stories.

Participants in the final sample were evenly distributed between conditions, with 14 (50%) allocated to the web-series condition, and the other 14 (50%) to the short story condition. The same distribution applied to the order in which the stories were presented, that is, one half was first presented the story with trans characters, and the other half, had the story with cis ones.

### *6.2.3. Measures*

The questionnaire displayed the measures in the order presented below. The parentheses indicate whether a measure appeared in T1, T2, or at both times. The first four sets of questions appeared before the story.

*Socio-demographic questions* (T1). The first set of questions in the questionnaire included age, gender, ethnic background, political orientation, religious affiliation, level and field of education, and sexual orientation.

*Self-reported reading behaviour (T1)*. Rain and Mar (2014) assessed the frequency of reading fiction and non-fiction with a 9-point scale, with five anchors ("Never", "Occasionally", "Roughly once a month", "Roughly once a week", "Roughly every day"). In this study, the 7-point scale from Study 1 was used, including the two additional anchors ("Roughly every two weeks", "Roughly a few days per week"), so that each response point corresponded to a specific anchor.

*Author recognition test (ART) (T1)*. Stanovich and West (1989) designed the ART to measure long-exposure to print. It has been extensively used in research on reading habits and related abilities and behaviours (Fong et al., 2013, 2015; Kidd & Castano, 2013, 2016; Mar et al., 2006; Mar et al., 2009). Participants are presented a list of names and are asked to check those names that they recognise as authors; some of the names are foils, and guessing is discouraged. This study used the ART version by Mar et al. (2006), with 140 author names, 50 for fiction, 50 for non-fiction, and 40 foils. These authors reported good internal reliability in the overall scale, .96, and for both fiction (.93) and non-fiction scale (.90). For this study, Cronbach's alpha for the overall scale was .91.

*Transgender representation in fiction and media (T1)*. These items were constructed based on a Trans Media Watch (2010) survey, and on Clark's stages of media representation for minority groups (Raley & Lucas, 2006). These items asked about the participant's perception of (1) the representation of transgender lives and experiences in fiction; (2) personal importance of finding transgender representation in fiction; and (3) the stage of transgender representation in fiction, i.e. Non-representation, Ridicule, Regulation, or Respect. Participants were asked to think of media in general, not only fiction. The first two questions had a 7-point response scale ranging from 1 = Poor representations/Not at all important, to 7 = Sensible representations/Very important. The third question was a single-choice response format containing the four options and their definition. The scores for each of the three questions were examined separately in the analysis.

*Questions about the story (T1, T2).* Two content-specific questions followed each story to check participants paid attention to the story. Example question: "Did Violet's partner leave his car keys for her?" Response options were "Yes" and "No".

*Manipulation check (T1, T2).* Participants were asked to rate how artistic and how interesting each story was. These questions were used by Djikic et al. (2009a) to ensure that any effect of a story would be due to the experimental manipulation and not to the participant's interest in the story or the artistic merit of the story. Response options for both questions ranged from 1 = Not at all, to 7 = Very much.

*Transportation scale (T1, T2)*. Proposed by Green and Brock (2000), the Transportation scale measures emotional engagement and the cognitive experience of being absorbed by a story. Example item: "While I was reading the narrative/watching the program, I could easily picture the events in it taking place". The response scale ranged from 1 = Strongly disagree to 7 = Strongly agree. Quintero and Sangalang (2016) used this measure for both print and film narratives, and reported a Cronbach's alpha of .77, while Johnson (2013) reported .82. For this study, Cronbach's alpha was .89 for T1 and .88 for T2.

*Experience-taking (T1, T2)*. Kaufman and Libby (2012) proposed the 7-item measure of experience-taking to assess readers' simulation of a character's thoughts, emotions, behaviours, goals and traits as if they were their own. An example item is: "I found myself feeling what the character in the story was feeling". The response scale ranged from 1 = Strongly disagree to 7 = Strongly agree. Cronbach's alpha reported by the authors of the scale range from .80 to .92, and in this study it was .94 for T1, and .96 for T2.

*Transgender Congruence scale (T1)*. Kozee et al. (2012) developed the Transgender Congruence Scale to measure how genuine, authentic, and comfortable transgender people feel with their gender identity and appearance at the time of their responses. Sample item: "I feel that my mind and body are consistent with one another". The response scale ranged from 1 = Strongly disagree to 7 = Strongly agree. Kozee et al. (2012) reported a Cronbach's alpha of .92 for the 12-item scale, and for this study it was .91.

*Measure of generalised affect (T1)*. Two items by Poerio, Totterdell, and Miles (2013) were used to measure participants' affect in terms of valence (sad/happy), and arousal (calm/anxious). For this study, the original items were modified to prompt participants to think of themselves in general terms: "I am generally a sad/happy person", with response scale 1 = Sad, 7 = Happy; and "I am generally an anxious/calm person", with response scale 1 = Anxious, 7 = Calm.

### *6.2.4. Procedure*

Potential participants were contacted via LGBTQ and transgender-specific organisations, mailing lists, online forums and social networks based in the United Kingdom, Ireland and the United States. The recruitment ad contained the link to the questionnaire.

When participants clicked on the link provided, the participant information sheet was displayed, stating that this was a study of exposure to fiction and transgender representation in

the media, and the experience of immersion in a story. Then it was explained that this study required the participant to respond to one part of the questionnaire in the present moment (T1), and the other part one week later (T2), and both parts included a story to view or read. At the end of T1, they would be asked to generate an ID to match both parts, and they would be asked to provide a valid e-mail address to receive the link to T2. The e-mail would only be used to send the link to the T2 questionnaire (and one reminder seven days after sending this link if no response was recorded by then), and it would not be linked to their responses. Participants were asked to provide consent before proceeding with the questionnaire and they were informed that their data was confidential. Participants were also told that they were free to withdraw from the study at any time up until before they submitted their responses.

The T1 questionnaire contained the participant information sheet and consent form, socio-demographic questions, the reading behaviour and ART measures, and queries about perception of transgender media representation. The online survey randomly allocated participants to (1) the web-series or short story conditions, and (2) the story with either cis or trans characters first. Afterwards, participants answered the manipulation check questions, the Experience-taking and Transportation measures, the Transgender congruence scale and the Generalised affect questions. Lastly, participants were reminded that they would receive the second half of the questionnaire one week later and were asked to generate a unique six-character participant ID, based on letters and numbers, to match both sets of responses.

A week after responding to T1, participants received the link to the T2 questionnaire. Those who did not respond within a week received one reminder. The ID was requested, and then the second story in the same format as the first one was presented, followed by the manipulation check questions, and the Experience-taking and Transportation questions. Lastly, a debriefing sheet explained the research purposes of the study at the end of the T2 questionnaire.

Participants did not receive any incentive in exchange for their participation. This study was approved by the University of Sheffield Psychology Ethics Committee.

## 6.3. Results

### *6.3.1. Long-term fiction exposure, transgender media representation, and generalised affect*

The first set of variables analysed measured the participants' involvement with media and fiction, and affect-related individual differences. Specifically, these measures looked at overall exposure to fiction through questions about frequency of reading and movie viewing, and the Author Recognition Test (ART); quality and importance of transgender representation in fiction; and trait affect in terms of happiness-sadness, and calmness-anxiety. These variables were measured at T1 for all participants.

Regarding fiction exposure, half of participants (50%) reported reading literary fiction

occasionally, while 17.9% reported reading roughly every day. As for watching fiction movies, 60.7% of the sample reported watching movies every two weeks or more often than that. In the ART, participants identified an average of 14.50 (*SD* = 9.42) fiction authors, and 7.57 (*SD* = 6.02) non-fiction authors, with an average of 1.04 misses (*SD* = 1.99) or foils incorrectly identified as authors. Mar et al. (2006) developed the ART version used in this study and reported similar numbers for the fiction subscale (*M* = 12.50, *SD* = 9.50), and for the non-fiction subscale (*M* = 7.80, *SD* = 6.80). However, there is no standard to establish the expected degree of knowledge about authors. Considering that the ART is a reliable measure of long-term exposure to print, it was included as a covariate in the supplementary analysis in Section 6.3.6.

Participants were also asked about their perception of transgender representation in media and fiction. The average score of the quality of this representation, on a scale from 1 = Poor to 7 = Sensible, was 2.89 (*SD* = 1.54). Regarding how important transgender media representation was to participants, on a scale from 1 = Not at all to 7 = Very important, the average score was 4.86 (*SD* = 1.58). Figure 6.1 shows participants' opinion on the current state of transgender representation in the media at the time of data collection (Late 2016 to Mid-2017). Only 10.7% of the sample chose *Respect,* which referred to seeing transgender characters taking on both positive and negative roles depicting everyday lives. The state of *Non-representation*, or complete omission of transgender characters, was chosen by 28.6% of participants. *Ridicule,* or the portrayal of transgender characters as punchlines, was chosen by 25%. Lastly, *Regulation,* or portrayals of socially acceptable roles, was reported by 35.7% of the sample.

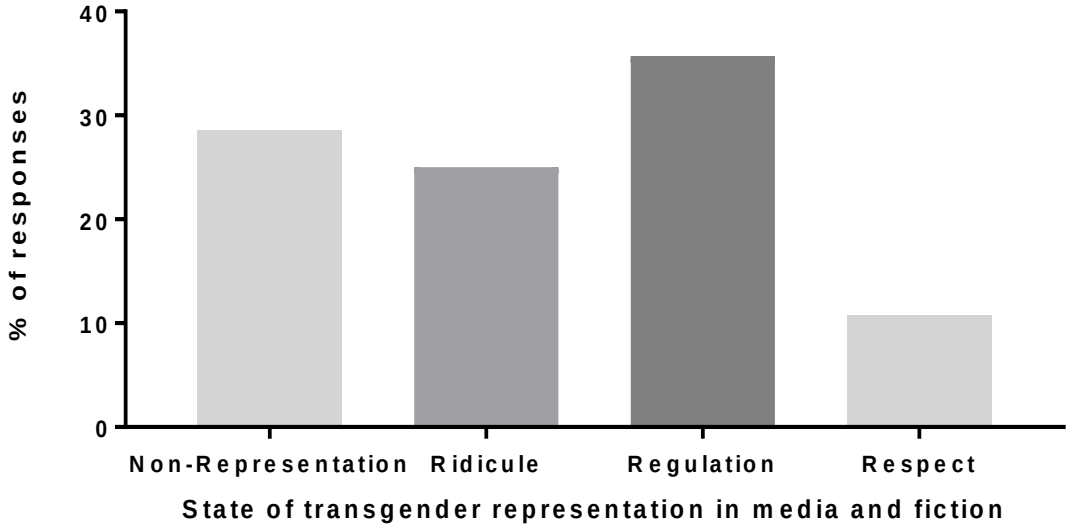


*Figure 6.1.* Participants' assessment of the state of transgender media representation.

Lastly, generalised affect was measured by asking participants whether they considered themselves, overall, a sad/happy person, and a calm/anxious person. On a scale from 1 to 7,

affective valence had a mean score of 4.07 (*SD* = 1.30), and anxiety 4.64 (*SD* = 1.76).

### *6.3.2. Manipulation check questions and equivalency of stories*

Participants were asked to rate the artistic merit and the interest elicited by the two stories they viewed or read. These manipulation check questions would help establish whether potential differences in outcomes were due to the presence or absence of transgender characters, rather than to stylistic aspects of the stories (Djikic et al., 2009). In the comparisons below, counterbalance (whether transgender characters were shown in T1 and cisgender characters in T2 or vice versa) was included.

Outliers in the two manipulation check responses were removed based on the interquartile range (IQR) rule for outliers. In this procedure, the IQR results from subtracting the first quartile ($Q_1$) from the third quartile ($Q_3$), and multiplying this result by 1.5. The value of (IQR)1.5 is added to $Q_3$, and subtracted from $Q_1$, and data points greater than the former and less than the latter are removed. The percentiles for Interesting and Artistic responses, which were the basis to obtain the IQR, are shown on Table 6.3. Using the IQR rule, neither Artistic nor Interesting scores by type of character appeared to have outliers.

*Table 6.3*. Percentiles and outliers, using the IQR rule, for the manipulation check questions by type of character.

| Type of story characters | Manipulation check | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 5 | 10 | **25** | 50 | **75** | 90 | 95 | < | > |
| Transgender | Interesting | 2.45 | 3.00 | **4.00** | 5.50 | **7.00** | 7.00 | 7.00 | -.50 | 11.5 |
| | Artistic | 2.00 | 2.00 | **3.00** | 4.00 | **5.00** | 7.00 | 7.00 | 0.00 | 8.00 |
| Cisgender | Interesting | 1.45 | 2.00 | **2.00** | 4.00 | **5.00** | 6.10 | 7.00 | -2.5 | 9.50 |
| | Artistic | 1.00 | 1.00 | **2.00** | 3.00 | **4.00** | 5.20 | 7.00 | -1.0 | 7.00 |

A 2x2 mixed ANOVA tested differences in the two manipulation check questions, by type of character (within-subjects factor) and medium in which the story was presented (between-subjects factor). Table 6.4 presents the mean scores of the questions and standard deviations of these questions. There were significant differences in how interesting, $F(1, 26) = 12.10$, $p = .002$, $\eta 2 = .31$, and how artistic, $F(1, 26) = 6.27$, $p = .019$, $\eta 2 = .19$ the stories were, in terms of type of character in the story. That is, participants rated the stories with transgender characters as more interesting and more artistic than those with cisgender characters. On the other hand, participants did not differ in these ratings based on the medium in which the story was presented, either web-series or short story, $F(1, 26) = 6.44$, $p = .117$. These results show that the stories were not perceived as equivalent by the participants, suggesting that the type of character might play a role in their engagement with the stories. An additional analysis controlling for both the Artistic and Interesting manipulation check questions is reported in the test of the first hypothesis.

*Table 6.4.* Manipulation check questions by type of character and medium of the story

| Condition | Repeated measures | Interesting | | Artistic | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| Web-series | Trans character | 5.86 | 1.51 | 4.64 | 1.90 |
| | Cis characters | 3.93 | 2.01 | 3.29 | 2.09 |
| Short story | Trans character | 4.71 | 1.38 | 3.57 | 1.08 |
| | Cis characters | 3.71 | 1.26 | 3.36 | 1.08 |

### *6.3.3. Outliers of main measures*

Data was explored for the two measures involved in the hypotheses, Experience-taking and Transgender congruence. Given that research has shown that Transportation is an essential mediator in the relationship between fiction and social cognition (e.g. Bal & Veltkamp, 2013), this variable was also examined to include it in a supplementary analysis.

Distributions were examined for the whole sample for Congruence, and by type of character for Transportation and Experience-taking. The Shapiro-Wilk statistic indicated a normal distribution for four out of these five measures, except Transportation for trans characters, $p = .047$. The IQR rule was applied as explained above. Two outliers were detected for Transportation for transgender characters, below 3.21, and were removed from subsequent analysis.

### *6.3.4. Correlations between measures*

A correlation analysis was conducted between the variables related to fiction exposure and transgender media representation, Transportation, Experience-taking, Generalised affect, and Transgender congruence. Results are displayed in Table 6.5.

Results suggest that long-term exposure to print, measured by the ART, was linked to a positive assessment of transgender media representation. Affect in terms of Anxiety correlated positively with quality of transgender representation, and negatively with the personal importance ascribed to this representation. In other words, those who rated themselves as more anxious tended to report that transgender media representation was of lower quality, and considered that media representation was more personally important to them.

Anxiety also correlated positively with Congruence, suggesting that participants who described themselves as less anxious also showed higher transgender congruence. Affect in terms of Happiness was positively correlated with Experience-taking for transgender characters, that is, a higher ability to simulate an ingroup character's mindset.

As expected from previous findings in the literature, the measures of Transportation and Experience-taking were correlated with one another when they addressed the same story (e.g. Transportation and Experience-taking were correlated for the *Darwin* story). This result is

supported by Sestir and Green (2010), who stipulated that Transportation overlaps with identification (i.e. experience-taking) because both variables involve increasing perceived verisimilitude of a narrative.

*Table 6.5*. Correlations between fiction exposure and transgender media representation, Transportation, Experience-taking, Generalised affect, and Transgender congruence

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. ART | - | | | | | | | | | |
| 2. Quality trans rep | -.281 | - | | | | | | | | |
| 3. Importance trans rep | .044 | -.142 | - | | | | | | | |
| 4. State of trans rep | **.418*** | .297 | -.188 | - | | | | | | |
| 5. Exp-tak trans characters | -.270 | -.186 | .235 | -.121 | - | | | | | |
| 6. Transportation trans characters | .009 | -.274 | .326 | .010 | **.758**** | - | | | | |
| 7. Exp-tak cis characters | .017 | .166 | -.016 | .164 | .096 | .127 | - | | | |
| 8. Transportation cis characters | .185 | -.044 | -.020 | .274 | .014 | .275 | **.771*** | - | | |
| 9. Affect: Sad=1, Happy=7 | -.188 | .206 | -.069 | -.166 | **.459*** | .290 | .202 | .198 | - | |
| 10. Affect: Anxious=1, Calm=7 | .029 | **.392*** | **-504**** | -.205 | .128 | .167 | .092 | .234 | -.105 | - |
| 11. TIC | .214 | .160 | -.370 | .178 | -.117 | -.026 | -.297 | -.220 | .143 | **.459*** |

* Correlation significant at .05 (2-tailed)

** Correlation significant at .01 (2-tailed)

### *6.3.5. Test of hypotheses*

A repeated measures ANCOVA (Field, 2012; Thomas et al., 2009) was conducted to compare the experience-taking scores within subjects upon exposure to transgender characters and to cisgender characters. It was also expected that Experience-taking would depend partly on Congruence. The repeated measures (RM) ANCOVA was chosen over conducting a moderation in multiple regression, because the multiple regression analysis tends to omit repeated measures. The RM ANCOVA was also chosen over regression analysis with repeated measures, because the latter tends not to include covariates (e.g. Donner, 1984; Van den Noortgate & Onghena, 2006). According to Thomas et al. (2009), adding a non-time-varying covariate to a repeated measures analysis does not necessarily alter the main effects of the within-subjects factors, but the covariate can interact with the repeated measures.

In this study, the within-subjects factor was type of character, which had two levels: transgender and cisgender characters. The repeated measures were Experience-taking and Transportation, although only Experience-taking was included in the hypothesis; Transportation is examined in Section 6.3.6. The format of the story was included as a between-subjects factor; the literature (e.g. Black & Barnes, 2015) suggests that there would be no difference in outcomes based on the media in which the story is presented, but in this study there was a significant difference in how interesting the story with trans characters was perceived between the web-series and the short story conditions. Congruence was included as a potentially interactive variable and its scores were centred before the analysis, as recommended by Schneider et al. (2015) and Thomas et al. (2009).

The means and SD for the three variables involved in the hypotheses are displayed on Table 6.6. Experience-taking values (repeated measure) are shown by type of character and medium in which the story is presented, while values for Congruence (one-time measure) are shown for the whole sample.

*Table 6.6.* Mean scores and SD of experience-taking by type of character and medium of the story

| Measure | | Medium of story | Mean | SD |
|---|---|---|---|---|
| Experience-taking | With transgender characters | Web-series | 5.97 | .91 |
| | | Short story | 5.16 | 1.03 |
| | | Total | 5.57 | 1.04 |
| | With cisgender characters | Web-series | 3.32 | 1.86 |
| | | Short story | 4.81 | .98 |
| | | Total | 4.07 | 1.64 |
| Congruence | | Total | 3.99 | 1.37 |

The first hypothesis of this study was that *Encountering transgender characters in a story will elicit higher experience-taking, compared to encountering cisgender characters, irrespective of the medium in which the story is presented.* Results of the repeated measures analysis showed that there was a significant association between Type of character and Experience-taking, $F(1, 26) = 25.70$, $p < .001$, $\eta p^2 = .49$, meaning that experience-taking was higher when participants read or viewed a story with transgender characters than one with cisgender characters. Therefore, Hypothesis 1 was supported.

Two additional analyses were carried out in relation to Experience-taking. The first analysis examined the potential effect of the medium in which the story was presented. Results showed that Type of media had no effect on Experience-taking, $F(1, 26) = .81$, $p = .375$, but the former factor interacted with Type of character, $F(1, 26) = 15.18$, $p = .001$, $\eta p^2 = .36$. Figure 6.2 shows that Experience-taking was higher when the story included transgender characters, with the highest score reported in the web-series condition. Conversely, when the story showed cisgender characters, Experience-taking was higher in the short story condition than in the web-series one.

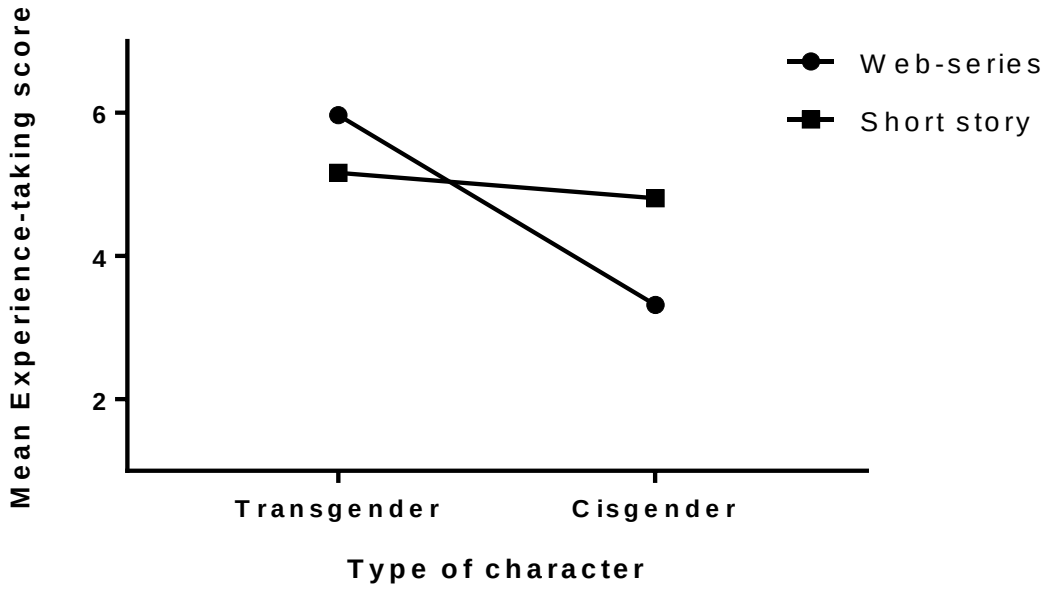


*Figure 6.2.* Experience-taking scores by type of character and by medium in which the story was presented.

The second supplementary analysis for Experience-taking included controlling for Artistic merit and Interest elicited by the stories, given the significant differences in these measures. Interest and Artistic were analysed as time-varying covariates in the interaction reported above. This analysis showed that Interesting had indeed a significant effect on Experience-taking $F(1) = 20.92$, $p < .001$. However, after controlling for this covariate, the interaction between Type of character and Medium in which the story was presented remained significant, $F(1) = 14.654$, $p = .001$. As for Artistic, results showed that this variable had no effect on Experience-taking $F(1) = .008$, $p = .928$.

The second hypothesis of this study was that *Congruence will moderate the effect of type of character on experience-taking.* The repeated measures ANCOVA showed no significant interaction between Type of character in the story and Congruence to influence Experience-taking, $F(1, 25) = 1.21$, $p = .281$. In other words, identity congruence was not involved in the degree of simulation of the characters' mindset, whether these characters were transgender or cisgender. Therefore, Hypothesis 2 was not supported.

## 6.4. Discussion

Few studies have addressed how transgender audiences relate to media and fiction, in general and when it portrays characters representing their own group (Cavalcante, 2013; Soto-Sanfiel et al., 2014; Trans Media Watch, 2010). This study sought to fill in this gap in the literature, by examining different aspects of transgender individuals' engagement with media and fiction. These aspects included their long-term exposure to print, their perception of media transgender

representation, and whether congruence was a moderator in their identification with fictional characters, whether these were transgender or cisgender.

### *6.4.1. Test of hypotheses: Experience-taking and congruence in encounters with fictional characters*

Hypothesis 1 of this study proposed that encountering transgender characters in a story would elicit higher experience-taking in participants, compared to cis characters. This hypothesis was supported, in accordance with findings by Kaufman and Libby (2014), given that the audience and the characters shared a salient ingroup membership.

A starting point for experience-taking, or identification, as labelled by Sestir and Green (2010), is that audience members like the character and perceive similarities between the character and themselves. Furthermore, experience-taking entails a merger of the self and the other, in which readers and viewers give up their self-awareness and adopt the perspective of a character instead (Smith, 2014). This merger occurs more easily when the self and the other have salient traits in common; in the case of this study, the salient trait was a non-normative gender identity. Soto-Sanfiel et al. (2014) also provided evidence that group membership is key to relating to characters: Their study using audio-visual works depicting lesbian characters showed that sexual orientation influenced the magnitude of appreciation (a positive evaluation of a story beyond mere enjoyment) of these works; that is, gay people appreciated these works more than heterosexual people.

Another relevant finding on experience-taking in this study was its positive correlation with transportation for the two stories presented to each participant. Transportation measures immersion in a story while experience-taking is specific to the character, and the influence of transportation may not necessarily translate into experience-taking (Sestir & Green, 2010). Hence, conceptually, experience-taking supplements the information provided by transportation, as the former relates not only to the degree of engagement with the story but to the vantage point from which this engagement occurs. This finding, too, was expected, given that the protagonists of the story, and the attachment they evoke in the audience members, have a critical role in how invested individuals become in the narrative (Green & Brock, 2000).

That participants identified with a character with whom they shared a relevant trait should be placed into a wider context. One participant in the short story condition contacted the researcher at the end of the study. The participant's comment was that they indeed identified with the protagonist of the story, a transgender woman, but in a negative way, because some of the dialogues reflected the lack of awareness about what being transgender means, even among the transgender community itself. Simulating a character's mindset based on ingroup membership

may not always be an enjoyable experience if one belongs to a group that is consistently misrepresented.

Hypothesis 2 of this study, on the other hand, was not supported. This hypothesis stated that transgender congruence would moderate the effect of type of character on experience-taking. This hypothesis was proposed based on Kaufman and Libby's (2014) assertion that experience-taking requires a reduced salient identity; here it was examined whether the quality of this salient identity (i.e. degree of congruence) was involved in the participants' engagement with the characters. Simulation of a characters' mindset was higher when the participant and the character shared group membership, independently of the participants' self-perception in terms of their ideal self vs. their actual self.

### *6.4.2. Media, representation, fiction exposure and generalised affect*

Participants in this study provided a snapshot of their perceptions of media and fiction, in general and related to transgender issues. Queries of fiction and general media exposure showed that participants engaged occasionally (a few times a week or a month), with fiction in the form of books and movies. Participants also leaned towards a negative evaluation of transgender representation in the media, with a slight advancement towards "regulated" roles, echoing the negative evaluation reported by transgender interviewees in the 2010 Trans Media Watch survey.

Participants also provided information regarding self-perception, through the measures of congruence and generalised affect (i.e. being a happy or sad, and calm or anxious person). These measures were examined in relation to the participants' media consumption. Results showed that a positive evaluation of transgender media representation was linked to long-term exposure to print, measured by the Author Recognition Test, which is considered a proxy for reading habits (Stanovich & West, 1989; Mar et al., 2006). This association suggests that the more reading materials the individual encounters, the more likely they are to find narratives that represent ingroup (or ingroup-adjacent) members accurately. Regarding congruence, this variable did not correlate with any other measures except for anxiety, where higher congruence was linked to describing oneself as less anxious, in line with findings from Kozee et al. (2012).

Generalised affect correlated with aspects of perceptions of media and fiction, congruence, and experience-taking. Anxiety was associated with the quality of transgender representation, and with the personal importance ascribed to this representation. Specifically, those who rated themselves as more anxious tended to report that transgender media representation was of lower quality, and considered that media representation was more personally important to them. Anxiety also correlated with congruence, as mentioned above. Happiness correlated positively with experience-taking with transgender characters, suggesting that simulating an ingroup character's mindset may be linked to generalised positive affect. While causal links cannot be

established in these relationships, these findings align with previous studies that show the involvement of emotions in fiction engagement (Djikic et al., 2009a, 2009b). Research should continue to explore the relationship between media representation of minorities and the emotions it elicits in individuals that belong to these minorities.

### *6.4.3. Evaluation of the stories*

The stories were chosen to match each other with respect to criteria such as type of character, estimated length/time to be spent reading or viewing the story, authorship by an ingroup/outgroup member, and availability to the general public. However, participants did not rate these stories as equivalent. The web-series story with transgender characters, *Her story*, was rated as more artistic and more interesting than the web-series with cisgender characters, *Darwin*. In addition, *Her story* was rated as more interesting than *To finish the row*, the short story with transgender characters. This *web-series* with transgender characters obtained the highest experience-taking scores of all four stories.

The divergent responses from participants to the stories with transgender and cisgender characters may be partially explained by type of character. Furthermore, the differences between the stories with transgender characters may be related not to the format of the story, but to other aspects that make it of higher quality. For instance, *Her story* was nominated for a 2016 Primetime Emmy Award as Outstanding Short Form Drama or Comedy series (the other TV shows nominated in this category were not used in this study, because, while they fit the criterion of showing cisgender characters only, they did not match the web-series' episodes in length). The short stories were chosen to match running times and themes of the web-series, but they fell in the category of genre fiction rather than literary fiction (Djikic et al., 2009; Kidd & Castano, 2013), a narrative style with simpler characters and plots. These differences between stories featuring transgender characters support the argument (GLAAD, 2017b) that the presence of a low-status character in a story is not enough for low-status group members to feel identified with, or represented by this character. Transgender characters "must be crafted with thought, attention, and depth" (GLAAD, 2017b, p. 3), which implies a portrayal complexity that is already afforded to most characters in literary fiction (Oatley, 2016).

Comparing the stories with cisgender characters only, the opposite trend to transgender characters emerged: The short story seemed to elicit higher immersion than the web-series. The stories with cis characters easily resembled the media content that transgender audiences usually encounter, inasmuch that transgender characters and experiences were absent. Experience-taking was higher in the cis-character short story, *Colours*, where a woman experiences both positive and negative emotions about her romantic partner in response to a song and related memories. This short story was more intimate, and gave more relevance to emotional content,

than its web-series counterpart, *Darwin*, which showed a conventional vantage point of a cisgender and presumably heterosexual white man who juggles family and business. *Darwin* obtained the lowest experience-taking score from all four stories, which suggests there was little merger between the participants' self and the protagonist's self.

An additional analysis showed that the interest elicited by the stories had a significant effect on participants' experience-taking, but the interaction between condition and type of character remained significant when this interest was controlled for. These differences indicated by the interaction support the findings that people can become emotionally invested in their relationships with characters (Barnes, 2015). This investment is based on emotional content (Djikic et al., 2009a), regardless of the medium in which the story is presented (Black & Barnes, 2015a).

### *6.4.4. Limitations and future studies*

The first limitation of this study was addressed above, that is, the fact that the stories were not equivalent. Furthermore, as discussed elsewhere (Chapters 4, 5, and 7), it is difficult to establish which aspects of the story, besides the characters, influenced the participants' responses. Future studies should ensure the equivalency of the stories with and without transgender characters, in terms of style, genre, plot, and length.

A second limitation of this study relates to the sample. Besides the small sample size, participants lived in potentially differing environments. This was an online study, which made it possible to reach a wider sample of transgender participants outside clinical contexts and support groups (Kuper et al., 2011) and from at least three English-speaking countries. However, the questionnaire did not include measures of participants' access to transgender-inclusive environments (e.g. community support groups, institutional or legal recognition of their gender identity) and media (e.g. access to books, TV channels, or films that include transgender narratives). These measures should be contemplated when enquiring about opinions on quality and quantity of transgender media representation. A related limitation was that participants were asked about the frequency of exposure to fiction and media, but the kinds of contents they preferred were not ascertained. Personal preferences in media consumption must also be considered in future studies.

A third limitation concerning a potential demand effect arose because the recruitment ad for this study specified that transgender participants were sought. Given the focus of the research question, the call for participants was needed to directly state that transgender individuals were sought. Further studies, however, should work towards minimising the salience of the transgender identity, for instance, by focussing on other characteristics that may be personally salient for the participant. Information on other identities that are relevant for participants,

besides their gender identity, may also contribute to understanding how they identify with characters who are not transgender. Alternatively, this understanding can also be applied to how cisgender audiences identify with transgender characters.

In addition to measuring congruence, other self-concept measures should be examined in the future (e.g. Richter et al., 2014). In this study, congruence seemed to be unnecessary for experience-taking to occur, but it may be both involved in and influenced by longer-term fiction exposure (Djikic et al., 2009b; Mar et al., 2006; Richter et al., 2014; Schmidt & Retelsdorf, 2016). Researchers have yet to establish whether merging one's sense of self with that of a character can influence people's goals, emotions, decision-making, and behaviours (Hawkins & Scherr, 2017; Kaufman & Libby, 2014; Smith, 2014) in the long term. Additionally, measures of perceived ingroup media representation for minorities should be developed (e.g. expanding on Clark's [1969]stages of representation) to better capture potential influences of exposure to these representations and changes in self-perception.

One limitation for the scope of these findings is the high number of participant drop-out, and the low number of participants in the final sample. Yet these low numbers also indicate an issue that cisgender researchers should address when working with transgender populations. The exercise of caution by potential participants is due to at least three reasons. One is that transgender people face high rates of online harassment, not only as individuals but also as organised groups (e.g. Hughes, 2018), thus the concerns regarding the use of their digital data, anonymity, and confidentiality are amplified for this population (Levitt & Ippolito, 2014b). A second reason for caution is research fatigue. All transgender-related forums visited during participant recruitment for this study had a sub-forum for researchers to post calls for participants. These forum areas shows that transgender individuals are constantly sought for research purposes, which mostly address clinical/pathological issues. Third, researchers still hold misunderstandings regarding how to approach gender identity (a concern voiced by transgender individuals in the forums), and these misunderstandings nonetheless can become part of the research literature. For instance, in the context of norm perception, Tankard and Paluck (2016) mentioned that institutions add "transgender" in addition to "male" and "female" in data collection forms, and this addition was a way to normalise diverse gender identities. In contrast, this distinction perpetuates the othering of transgender individuals, while a more inclusive distinction is "male-female[19]" and "cisgender-transgender" (Reisner et al., 2014). While this study, and the thesis as a whole, took measures for a sensible approach to transgender issues, it nonetheless would have benefitted from previous training or formal guidance on the subject. Cisgender researchers working with transgender participants must consider such preparation.

[19] Adding "non-binary" to these options is also recommended (Kuper et al., 2011).

Lastly, it is strongly suggested that studies about fiction compare responses from both high-status and low-status groups. Soto-Sanfiel et al. (2014) showed that heterosexual and homosexual audience members differ in their appreciation of narratives representing the latter, but these narratives nevertheless help reduce prejudice in heterosexual individuals and provide models for homosexual individuals. Future studies should explore this distinctive feature of fiction that is not found in other forms of indirect contact, the self-other overlap (Sestir & Green, 2010) between audience members and characters, and how it can benefit normative and non-normative audiences.

### *6.4.5. Conclusions*

Results from Study 4 showed that engagement with a story stemmed from the characters' shared group membership with the audience members, and independently of broader self-perception processes. In line with previous research, participants reported higher experience-taking when they encountered characters with whom they shared a key trait, being transgender, compared to when they encountered cisgender characters. Participants' self-perception, measured by congruence, did not moderate the relationship between the characters' group membership and the participants' degree of experience-taking.

Additional measures in this study showed that lower congruence correlated with higher anxiety, while higher anxiety correlated with perceived lower quality of transgender media representation. Most participants reported a negative evaluation of transgender evaluation in the media, but those who reported a more positive evaluation also tended to report more exposure to print. Positive affect was linked to higher congruence, and higher experience-taking. Given that higher congruence is related to well-being in transgender individuals (Kozee et al., 2012), these links between fiction exposure and well-being in minorities should be explored further. Within the framework of this thesis, findings from this study add to the evidence that a story well done, with sensible characters, can be beneficial for both high-status and low-status groups.

## A LOOK AHEAD: IMPLICIT TRANSNEGATIVITY AND INTERGROUP ANXIETY

The next chapter presents the last study of this thesis. Study 5 returns to the framework of fiction as mediated contact, with cisgender individuals as the audience for stories featuring transgender characters. Like its four predecessors, this study examined both characteristics of the reader and engagement with the story as intermediaries in the relationship between fiction exposure and prejudice.

Study 5 inspected fictional narratives under the light of contact-related approaches, implicit intergroup attitudes and intergroup anxiety, involving cisgender participants and transgender fictional characters. Following this last study, the general discussion (Chapter 8)

brings together the main findings of the five studies reported in this thesis, to highlight conclusions, limitations and research possibilities regarding fiction and prejudice reduction towards sexual and gender minorities.

# CHAPTER 7

# STUDY 5. TRANSGENDER-RELATED FICTION AND ITS ASSOCIATION WITH IMPLICIT AND EXPLICIT TRANSNEGATIVITY: THE MEDIATING ROLE OF TRANSPORTATION AND INTERGROUP ANXIETY

> She doesn't have to like you, but she does need to speak to you kindly and to welcome you into our family. She needs to know that's what decent people do.
>
> —Suzi Chase*, What decent people do*

It is not necessary to like people in order to respect them. That is what the character quoted above is saying: A man thinks his daughter does not have to like his girlfriend, a transgender woman, in order to be respectful of her. This story was read by some participants in the study reported in this chapter, a study indeed concerned with liking others. Specifically, Study 5 investigated how attitudes are mediated by emotions. Contact theory, including mediated contact, has established that high-status group members who have positive emotions towards low-status group members are motivated to show positive attitudes and display prosocial behaviour towards the latter group (Joyce & Harwood, 2014).

The aim of Study 5 was to test the association between exposure to transgender characters and reduced transnegativity. To do so, this study focussed on emotions, which research characterises as the most effective mediator between contact and reduced prejudice, and between fiction and enhanced social cognition (Chapters 2 and 3). Contact research focussed on one particular emotion, intergroup anxiety. Fiction research involves a wider range of emotions which are examined as a function of immersion into the story, or transportation. Study 5 thus examined how these two constructs come together in the use of fiction as mediated contact. Furthermore, a secondary aim of this study was to inspect participants' transnegativity which may manifest outside their conscious efforts, that is, implicit transnegativity.

The first section of this chapter supports these aims by addressing explicit and implicit transnegativity, and findings regarding transportation and intergroup anxiety in fiction research. The next section of this chapter develops the three hypotheses of this study. It was expected that exposure to transgender fictional characters would be linked to lower explicit and implicit transnegativity, compared to a control story (Hypothesis 1); and that intergroup anxiety (Hypothesis 2), and transportation (Hypothesis 3) would mediate this association. The method is then described, in which adult participants came into the lab to either view or read a story with transgender characters, or read a science article about space exploration. The last section of this

chapter discusses the main findings of this study against relevant literature, reviews its limitations and builds upon them to improve future research about fiction and transnegativity.

## 7.1. Fiction, implicit transnegativity and intergroup anxiety

### *7.1.1. Explicit and implicit transnegativity*

Among sexual and gender minorities, transgender people are one of the most marginalised populations around the world (Amnesty International, 2001; Clarke, Ellis, Peel & Riggs, 2010; Flores, 2015). "Transgender" is an umbrella term that describes individuals whose gender identity does not conform to the social expectations for the sex they were assigned to at birth (Gressgård, 2010); this term includes non-binary and intersex individuals. Transgender people suffer high rates of prejudice and discrimination from cisgender people, on the basis of gender nonconformity, that is, on what is considered a violation of traditional gender expectations assigned to males and females (Elischberger et al., 2016; Hill and Willoughby, 2005; McDermott et al., 2018; Tebbe et al., 2014).

Prejudice towards transgender people, or transnegativity (McDermott et al., 2018), has been shown to be prevalent in everyday life. Research shows that, due to their gender identity, transgender individuals are prevented from accessing employment opportunities, legal protection, and adequate health services (Greene, Benner, & Pear, 2018; Reisner et al., 2014; Shah & Radix, 2016; Wodda & Panfil, 2014). This exclusion, in turn, leaves this population at a high risk of stigmatisation, physical and sexual abuse, and becoming hate crime targets (Bachmann & Gooch, 2015; Barrientos et al., 2011; Broockman & Kall, 2016; Lee & Kwan, 2014; Miller & Grollman, 2015). Transnegativity has also been found to be reflected and reinforced by the media (Trans Media Watch, 2010; Solomon & Kutz-Costes, 2018), which tends to depict transgender characters as objects of terror and perversion, sympathy, or ridicule (Levasseur, 2015; Miller, 2012; Ryan, 2009; Whitney, 2018a, 2018b).

Most studies of transnegativity have measured explicit attitudes, that is, prejudicial cognitions, emotions, and behaviours that participants consciously experience and report deliberately. In contrast, implicit attitudes in the study of transnegativity have been less explored. Implicit attitudes are automatic responses that occur outside of the individual's awareness (Burke et al., 2015; Lai, Hoffman, & Nosek, 2013). Evidence so far suggests that implicit attitudes arise from a combination of personal experiences and the normative environment (Karpinski & Hilton, 2001; Jost et al., 2009; Hinton, 2017). From this combination, an individual can internalise an association regarding and object, which may not align with the individual's explicit belief about this object (Blanton & Jaccard, 2015); these associations may go undetected by self-report measures. For instance, three experiments by Strick et al. (2011) demonstrated that associating energy drinks and household products with humorous images enhanced the customers' liking and

choice for these products, although the explicit memory of these products was impaired. For this reason, work on Media Psychology has stressed the potential of implicit attitudes to provide valuable information about the audiences' responses to the media, including fiction (Blanton & Jaccard, 2015; Payne & Dal Cin, 2015).

Specific to the research of implicit transnegativity, most studies have used the Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998). The IAT is a computer-based task which registers the speed with which participants make associations between target concepts (e.g. faces of Black and White faces) and positive and negative evaluations (e.g. "Good", "Bad"). There is no consensus yet, however, on how to best measure implicit transnegativity. Wang-Jones et al. (2017) used the target concepts "transsexual" versus "biological" referred to males and females. West et al. (2017) used the target concepts "male"-"female" versus "trans"-"transgender", associated with the planetary gender and transgender symbols. Juge (2016) and Jellison et al. (2016) asked participants to associate positive and negative evaluations with "gender normative" versus "transgender", and "transgender male" versus "cisgender male", respectively. Both sets of target concepts were illustrated with photos of men dressed in traditionally masculine clothes, such as pants (i.e. gender-conforming), or traditionally feminine clothes, such as a dress (i.e. gender-nonconforming).

Juge (2016) recognised the difficulty of representing transgender people accurately through the IAT. For instance, appearance is not a marker of transgender identity (Kuper et al., 2011), and participants may not be familiar with terms like "cisgender", or the transgender symbol (West et al., 2017). The alternative proposed by Juge (2016), supported by previous research, was to measure attitudes towards gender nonconformity as proxy of transnegativity. The present study adopts this approach, assuming that implicit evaluations of gender nonconformity are linked to attitudes towards transgender individuals (Elischberger et al., 2016; Hill and Willoughby, 2005; McDermott et al., 2018; Tebbe et al., 2014).

### *7.1.2. Fiction as indirect contact*

Research shows that prejudice can be reduced by promoting intergroup contact (Pettigrew & Tropp, 2006), that is, direct encounters between an ingroup (e.g. a high-status group) and an outgroup (e.g. a low-status group). In the case of cisgender-transgender relations, however, there are two difficulties in achieving direct contact (Hoffarth & Hodson, 2018). The first one is opportunity: Estimates indicate that transgender individuals make up less than 1% of the general population (Vijay, 2016). There is little chance for spontaneous contact, as suggested by a GLAAD (2017b) nation-wide survey in the United Stated, which showed that 84% of Americans said they did not personally know a transgender person. The second difficulty is that contact can be threatening or harmful for transgender individuals (Levitt & Ippolito, 2014b; Wodda & Panfil,

2014), and hence they may conceal their gender identity from others, especially from those they do not know very well. Even in brief social encounters, cisgender individuals can respond with prejudice or violence towards their transgender counterparts, particularly transgender women (Lee & Kwan, 2014; Miller & Grollman, 2015).

When direct contact cannot be promoted, researchers employ indirect contact as an alternative strategy to reduce prejudice (Brown & Paterson, 2016). One form of indirect contact that has gained attention in the last decade is fiction exposure (Johnson, 2012, 2013; Vezzali et al., 2012; Vezzali et al., 2015). Fiction entails an emotional and cognitive simulation of selves and social worlds (Mar & Oatley, 2008). It also induces new viewpoints and emotional reactions (Djikic et al., 2009a), and is a "safe haven" (Johnson, Jasper et al., 2013) for individuals to explore themes that may be otherwise threatening to them. Of value to illustrate the intersection between fiction and contact, research has shown that exposure to complex representations—i.e. negative and positive aspects—of outgroup members can decrease ingroup members' negative affect towards the outgroup, more than exposure to only positive aspects (Birtel & Crisp, 2012; Brauer, Er-rafiy, Kawakami, & Phills, 2012). Fiction can provide complex representations of outgroup members through the story characters (Kidd & Castano, 2016).

There is increasing evidence that fiction exposure is associated with lower prejudice towards different target groups. Studies have shown that reading fiction improves attitudes towards immigrants (Vezzali et al., 2013), gay people and refugees (Vezzali et al., 2015), and Arab-Muslims. Attitudes towards this latter group were found to improve via enhancing empathy (Johnson, 2013), and decreasing intergroup anxiety (Johnson, Jasper, et al., 2013). A field study by Paluck (2009) showed that a radio soap opera, about post-genocide reconciliation in Rwanda, influenced change in listeners' perceptions of social norms and intergroup-related attitudes and emotions. In the realm of gender and sexuality, a literature review by Abad and Pruden (2013), and a study by Fong, Mullin, and Mar (2015) suggested that individuals with long-term exposure to fiction are more likely to challenge gender stereotypes (i.e. gender conformity), and endorse gender equality.

Regarding the effect of exposure to transgender fictional on transnegativity, the evidence is mixed. Both Hoffarth and Hodson (2018) and McDermott et al. (2018) found that exposure to transgender characters via TV or film was linked to lower transnegativity; respectively, when contact was spontaneous (i.e. reported in an online survey) or prompted by the researchers (i.e. a specific film shown in a controlled environment). In another study, Solomon and Kutz-Costas (2018) compared responses between participants who viewed TV series clips showing positive portrayals of transgender women and those who viewed negative ones. These researchers conducted pre-post measures of transnegativity, and found that participants who viewed the positive portrayals did not report attitudinal change, but those exposed to negative portrayals

reported significantly more negative attitudes towards transgender people afterwards. The finding from this study, as stated in Chapter 3 and in line with results from Study 1 (Chapter 4), suggests that negative depictions of a stigmatised group might initially elicit negative reactions in audience members. In this sense, the audience might need longer exposure to positive portrayals of stigmatised group members, to overcome the negative perception of this group.

### *7.1.3. The role of emotions in fiction as contact: Transportation and intergroup anxiety*

Studies have shown that fictional narratives and other media content can contribute to reduce transnegativity. Through experiments (Schiappa et al., 2005), and surveys (Hoffarth & Hodson, 2018), research shows that media exposure to complex representations of transgender individuals, either fictional characters or real-life individuals, is associated with lower transnegativity. Research by McDermott et al. (2018) showed that these positive effects of exposure to transgender characters can be enhanced further by combining fiction with direct contact. Overall, these studies have framed the relationship between cisgender audiences and transgender characters as parasocial or vicarious contact, indicating an indirect encounter between the two groups. Yet beyond such an encounter between "us" and "others", fiction allows audiences to immerse themselves in the fictional world and the characters' experiences (Oatley, 2016b; Sestir & Green, 2010).

Researchers have shown that the emotions elicited by fiction can have a powerful effect in attitude change. This impact of fiction on attitudes has been found to be stronger than that of logical arguments from non-fiction (Bal & Veltkamp, 2013), and knowledge about the outgroup in contact (Pettigrew & Tropp, 2008). Immersion in a story, termed transportation (Green & Brock, 2000), has been identified as the main condition that influences individuals' attitudes when they engage with fiction (Green, Kass, Herzig, Feeney, & Sabini, 2008; Quintero & Sangalang, 2016). Transportation has been shown as a crucial mediator in the relationship between fiction and prejudice reduction (Johnson, 2013). Transportation has been found to increase empathy (Bal & Veltkamp, 2013), likelihood of prosocial behaviour (Johnson, 2012), and persuasion (Quintero & Sangalang, 2016). Furthermore, low levels of transportation can also have the actively negative effects of lower empathy for the characters (Bal & Veltkamp, 2013). It has also been established that individuals can be transported into a story regardless of the medium (print or film) in which the story is presented (Black & Barnes, 2015a; Green et al., 2008; Mar & Oatley, 2008).

Although less frequently included in research on fiction as contact, intergroup anxiety plays an important role in the process of reducing prejudice. Stephan (2014) defined intergroup anxiety as a set of emotions that individuals experience when they engage, or anticipate engaging, in intergroup interaction. Stephan (2014) stated that intergroup anxiety is only one of many factors in intergroup dynamics, with a small influence on broader elements such as personality-

related traits (e.g. SDO). Nevertheless, contact research has consistently established intergroup anxiety as the most important mediator between contact and prejudice reduction (Binder et al., 2009; Pettigrew & Tropp, 2008; Tausch, Hewstone, & Roy, 2009; Voci & Hewstone, 2003; West et al., 2015). This relationship seems to hold when contact is indirect, including when it occurs via fictional narratives.

Few studies have been conducted to examine the role of intergroup anxiety in the effects of intergroup fictional narratives. Shim et al. (2012) studied parasocial contact between Korean audiences with U.S. Americans through television. These researchers found that parasocial contact was more effective in reducing intergroup anxiety in Koreans who have not had direct contact with Americans. Additionally, lower intergroup anxiety was associated with positive behavioural intentions (e.g. willingness to work in the same team). In another study, Johnson, Jasper et al. (2013) found that decreased intergroup anxiety after reading a fictional story was linked to lower explicit prejudice towards Arab-Muslims, specifically in participants who reported low disposition to take others' perspective (see Perspective-taking, Chapter 3). These findings suggest that fiction can be more likely to reduce intergroup anxiety, and in turn reduce prejudice, in individuals who have had no previous contact with outgroup members, or those who have a low tendency to "put themselves in other people's shoes". The question here is the extent to which intergroup anxiety, as a contact-related factor, stands on its own as a mediator for fiction, or involves other factors related to the narrative itself (i.e. transportation) to exert an effect on prejudice reduction.

### *7.1.4. Overview of Study 5*

Research has shown that emotion is an important mechanism linked to attitudinal change after exposure to outgroup members, either real or fictional. However, little is known about this mechanism in the context of fiction as contact, that is, whether and how emotion-related mediators from fiction (transportation) and contact (intergroup anxiety) work together to reduce prejudice. Therefore, building on the background above, this study sought to investigate whether exposure to transgender fictional characters (trans-fiction from here on in) was associated with lower explicit and implicit transnegativity, compared to a control story (i.e. non-trans non-fiction). The role of transportation and intergroup anxiety was assessed in this potential relationship. To this end, participants read or viewed fictional stories with transgender women as protagonists, or read a science article about space exploration. The hypotheses were:

*$H_1$: Exposure to trans-related fiction will be associated with lower explicit and implicit transnegativity than exposure to a control story.* There are mixed findings regarding indirect contact and transnegativity reduction. Research in experimental (Schiappa et al., 2005) and correlational (Hoffarth & Hodson, 2018) settings shows that contact with transgender individuals via

mass media can help reduce explicit transnegativity, but other studies do not support this assertion (Solomon & Kutz-Costas, 2018). Similarly, the effects of direct and indirect contact with transgender people are inconclusive (Jung, 2016; West et al., 2017). This hypothesis thus tested whether exposure to transgender characters was associated with explicit and implicit transnegativity.

*$H_2$: Exposure to trans-related fiction will be associated with lower intergroup anxiety, which in turn will be associated with lower explicit and implicit transnegativity.* Contact literature positions intergroup anxiety as the strongest mediator in the relationship between contact and reduced prejudice (Stephan, 2014), and this role is maintained when contact is conducted through fiction (Johson, Jasper, et al., 2013; Shim et al., 2012).

*$H_3$: Higher transportation into trans-related fiction will be associated with lower intergroup anxiety, which in turn will be associated with lower explicit and implicit transnegativity.* This hypothesis acknowledges a common finding from both contact and fiction research, which shows that emotion is the most relevant mediator between the stimulus and socio-cognitive effects (Green et al., 2008; Quintero & Sangalang, 2016). It was then expected that transportation into the story would provide the grounds for lower negative emotions towards an outgroup characters (Bal & Veltkamp, 2013; Johnson, Jasper, et al., 2013; Shim et al., 2012). Less negative emotions about transgender people would, in turn, be associated with lower transnegativity (Stephan, 2014).

### *7.1.5. A note of caution on measuring implicit transnegativity*

This study assumes that implicit transnegativity reflects automatic associations (Blanton & Jaccard, 2015), based on the amount of exposure to transgender people –face-to-face or through a medium– rather than on sustained beliefs about transgender people. This is in line with previous research on implicit attitudes that has shown these attitudes may not reflect the extent to which individuals endorse evaluative associations, but rather reflect the associations to which individuals has been exposed in their environment. (Blanton & Jaccard, 2015; Karpinski & Hilton, 2001; Phills et al., 2011).

Although transgender issues have become visible to the public in recent years, terms such as “cisgender” (Wang-Jones et al, 2017) and “gender conforming” (Juge, 2013), or the planetary symbol of transgender (West et al., 2017), may still be novel or unusual for cisgender participants. If that is the case, and assuming here that implicit associations are a measure of exposure, the use of these words and symbols to measure bias may not tap into cisgender people’s overall experience with transgender issues (e.g. participants may not have learned to associate “cisgender” with “good”, as they may have learned to associate “transgender” with “bad”). Similarly, showing images of men in feminine clothing (Jellison et al., 2016; Juge, 2013) is not the same as showing images of transgender women; showing a gender non-conforming person is not

necessarily equivalent to showing a transgender person. Furthermore, the claim that the IAT measures prejudice in a valid and reliable manner has been questioned (Singal, 2017). Some studies suggest instead that the IAT measures a distinction based on ingroup-outgroup membership rather than prejudice (Ravnzwaaij, van der Maas, &Jan Wagenmakers, 2010). These critiques, however, are not meant to diminish the value of these and similar studies on implicit transnegativity. The present study is built upon some of these procedures.

The IAT in this study, as explained in the Method, showed images of men in traditionally feminine or masculine clothes, and the target concepts were "cis" and "trans" (the problem of associating these words with gender non-conformity is addressed in the Discussion). The words "transgender" and "trans" were mentioned in the fiction pieces presented to participants. Juge (2013) underscored the difficulty of measuring implicit transnegativity, suggesting that instead researchers examine attitudes towards gender non-conformity, as both constructs strongly associate to one another. Specifically, gender non-conformity appears to be a general stance that fuels transnegativity (Elischberger, Glazier, Hill, & Verduzco-Bake, 2016; Tebbe, Moradi, & Ege, 2014). Therefore, the images used in this study depicted gender non-conformity in men, not transgender identity; yet, for the purposes of this study, the measure of this IAT was referred to as Implicit transnegativity. Furthermore, this study focused on gender non-conformity in men, since men perceived to be breaking masculinity norms elicit more negative attitudes than women breaking femininity norms (Elischberger et al., 2016; Hill & Willoughby, 2005; Juge, 2013; Miller & Grollman, 2015).

## 7.2. Method

### *7.2.1. Participants*

The sample comprised 84 cisgender adults in the city of Sheffield. A post hoc sensitivity analysis ($\alpha = .05$, power = .80) showed that the minimum effect size detected by this study was .34, which is a large effect size (Selya et al., 2012). Participants were recruited through print ads posted in public libraries, community centres and other social groups in the city, and via the student and staff volunteer lists of the University of Sheffield.

Participants ranged from 18 to 84 years old, with a mean age of 42 (*SD* = 19.79). Over half of the sample were female (49, 58.3%) and leaning towards the left of the political spectrum (53.6%), mostly on the moderate left (28.6%). The majority of participants were White (73.8%), heterosexual (88.1%), reported an undergraduate or postgraduate education level (76.2%), and reported not having a religious affiliation[20] (75%). Over half of the participants (68%) reported

[20] This is a considerably higher percentage compared to that of the population of Sheffield. Per the 2011 UK Census data (the latest data available at the time of writing this thesis), 31.21% of the population of Sheffield

not knowing a transgender person. Table 1 presents the more detailed socio-demographic profile of the sample.

*Table 7.1*. Sociodemographic characteristics of the sample.

| N | 84 | |
|---|---|---|
| Mean age | 42.40 (SD=19.79). | |
| Gender[1] | Male | 41.7% |
| | Female | 58.3% |
| Ethnic background | White | 73.8% |
| | Other: Asian/Asian British, Black/African/Caribbean/Black British, Latin American/Hispanic/Mixed | 26.2% |
| Political position[2] | Far left | 3.6% |
| | Left | 21.4% |
| | Moderate left | 28.6% |
| | Centre | 17.9% |
| | Moderate right | 9.5% |
| | Right | 2.4% |
| | None | 15.5% |
| Religious affiliation | Yes | 25.0% |
| | No | 75.0% |
| Level of education | School | 23.8% |
| | Undergraduate | 29.8% |
| | Postgraduate | 46.4% |
| Field of education (If undergraduate or postgraduate) | Arts | 9.5% |
| | Social Sciences and Humanities | 36.9% |
| | Engineering and Computer sciences | 8.3% |
| | Natural sciences | 9.5% |
| | Medical sciences | 11.9% |
| Sexual orientation[1] | Heterosexual | 88.1% |
| | Gay/lesbian | 2.4% |
| | Bisexual | 8.3% |
| | No response | 1.2% |
| Knows transgender individuals | Yes | 32.1% |
| | No | 67.9% |

reported not having a religious affiliation. Source: https://www.nomisweb.co.uk/census/2011/qs208ew, retrieved July 2018.

[1] The option "Other" was included but not chosen by participants.
[2] The option "Far right" was included but not chosen by participants.

### *7.2.2. Design*

This study used a between-participants experimental design, in which participants were randomly allocated to one of three conditions. Two conditions consisted of a fiction piece featuring transgender characters, one was a series streamed online (web-series condition) and the other, two short stories (short story condition). The third condition, control, was a non-fiction written piece with content unrelated to transgender issues, namely, a science article about progress and obstacles in space exploration. Table 2 describes the materials used in the three conditions, generically referred to as "stories" in this chapter. All materials were available online at the time of writing this thesis.

The stories for the trans-related fiction conditions were chosen because they met the following criteria. The first one was that both the protagonists and the authors of these stories were transgender, to ensure a representation of the low-status group crafted by its own members. The second criterion was that the general theme of the stories related to everyday experiences of transgender women with cisgender friends and romantic partners. For the web-series, *Her Story*, episodes 1, 2, and 4 were chosen. Episode 3 contained derogatory language by a cisgender character towards transgender people, and it was skipped to avoid priming participants with an ingroup (i.e. cisgender) character's transnegativity. The three episodes shown followed the point of view of two transgender women, and the logical narrative remained when skipping episode 3. Regarding the short stories, two were chosen to attain equivalency in terms of content, time spent on the web-series (i.e. reading time), and availability online. Lastly, the control condition was a science article, also chosen to match availability and the length of the short stories, and to counter the two experimental conditions by addressing non-social themes with a non-fiction approach.

*Table 7.2.* Description of the materials used in the study for each condition

| Condition | | Title | Synopsis | Length (Estimated time spent)[1] |
|---|---|---|---|---|
| Trans-fiction | Web series | *Her Story* | Violet, a waiter, and Paige, an attorney, are two trans women living in Los Angeles. | Three 8-minutes long episodes (1440 seconds) |
| | Short story | *What decent people do, To finish the row* | In both stories, transgender women deal with romantic relationships. | 3724 words (1241 seconds) |
| Control | Science article | *Martians might be real. That's what makes Mars explorations more complicated* | An article about Mars exploration (language accessible to non-specialised readers) | 3134 words (1044 seconds) |

[1] For the short story and science article, the estimated time spent was calculated at a reading speed of three words per second (wps) at https://www.edgestudio.com/production/words-to-time-calculator

The random distribution of participants across the three conditions resulted in 32.1% (n = 27) of the sample allocated to the web series condition, 34.5% (n = 29) to the short story condition, and the remaining 33.3% (n = 28) to the control story.

### *7.2.3. Measures*

*Self-report measures*

The following list includes all measures used in this study, in order of appearance during the session, but the Implicit Association Test (IAT) –presented after the manipulation check– is described in detail in the following section. Only the socio-demographic questions and the Social Dominance Orientation measure were presented before the story. With the exception of socio-demographic questions and the IAT, all questions were answered using a 7-point response scale, with response options ranging from 1 = Completely disagree/Not at all, to 7 = Completely agree/Very much.

*Socio-demographic questions.* The first section of the questionnaire asked about age, gender, ethnic background, political orientation, religious affiliation, level and field of education, and sexual orientation.

*Social Dominance Orientation (SDO)* (Ho et al., 2015). An 8-item scale measured the extent to which individuals accept status hierarchies in which some groups are more advantaged that others. Half of the items are reverse-scored so that overall a higher score indicates higher SDO. Example items: "Group equality should not be our primary goal", "We should do what we can to equalize conditions for different groups" (reverse-scored). Across six samples, Ho et al. (2015) reported Cronbach's alpha between .78 and .98. In this study, it was .73.

*Transportation scale* (Green & Brock, 2000). This 11-item scale measures emotional and cognitive engagement with a story. Quintero and Sangalang (2016) used this scale to measure

immersion in a story for both print and film narratives. One example item is: "While I was reading the narrative/watching the program, I could easily picture the events in it taking place". Some items are reverse-scored. The aforementioned authors reported Cronbach's alpha of .77, while Johnson (2013) reported .82. In this study, it was .81.

*Manipulation check* (Djikic et al., 2009a). This manipulation check consisted of two questions that asked participants to rate how artistic and how interesting the story was. Djikic et al. (2009a) used these questions to make sure that any effect would be due to the experimental manipulation and not to the participant's perception of artistic merit or interest in the story.

*The Genderism and Transphobia Scale* (Tebbe et al., 2014). This 17-item scale assesses negative attitudes and propensity for violence towards transgender people with two factors: genderism and transphobia scale (GTS), and gender-bashing. A higher score indicates greater transnegativity. Juge (2013) and Jellison et al. (2016) used an implicit measure of transnegativity and added the GTS as a self-report counterpart. Only the GTS was used in this study. The five items that make up the gender-bashing factor were not presented to participants because these items referred to behaviours (e.g. "I have beat up men who act like sissies"). Considering the possibility that participants who enrolled in this study may not be highly prejudiced, after the tendency seen in the previous studies in this thesis (Chapters 4 and 5), these items were deemed likely to elicit socially desirable responses. Example item from the GTS: "People are either men or women". Tebbe et al. (2014) reported a Cronbach's alpha of .93 for the GTS factor. In this study, it was .94.

*Intergroup anxiety* (Tausch, Hewstone, & Roy, 2009). This scale contains six items that assess negative emotions that may arise during intergroup encounters. Three items were negative emotions, and three were positive; the latter were reverse-scored so that a higher score indicates higher levels of intergroup anxiety. The items on this scale were introduced with the question: "If you were to interact with a transgender person later today, how would you feel?" Item examples were "Awkward" and "Comfortable". Tausch et al. (2009) reported a Cronbach's alpha of .72. In this study, it was .84.

*Transgender acquaintances.* This study included one item that read: "Do you know someone who is transgender?" Response options were: "No" and "Yes". If yes, "How many people do you know?" Close-ended options for this last question ranged from "1-3" to "10 or more".

*Definition of transgender person.* One multiple-choice question tested the definition that the participant had of the term transgender: "What does transgender mean? You may choose up to three of the following answers". Out of the six answers provided, three were correct answers and three were incorrect. Correct choices were based on the definition of transgender by Walch et al. (2012), and incorrect choices were based on the transgender stereotypes reported by Gazzola and Morrison (2014). Following these standards, the correct answers were: "Feeling like the identity does not match the physical sex", "Expressing a male or female identity that is not

expected by other people", "Being born in the wrong body". Incorrect choices were "Being confused with who you are", "Being flamboyant", "Expressing that one is gay". Participants with three correct answers were classified as having a correct notion of what being transgender means; two or one correct answers classified as having an ambivalent notion; all incorrect answers were marked as incorrect notion.

*Purpose of the study*. The last question of the study was open-ended: "What do you think this study was about?" Responses were coded as "Participant was suspicious" when answers included the connection between exposure to trans-related fiction and transnegativity, even if using incorrect terminology (e.g. a derogative or outdated term for transgender people). Responses were recoded as "participant was not suspicious" when their answers did not propose a relationship between those two variables.

*Implicit measures: the Implicit Association Test (IAT)*

Implicit transnegativity was measured in this study using the Implicit Association Test (IAT), a computer-based test developed by Greenwald, McGhee, and Schwartz (1998). The IAT measures differential associations of target concepts with positive and negative attributes (Meissner & Rothmund, 2013). The recorded data includes response latencies in milliseconds and error rates. The IAT scores, or the *IAT effect,* is the difference in between mean response times to congruent (low-status groups + negative attributes) and to incongruent (low-status group + positive attributes) pairings of target concepts and attributes (Greenwald et al, 1998); a larger difference, resulting from higher response times for incongruent pairings, suggests a stronger negative bias towards one of the target concepts. In transgender-related research, the IAT has been used to examine the individuals' identification with their stated gender identity in transgender adults (Prunas & Hartmman, 2015) and children (Olson et al., 2015), and to measure transnegativity in cisgender samples (Jellison et al., 2016; Juge, 2013; Wang-Jones et al, 2017; West et al., 2017).

The IAT in this study established the attributes "positive" and "negative", and the target concepts "cis" and "trans". All stimuli corresponding to either attributes or concepts were presented in images. For the attributes, ten images were used: Five showing "positive" words (e.g. Joy), and five showing "negative" words (i.e. Hurt). Ten images were also used for the target concepts. For "cis", these images consisted of five stock photos of men dressed in traditionally masculine clothing (shirts, vests, suits, pants or jeans); for "trans", five photos of men dressed in traditionally feminine clothing (dresses and visible make-up). The "cis" set was gathered from an online search engine and photos had no attribution of authorship. The "trans" set came from the series "Boys will be girls" by photographer Rebecca Jurgens.

This IAT was set up using the Python IAT code developed by Scaife and Stafford (2015) to measure racial bias. The modifications for this study were minimal and entailed changing the target concepts (i.e. “Cis” and “Trans” instead of “Black” and “White”) and the images associated with these concepts. The code run on PsychoPy (Peirce, 2007, 2009), an open source application that allows for the presentation of stimuli and data collection in visual processing tasks.

The resulting IAT presented the stimuli in five blocks containing the target concepts and attributes described. Blocks 1, 2 and 4 each presented 10 practice trials, while Blocks 3 and 5 presented 20 test trials, as presented on Table 3. To avoid order effects, the position of Block 3 was switched with that of block 5 for half of the sample (42 participants).

*Table 7.3*. Sequence of trial blocks in the gender nonconformity IAT[1].

| Block | Task description | Function | No. of trials | Items assigned to L key response | Items assigned to A key response |
|---|---|---|---|---|---|
| 1 | Attributes | Practice | 10 | Positive words | Negative words |
| 2 | Target concept | Practice | 10 | Cis[2] | Trans[3] |
| 3 | Combined task | Test[4] | 20 | Positive + Cis | Negative + Trans |
| 4 | Reversed target concept | Practice | 10 | Trans | Cis |
| 5 | Reversed combined | Test | 20 | Positive + Trans | Negative + Cis |

[1] Table adapted from Greenwald et al. (1998) and Greenwald et al. (2003) to reflect the IAT used in this study based on Scaife and Stafford’s (2015) IAT Python code.
[2] Images of men wearing traditionally masculine clothes (trousers, shirts, ties).
[3] Images of men wearing traditionally feminine clothes (dresses, make-up).
[4] For half of the participants, the position of block 3 was switched with that of block 5.

At the start of the task, participants were told to match the image they saw at the centre of the screen with its corresponding category, either at the top left (pressing the L key) or top right (A key) of the screen. They were asked to do this as fast as they could while making as few mistakes as possible. When introducing the target concept (Block 2), participants read the instruction that images of men in masculine clothes (shirts, trousers, ties) belonged to the category “cis”, and images of men in feminine clothes (dresses, visible make-up) belonged to the category “trans”.

Scaife and Stafford’s (2015) materials for running the IAT included the scoring procedure, reproduced below, based on the scoring algorithm by Greenwald et al. (2003):

(1) Eliminate scores over 10,000 ms;

(2) Return a score of "Too Fast" for participants who have RTs less than 300ms for more than 10% of their trials;

(3) Calculate the Block 3 mean reaction time for correctly answered trials and the block 5 mean reaction time for correctly answered trials;
(4) Calculate the pooled standard deviation for all items in blocks 3 & 5 (as if they were just one block) regardless of if they were answered correctly or incorrectly;
(5) In blocks 3 & 5 replace incorrectly answered items with the mean for that group (from step 3) + 600ms and recalculate the mean for groups 3 & 5.
(6) Finally calculate (Block 5 - Block 3)/Pooled standard deviation to generate overall IAT score.

Step 6 provides the D score, which is similar to Cohen's effect-size measure, d (Greenwald et al., 2003). In this study, higher D scores indicated stronger implicit transnegativity, or, more properly, negative implicit attitudes towards gender-nonconforming men.

### *7.2.4. Procedure*

Cisgender adults were recruited through ads posted in public libraries, community centres, and other social groups in the city of Sheffield. Additional participants were contacted via the University of Sheffield staff and student volunteer scheme. The ad described the study as an investigation on the experience of immersion in a story about social relationships or scientific themes.

Participants arrived at the Psychology Department at the University of Sheffield for a one-hour session. This session was conducted in a small room with a desk, a chair, and the computer in which participants answered the questionnaire and took the IAT. A set of noise-cancelling headphones was also within reach for participants in case they were randomly allocated to the web-series condition. They were also told, however, that they could put the headphones on at any point during the session, regardless of the format of the story, if environmental noises became distracting (although this sort of distraction was unlikely given the conditions of the testing room). The researcher remained outside the room for the duration of the session, except for the setup of the IAT, explained below.

At the start of the session, participants read the participant information sheet. This sheet described the general aims and tasks of the study, and included the notice that the story may contain strong language and references to sexuality. The information sheet also guaranteed participants' confidentiality and anonymity of their responses, and explained that they could withdraw from the study at any moment up until the end of the session.

The questionnaire was presented online. It began with the socio-demographic questions and the SDO scale, and then it proceeded to randomly assign the participant to one of the three conditions (web-series, short story, or science article). After reading or viewing the story, participants responded to the manipulation check and Transportation questions.

Then followed the IAT. In the call for participants, at the start of the session, and in the participant information sheet, it was stated that the study included taking an association task. Hence, participants saw a message displayed in the screen after they responded to the Transportation scale, instructing them to call the researcher to proceed to this task. The researcher entered the room to set up the IAT and to explain that this test involved classifying words and images in categories using two response keys. Participants were told that they would get a "positive" and "negative" practice block first, but it was not disclosed what kind of words and images they would see after this block. The researcher exited the room for participants to take the test in private, but they were instructed to call the researcher again when they finished. Then the researcher entered again to close the IAT application and return the participant to the last section of the questionnaire.

After the IAT, participants responded to the remaining questions: the Genderism and Transphobia Scale, the Intergroup Anxiety Scale, transgender acquaintances and definition of transgender, and the purpose of the study. At the end of the session, participants read the debriefing sheet and received five pounds in exchange for their participation, or, in the case of Psychology undergraduates, course credit.

## 7.3. Results

A preliminary check of the database was conducted to make sure that all variables were named and labelled properly; to add the IAT data to the main database by matching it to participant numbers and date-time stamps; to reverse-code items where required; to group participants by condition and calculate scores in preparation for the analysis.

All 84 participants completed the questionnaire. Participants with missing data in a given variable were excluded from the analysis that involved that variable. For instance, a participant with missing data in the SDO measure (e.g. left one or more of its questions blank) was excluded from analysis that involved that scale (i.e. pairwise deletion), but remained in the dataset for other statistical tests which did not require SDO.

### *7.3.1. Manipulation check*

The manipulation check questions aimed to determine that the stories were equivalent in terms of the interest they elicited and their perceived artistic merit. An equivalent response to these questions in the three conditions would suggest that any differences in the outcomes would not be due to diverging perceived quality between the stories (Djikic et al., 2009a).

The data for these two manipulation check questions was explored before conducting a statistical comparison between conditions. The Shapiro-Wilk statistic indicated a non-normal distribution for both Interesting and Artistic, $p < .001$ in both cases. Examination of Q-Q plots for

both variables, however, led to the decision to rely on the ANOVA's robustness against non-normality. Levene's statistic showed that variances were equal among the three conditions for Interesting, $p = .391$, and Artistic, $p = .819$.

Outliers in the manipulation check responses were removed based on the interquartile range (IQR) rule for outliers (see Chapter 4) The percentiles for responses to the Interesting and Artistic measures, which were the basis for obtaining the IQR, are shown in Table 4. Using the IQR rule, Artistic quality showed no outliers. For Interesting, three data points below a score of 2 were marked as outliers, and thus were removed from the following analysis.

*Table 7.4*. Percentiles and outliers for the manipulation check questions

| Manipulation check questions | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | **25** | 50 | **75** | 90 | 95 | < | > |
| How interesting was the story | 2 | 3 | **5** | 6 | **7** | 7 | 7 | 2 | 10 |
| How artistic was the story | 1 | 2 | **3** | 4.50 | **5** | 6 | 7 | 0 | 8 |

The ANOVA for the manipulation check showed no significant differences between the three conditions in terms of how interesting, $F(2, 78) = .02$, $p = .972$, and how artistic, $F(2, 78) = .82$, $p = .438$, each story was. Of particular interest was testing the equivalency between the two trans-related stories, and the result suggested that the media in which the story was delivered –a web-series or a written story– had no effect on the participant's perception of the story as interesting and artistic. Table 7.5 shows the mean scores and standard deviations (SD) of both manipulation questions for the three conditions.

*Table 7.5*. Mean scores and standard deviations of manipulation check questions by condition.

| Condition | | Interesting | | Artistic | |
|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD |
| Trans-fiction | Web-series | 5.50 | 1.63 | 4.54 | 1.50 |
| | Short story | 5.59 | 1.42 | 4.28 | 1.57 |
| Control | Science article | 5.58 | 1.27 | 4.00 | 1.41 |

[1] Response options ranging from 1=Not at all to 7=Very much

### *7.3.2. Data exploration, removal of outliers, and mean scores of main variables*

The measures involved in the main analysis were SDO, Transportation, Explicit transnegativity, Implicit transnegativity, and Intergroup anxiety. Table 7.6 shows the mean scores, SD, and The Shapiro-Wilk statistic (considered normal when $p > .05$) for these variables. Except for Implicit transnegativity, all measures were self-reported and had a response range of 1 to 7, where a higher score indicated a stronger presence of the variable. Implicit transnegativity

was measured through reaction times. The resulting *D* score ranged from -1.38 to 1.38. This range falls within the expected value interval [-2, 2] for IAT *D* scores (Blanton, Jaccard & Burrows, 2014; Nosek & Sriram, 2007; West et al., 2017), where higher values suggested negative bias towards gender non-conformity. The measures of SDO, Transportation, and Implicit transnegativity showed a normal distribution. The robustness of the tests conducted was assumed for non-normal distributions.

*Table 7.6*. Mean scores, standard deviations and Shapiro-Wilk statistic for the main measures, for the whole sample.

| | Mean[1] | SD | Shapiro-Wilk statistic |
|---|---|---|---|
| Social Dominance Orientation | 2.59 | .95 | .08 |
| Transportation | 4.42 | .95 | .91 |
| Explicit transnegativity | 2.37 | 1.18 | <.01 |
| Intergroup anxiety | 2.60 | 1.15 | <.01 |
| Implicit transnegativity | -.10 | .62 | .14 |

[1] Response options ranging from 1=Not at all to 7=Very much for the first four variables, and from -1.38 to 1.38 for the last one.

The IQR rule was again used to detect outliers in the main measures. Table 7.7 displays the percentiles obtained for each variable. The IQR analysis showed three data points as outliers for SDO (plus one more data point from a participant who left all items but one blank), and four data points for Explicit transnegativity. These data points were excluded from subsequent analysis.

*Table 7.7*. Percentiles and outliers for the five main measures.

| Measures | Percentiles | | | | | | | Outliers | |
|---|---|---|---|---|---|---|---|---|---|
| | 5 | 10 | **25** | 50 | **75** | 90 | 95 | < | > |
| Social Dominance Orientation | 1.06 | 1.56 | **1.87** | 2.50 | **3.12** | 3.81 | 4.28 | <-.01 | 4.99 |
| Transportation | 2.72 | 3.18 | **3.81** | 4.45 | **5.09** | 5.63 | 6.00 | 1.89 | 7.01 |
| Transnegativity | 1.06 | 1.15 | **1.53** | 2.12 | **2.85** | 3.91 | 5.38 | -0.45 | 4.83 |
| Implicit transnegativity | -1.12 | -.78 | **-.59** | -.21 | **.41** | .88 | 1.02 | -2.09 | 1.91 |
| Intergroup anxiety | 1.00 | 1.16 | **1.54** | 2.50 | **3.62** | 4.08 | 4.33 | -1.58 | 6.74 |

The resulting means and SD of the variables involved in the hypotheses after outlier removal are presented in Table 7.8. These measures are shown by condition.

*Table 7.8*. Means and SD for measures involved in the hypotheses by condition

| **Condition** | **Web-series (Trans-fiction)** | | | **Short story (Trans-fiction)** | | | **Science article (Control)** | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables**[1] | **Mean** | **SD** | **N** | **Mean** | **SD** | **N** | **Mean** | **SD** | **N** |
| Transportation | 4.57 | .88 | 26 | 4.83 | 1.01 | 27 | 3.97 | .68 | 27 |
| Intergroup anxiety | 2.32 | .92 | 26 | 2.42 | 1.11 | 27 | 2.74 | 1.13 | 27 |
| Explicit transnegativity | 2.16 | .87 | 26 | 1.90 | .80 | 27 | 2.51 | .98 | 27 |
| Implicit transnegativity | .04 | .70 | 26 | -.14 | .64 | 27 | -.20 | .53 | 27 |

[1] Response options ranging from 1=Not at all to 7=Very much for the first t variables, and from -1.38 to 1.38 for the last one.

Participants also responded to two questions to estimate how familiar they were with transgender people. The first question showed that most people in the sample had a correct (59.5%) or ambivalent (25%) notion of what it meant to be transgender, only 15.5% chose the three options that were incorrect (i.e. being confused, flamboyant, and gay). This question was included as a background variable in relation to the participants' socio-demographic profile. The second question regarding familiarity with transgender people showed that nearly all participants (95.2%) had heard the word transgender before. Out of this percentage, 67.9% did not know someone who was transgender.

When asked about what they thought the study was about, as a way to estimate social desirability in the responses, 9.5% of participants suggested the effect of stories on attitudes towards transgender people. When these participants were removed from the analysis, there remained 46 participants in the trans-fiction condition and 26 in the control one. Analysis for the three hypotheses were re-run with these 72 participants and, in terms of significance, results remained the same as those reported here using the whole sample.

### *7.3.3. Correlations*

The correlations between the main variables were explored, and Table 7.9 displays these results. This analysis examined the fiction-related measures of Interesting, Artistic, and Transportation; the prejudice-related measures of SDO, Explicit transnegativity, Implicit transnegativity, and Intergroup anxiety; and the socio-demographic variables gender, age, previous contact with transgender people (i.e. knowing someone who is transgender), and knowledge of what transgender means.

These four socio-demographic variables were included based on the literature about prejudice correlates. Regarding gender, research has established that it consistently relates to transnegativity and negativity towards gender nonconformity (e.g. Elischberger et al., 2016), with men showing higher levels of prejudice than women. Age was considered given the tendency of

older adults to be more prejudiced than younger people (Stewart, von Hippel & Radvansky, 2009), but also due to Greenwald et al.'s (2003) finding that response latency in the IAT can be larger for older participants (and others who respond slowly). Previous contact with transgender people has been found to be associated with less transnegativity (Acker, 2016), hence a significant correlation would be expected with other variables. Lastly, knowledge about the outgroup has been shown to have no major effect on reducing prejudice (Pettigrew & Tropp, 2008) compared to affective factors, thus a lack of correlation with the rest of variables would be unsurprising.

Results from this analysis showed that no socio-demographic variables correlated with transnegativity, explicit or implicit. However, gender was associated with intergroup anxiety, namely, men tended to report higher intergroup anxiety about transgender people than women, in accordance with the literature on gender and prejudice. Being of older age was associated with assessing the story as less interesting and to reporting less transportation. Objective knowledge about transgender people, that is, previous contact and knowing the correct meaning of transgender, did not correlate with any other variable.

Explicit transnegativity correlated positively with SDO and Intergroup anxiety, in line with the fact that these three measures relate to prejudice. Explicit transnegativity also correlated negatively with Interesting and Transportation, suggesting a link between engaging with trans-related fiction and sustaining prejudice towards transgender people, although the direction of this association cannot be established here. Implicit transnegativity did not correlate with any measures.

*Table 7.9*. Correlations between socio-demographic, fiction-related, and prejudice-related measures.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | - | | | | | | | | | |
| 2. Age | .195 | - | | | | | | | | |
| 3. Trans contact | .076 | .001 | - | | | | | | | |
| 4. SDO | -.216 | .051 | .130 | - | | | | | | |
| 5. Interesting | .094 | **-.283*** | .157 | **-.285*** | - | | | | | |
| 6. Artistic | .067 | -.205 | -.141 | -.076 | **.377**** | - | | | | |
| 7. Transportation | .200 | **-.239*** | .009 | **-.362**** | **.675**** | **.302**** | - | | | |
| 8. Explicit transnegativity | -.162 | .214 | .013 | **.406**** | **-.316**** | .012 | **-.424**** | - | | |
| 9. Intergroup anxiety | **-.248*** | .157 | .202 | **.396**** | **-.298**** | -.035 | **-.364**** | **.641**** | - | |
| 10. Implicit transnegativity | .167 | -.158 | .006 | -.005 | -.048 | -.103 | .065 | -.190 | -.204 | - |
| 11. Correct meaning of transgender | .129 | .136 | .208 | .157 | .128 | -.036 | .037 | .004 | .073 | .076 |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

### *7.3.4. Hypothesis 1. Exposure to trans-related fiction will be associated with lower explicit and implicit transnegativity than exposure to a control story.*

For the first hypothesis, the trans-fiction and the control conditions were compared in terms of Explicit and Implicit transnegativity. These two dependent variables were examined separately, and their mean scores and standard deviations by condition are displayed in Table 7.10.

*Table 7.10*. Mean scores and standard deviations of Explicit and Implicit transnegativity by condition.

| Condition[1] | Explicit transnegativity[1] | | Implicit transnegativity[2] | |
|---|---|---|---|---|
| | Mean | SD | Mean | SD |
| Web-series | 2.16 | .87 | .04 | .70 |
| Short story | 1.90 | .80 | -.14 | .64 |
| Science article | 2.51 | .98 | -.20 | .53 |

[1] Response options ranged from 1=Not at all to 7=Very much.
[2] *D* scores ranged from -1.38 to 1.38.

Figure 7.3 displays the mean scores for Explicit transnegativity for the web-series, short story, and science article conditions. A one-way ANOVA showed that the web-series was not significantly different from the other two conditions. On the other hand, there were significant differences between the short story and the control conditions, $F(2, 77) = 3.10$, $p = .051$, $\eta^2 = .07$, suggesting that reading trans-related short stories was linked to less Explicit transnegativity than reading a science article. This proportion of variance in transnegativity attributed to the condition is small.

Follow-up t-tests supported the findings above. Comparisons between the web-series and either the short story or the science article showed no significant differences in transnegativity scores. The comparison between the short story and the science article did show a significant difference, $t(52) = -2.45$, $p = .017$, $d = .68$, suggesting that exposure to fiction with transgender characters was associated with lower negative attitudes towards transgender people in comparison with exposure to a science article.

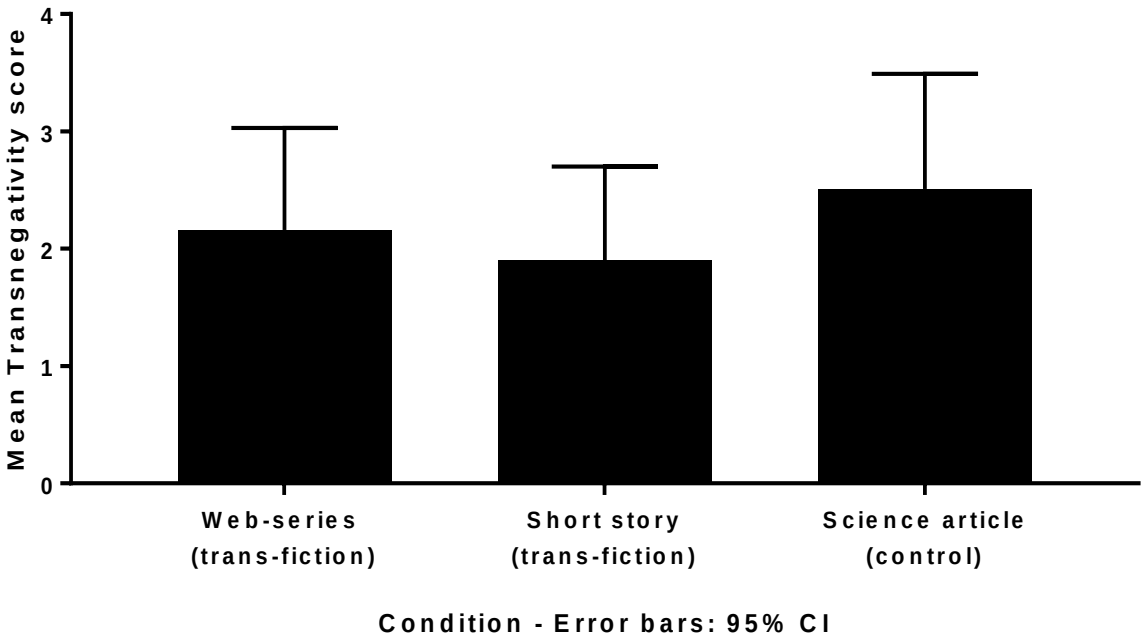


*Figure 7.3*. Mean Explicit transnegativity scores by condition. Error bars show a 95% CI.

For Implicit transnegativity, a preliminary test of order effects determined that there were no significant differences between those who were presented either the Positive+Cis/Negative-Trans block or the Negative+Cis/Positive+Trans block first, $t(82) = -1.69$, $p = .090$. This result determined that the order in which the test blocks were presented had no effect on participants' responses.

Figure 7.4 shows the average Implicit transnegativity D scores for the three conditions. The differences in these scores were not significant, $F(2, 77) = 1.15$, $p = .321$. Lastly, a one-sample t-test was conducted to determine whether the scores of Implicit transnegativity from each of the three conditions were different from 0 (no bias). This test resulted non-significant in Implicit transnegativity, web-series, p = .731, short story, p = .239, and science article, p = .061. This finding suggests that the implicit transnegativity scores do not significantly differ from a lack of bias.

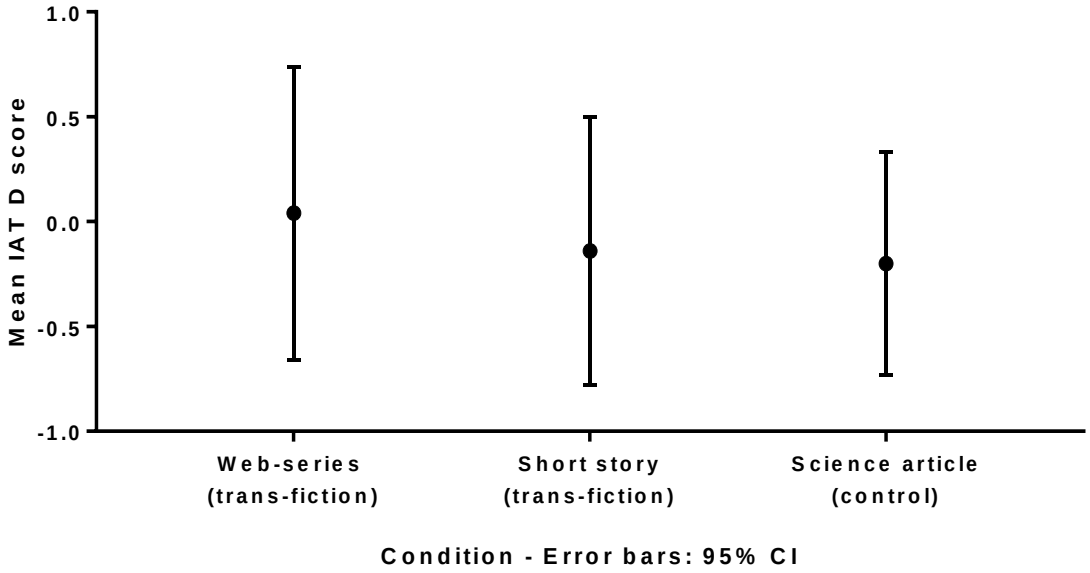


*Figure 7.4*. Mean IAT *D* scores measuring bias towards gender non-conformity in men by condition. Error bars show a 95% CI.

In summary, exposure to a trans-related fiction was associated with significantly lower Explicit transnegativity than exposure to a science article. However, exposure to either fiction with transgender characters, or to a science article, no significant effect on Implicit transnegativity. Therefore, results partially support Hypothesis 1.

Considering the high percentage of participants who reported not knowing someone who is transgender (67.9%), and that contact is negatively correlated with prejudice (Chapter 2), the analysis for this first hypothesis was replicated based on previous contact. In the subsample that reported not knowing someone who was transgender, transnegativity scores were significantly lower for participants in the trans-fiction condition, than for those in the control condition, $t(55) = -2.16$, $p = .035$, $d = .58$. Differences were not significant in explicit transnegativity for those who reported previous contact, $t(25) = .62$, $p = .536$; nor were significant in implicit transnegativity for those who had previous contact $t(25) = .002$, $p = .998$, and those who did not, $t(55) = 1.36$, $p = .177$. These results align with previous findings from contact studies (reviewed in Chapter 2), suggesting that high-status group members who have not had previous contact with low-status counterparts can respond more positively to this group as a whole when contact is indirect.

### *7.3.5. Hypothesis 2. **Trans-related fiction will be associated with lower intergroup anxiety, which in turn would be associated with lower explicit and implicit transnegativity.***

For the second hypothesis, Hayes' (2014) model 4 (described in Chapter 4, Study 1) was used to test this mediation. In this model, Explicit or Implicit transnegativity was the outcome;

Type of story (Trans-fiction = 1, Control = 0) the independent variable; Explicit and Implicit transnegativity were the separate dependent variables; and Intergroup anxiety was the mediator.

The first mediation model examined Explicit transnegativity as the outcome. Figure 7.5 shows the direct effects of the independent variable and mediator on the dependent variable. Results from this analysis indicate that Type of story was not associated with Intergroup anxiety, $\beta$ = -.37, *SE* = .20, $p$ = .141; this section of the model was non-significant, $R^2$ = .03, $F(1, 78) = 2.21$, $p$ = .141. Type of story was not associated with Transnegativity directly, $\beta$ = -.31, *SE* = .18, $p$ = .091, but Intergroup anxiety was associated with Transnegativity, $\beta$ = .44, *SE* = .08, $p < .001$, in line with findings that link lower intergroup anxiety to lower prejudice. This latter part of the model was significant, $R^2$ = .32, $F(2, 77) = 18.16$, $p < .001$. The total effect model of Type of story on Explicit transnegativity was significant, $R^2$ = .06, $F(1, 78) = 5.13$, $p$ = .026. However, the indirect effect of Type of story on Explicit transnegativity via intergroup anxiety was not significant, $\beta$ = -.17, *SE* = .12, CI [-.42, .03].

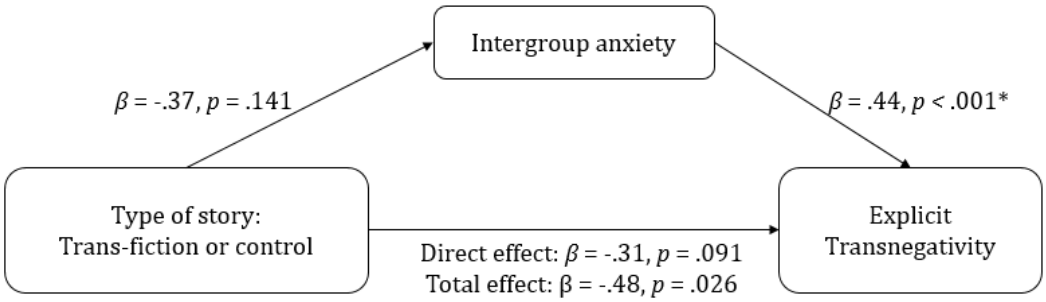


*Figure 7.5*. The mediating role of intergroup anxiety in the association between type of story (trans-fiction or control) and explicit transnegativity. *$p < .05$.

The second mediation model examined the effect of Type of story on Implicit transnegativity. The total effect of this model was not significant, $R^2$ = .01, $F(1, 78) = 1.01$, $p$ = .317. As seen on Figure 7.6, Type of story had no direct effect on Intergroup anxiety nor on Implicit transnegativity. Intergroup anxiety also did not have an effect on Implicit transnegativity. The indirect effect of Type of story on Implicit transnegativity via Intergroup anxiety was not significant, $\beta$ = .05, *SE* = .05, CI [-.01, .16].

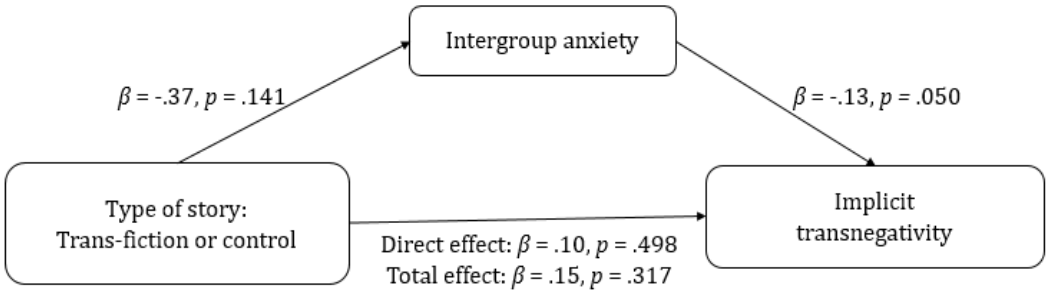


*Figure 7.6*. The mediating role of intergroup anxiety in the association between type of story (trans-fiction or control) and implicit transnegativity.

Findings from these two mediation models indicate that higher intergroup anxiety was associated with higher Explicit, but not Implicit, transnegativity. This relationship, however, occurred independently of the exposure to trans-related fiction or a science article. Overall, whether the story was trans-related fiction or non-social non-fiction had no effect on intergroup anxiety; thus Hypothesis 2 was not supported.

### *7.3.6. Hypothesis 3. Higher transportation into trans-related fiction will be associated with lower intergroup anxiety, which in turn would be associated with lower explicit and implicit transnegativity.*

The second hypothesis tested above determined that reading trans-related fiction was not linked to changes in intergroup anxiety towards transgender people. Based on the literature on transportation into a story and changes in social cognition, the third hypothesis sought to determine whether intergroup anxiety was involved in the relationship between fiction and transnegativity when accounting for transportation.

Transportation scores for the trans-fiction condition ($M$ = 4.64, $SD$ = .98) were significantly higher than those of the control condition ($M$ = 3.95, $SD$ = .67), $t(82) = 3.31$, $p = .001$, $d = .82$. This significant difference was expected because the control condition entailed reading a science article, and the nature and intensity of the cognitive and emotional engagement in non-fiction differs from those elicited by fiction (Bruner, 1985).

To test this third hypothesis, Hayes' (2013) Model 6 was used, a model which involves testing the effects of two mediators. The results of this model are shown in Figure 7.7. The only significant pathway is an indirect one: Fiction elicits higher Transportation, $\beta = .73$, $SE = .20$, $p < .001$, showing that those in the trans-fiction condition were more transported into the story than participants who read the control story. In turn, higher Transportation is linked to lower Intergroup anxiety, $\beta = -.31$, $SE = .13$, $p = .020$, while the latter is associated with lower Explicit

transnegativity, $\beta$ = .40, $SE$ = .08, $p$ < .001. The total effect of Type of story on Explicit transnegativity is significant, $\beta$ = -.47, $SE$ = .21, $p$ = .026, $R^2$ = .24, $F(1, 78)$ = 5.12, $p$ = .026.

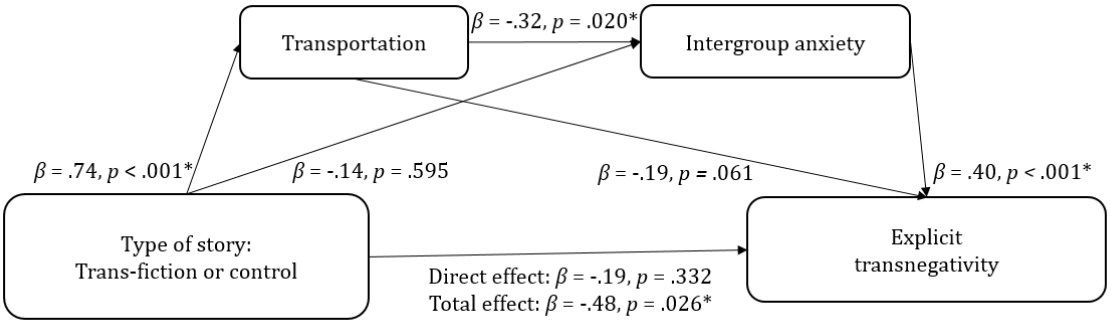


*Figure 7.7*. The combined mediating role of transportation and intergroup anxiety in the association between type of story (trans-fiction or control) and implicit transnegativity. *$p$ < .05.

Model 6 was also tested with implicit transnegativity as the outcome variable. Similar to the values reported in the Explicit transnegativity model, the pathway from Type of story to Transportation was significant $\beta$ = .73, $SE$ = .20, $p$ < .001, as well as the pathway from Transportation to Intergroup anxiety, $\beta$ = -.31, $SE$ = .13, $p$ = .020. However, neither of these pathways, nor the others displayed in Figure 7.7 were associated with Implicit transnegativity, and the total effect model was not significant, $R^2$ = .01, $F(1, 78)$ = 1.01, $p$ = .317.

## 7.4. Discussion

Findings in this study showed that explicit transnegativity was significantly lower in participants who read or viewed trans-related fiction, compared to those who read a science article. This difference was detected within the subsample of participants who reported not knowing someone who was transgender. Intergroup anxiety was involved in this relation between fiction and transnegativity, but only when participants were more transported into the story. In contrast, implicit transnegativity did not show any significant relationship with fiction exposure, intergroup anxiety, or any other of the variables of interest in this study. The discussion of results below focusses on explicit transnegativity, while the implicit transnegativity measure is discussed further on as a limitation.

### *7.4.1. Test of hypotheses*

The first hypothesis of this study was partially supported. Reading or viewing a story with transgender character was associated with lower explicit transnegativity, compared to reading a science article; there were no differences in implicit transnegativity. A comparison between the

three conditions showed that the significant differences in explicit transnegativity occurred between the trans-related short stories and the science article. The two short stories belonged to the *genre fiction* category (Chapter 2), a narrative style that rests, among other elements, on non-complex characters and plots (Kidd & Castano, 2013). This was a limitation assumed when the stories were chosen, because meeting the criteria stated above to match stimuli outweighed this limitation.

Of note, Study 4 of this thesis (Chapter 6) showed the same web-series and the same two short stories to a sample of transgender participants, some of whom provided feedback indicating that the two stories had a lower literary quality compared to the web-series, and conveyed an erroneous notion of what transgender means[21]. In the present study, despite the uneven overall quality of the web-series and the short stories, cisgender participants rated them as equivalent in terms of how interesting and artistic they found them. Furthermore, informal feedback from cisgender participants who read these stories manifested the opposite view to that of transgender participants: They believed that these stories helped raise awareness about the struggles of transgender people. Hence, in this study, a possible explanation for the significant difference in transnegativity after reading genre fiction and non-fiction is that the former elicited intimacy with the characters. Compared to a science story about exploring Mars, the short stories were driven by the emotions of the protagonists in response to prejudice (the story *What decent people do*), or heartbreak and sympathy (the story *To finish the row*).

The second hypothesis was that intergroup anxiety mediated the relationship between fiction and transnegativity. Higher intergroup anxiety was indeed significantly related to higher explicit transnegativity, but this relationship did not depend on the type of story that participants viewed or read. The second hypothesis was therefore not supported, which suggested that intergroup anxiety was not involved in the relationship between fiction and transnegativity.

The third hypothesis was that transportation was linked to intergroup anxiety in the relationship between fiction and transnegativity. This hypothesis was supported. Specifically, higher transportation into a fiction story was linked to lower intergroup anxiety, which in turn was associated with lower explicit transnegativity. Using a science article (i.e. non-social story) allowed to compare transportation between fiction and non-fiction, each genre eliciting a different form of cognitive and emotional engagement, according to Bruner (1985). Overall, these results align with research that shows transportation as a key mechanism in the influence of fiction on

[21] For instance, in one of the stories, the protagonist says that she "used to be a man". The intentions of the author in stating this phrase are beyond the scope of this research, but the concern of the Study 4 participants were based on the fact that transgender people do not become someone from the other gender. This is a misconception about transgender people (Gazzola & Morrison, 2014; Trans Media Watch, 2010); transgender communities and researchers of transgender identity development (e.g. Levitt & Ippolito, 2014a; Olson et al., 2015) have consistently shown that awareness of one's gender identity—for transgender and cisgender individuals alike—starts at an early age.

social cognition (Bal & Velkamp, 2013; Green, 2004; Green et al., 2008; Johnson, 2013; Richter et al., 2014; Quintero & Sangalang, 2016).

Previous research has shown that changes in explicit intergroup attitudes are linked to positive behavioural outcomes. For instance, Johnson, Cushman et al. (2013) found that participants' transportation into a fictional story increased their empathy towards Arab-Muslims, which in turn was associated with higher likelihood of prosocial behaviour. Shim et al. (2012) showed that Koreans who reported lower intergroup anxiety upon media exposure to U.S. Americans reported more intentions to cooperate with this group. Paluck (2009) demonstrated that a radio soap opera about reconciliation in Rwanda changed the audience's perceived social norms and behaviours (e.g. increased cooperation). In the context of this study, these findings suggest that lower explicit transnegativity linked to exposure to transgender characters, can potentially lead to prosocial behaviour towards transgender people.

### *7.4.2. Limitations and future research*

The first major limitation of this study relates to the use of gender nonconformity in men as a proxy for transgender. The decision to use this construct was based on the literature that links these two variables (Elischberger et al., 2016; Hill and Willoughby, 2005; Tebbe et al., 2014), and on the fact that the IAT appears to assess environmentally-bound associations rather than well-established attitudes. However, this resulted in conflating gender nonconformity with transnegativity.

This brings a concern of political nature, which involves an impression that participants may have taken away from this study. This IAT associated men in feminine clothing with the word "trans". This choice was made over using longer terms such as "gender non-conformity", and to focus on the core of both transnegativity and gender non-conformity, which is a negative evaluation of a perceived incongruence between sex and gender (Hill & Willoughby, 2005; Tebbe et al., 2014). Nevertheless, prejudice towards transgender people is sustained on the idea that a transgender woman is "a man in a dress" (Tebbe et al., 2014); the association of gender non-conforming men to the word "trans" in the IAT may have primed or reinforced this idea in participants. The debriefing sheet presented a proper definition of transgender, but this may not have been enough to counteract that impression.

A second limitation, also related to the proxy measure, is that this gender nonconformity IAT may not have properly captured associations prompted by trans-related fiction. In this study, the core of both transnegativity and gender nonconformity (i.e. rejection of gender variance) was assumed as an adequate point of theoretical convergence between the self-report and the association task. However, the lack of correlation between the implicit and the explicit measures suggest that there was no conceptual correspondence between them. Hofmann, Gawronski,

Gschwendner, Lee, and Schmitt (2005) found through a meta-analysis that implicit associations and self-reports tend to correlate more strongly with one another when they measure common indicators.

Besides building a more robust conceptual relation between implicit and explicit measures, future studies of implicit prejudice should include behavioural indicators. Blanton and Jaccard (2015) have stated that core facets of an implicit measure should correspond with core facets of the behaviour, in order for the implicit measure to predict behaviour. None of the existing implicit transnegativity measures to date, including the IAT used in this study, meet this criterion. Findings from previous research on transnegativity can inform the improvement of implicit measures in this regard. For instance, the gender-bashing factor from Tebbe et al.'s (2014) *Genderism and Transphobia scale* includes behaviour and behavioural intentions, which may be included in future studies of implicit transnegativity. Juge (2013) also proposed used a measure of behaviour (i.e. distance sought by participant when facing a gender nonconforming researcher) in addition to implicit attitudes towards gender nonconformity in men. This limitation encourages further exploration and validation of the measurement of implicit attitudes towards gender nonconformity, while linking this measurement to behavioural criteria (Blanton & Jaccard, 2015).

A third important limitation of this study was the demographic characteristics of the sample. The overall profile of participants was similar to the one in the transnegativity study by Hill and Willoughby (2005), that is, a sample that was older and more varied than an undergraduate population, yet it was a highly educated one, still unrepresentative of the population. The scores in prejudice measures presented before (SDO) and after (Transnegativity, Intergroup anxiety) the story suggested that this was a low-prejudice sample, and these prejudice levels were not susceptible to be reduced further by a brief story. It may have been that SDO was too low in this sample to have any discernible effect, as hypothesised by McDermott et al. (2018), falling near the lower end of the scale. It remains to be seen whether the relationships between variables probed in this study are evident in higher-prejudiced samples.

Some findings related to sample characteristics, however, were in line with the literature regarding prejudice correlates. The finding that was most consistent with previous research was that men had higher levels of sex and gender related prejudice (e.g. sexual prejudice, transnegativity) than women, which research indicates is likely due to them feeling more threatened in their ideals of masculinity and heterosexuality. The second correlate was religion. A study by Acker (2016) found that religion was a predictor of transnegativity, and only about 25% of the sample in this study reported being religious, thus explaining further the low degree of transnegativity. Lastly, older age tends to be associated with higher prejudice (Stewart et al., 2009). While this was not the case in the present study, older age was associated with lower engagement with a story (i.e. Interest and Transportation), which draws attention to the need to

assess how increasing age is linked to engagement with fiction. Future research on fiction as contact should involve participants from varied sociodemographic groups, to examine the interplay between individual characteristics and engagement with fiction (e.g. readers without a higher education degree), and attitude change towards a target group.

Another question for future research involves the literary quality of the stories. The web-series and the short stories used in this story, although chosen to fit the criteria of this study, were uneven in their overall quality. The short stories could be categorised as genre fiction (e.g. featuring unidimensional characters, see Kidd & Castano, 2013, Oatley, 2016). In contrast, the web-series was officially recognised as of high quality, receiving a nomination for the 68th annual Emmy Awards in 2016. Yet, the significant differences in explicit transnegativity were found between the trans-related short stories and the science article. A thorough explanation for this finding will benefit from future trans-related content comparisons between fiction and non-fiction, to properly test audience's responses to the same topic based on exploration of emotions versus logical arguments.

### *7.4.3. Conclusions*

Participants reported lower explicit transnegativity after viewing or reading fiction featuring transgender women, compared to those who read a science article; however, implicit transnegativity did not differ between conditions. This association was significant in those who reported no previous contact with transgender people, suggesting that fiction, like other forms of indirect contact, can be used to reduce negative intergroup emotions. Furthermore, the more transported participants were into the story with transgender characters, the lower intergroup anxiety they reported about encountering transgender people.

Fiction can serve as mediated contact to reduce transnegativity, but it does so under its own conditions. Intergroup anxiety, established in the literature as the most important mediator between contact and prejudice reduction, becomes a secondary mediator when the medium is fiction. First and foremost, the story needs to be told well enough so that the audience becomes transported into it. From here on in, the nature of the low-status characters, whether objectified or well-rounded, can make a difference in the audience's subsequent attitudes. The results of this study point in this latter direction: Fiction can make cisgender individuals more willing to accept transgender people as part of their social world.

# CHAPTER 8
# GENERAL DISCUSSION

The general aim of this research was to examine mechanisms of fiction that make narratives of this sort an effective form of intergroup contact to reduce prejudice. The mechanisms tested in the relationship between fiction exposure and prejudice reduction were mediators related to engagement with the story, and moderators related to group membership variables. The context of these studies was prejudice towards sexual and gender minorities, with the exception of Study 4. For the other four studies, gay men and lesbians (Study 1), and transgender people (Studies 2 to 5) were established in this research as low-status groups, represented by fictional characters, while heterosexual and cisgender individuals were established as the normative group and audience.

This last chapter summarises the results and conclusions derived from the five studies that were conducted as part of this thesis. The first section presents the summary of findings of these studies, fitting them within the literature on fiction as contact, and outlining their implications for research and practice. The key contributions and strengths of the studies are also described here. This section is followed by a discussion of the main theoretical, methodological and practical limitations of this research as a whole, as well as recommendations for future studies. Lastly, this thesis concludes with a few words about the value of fiction to bring together individuals from diverse social worlds.

## 8.1. Summary of findings

> God bless the book people for their boundless knowledge absorbed from having words instead of friends.
>
> —Mackenzi Lee, *The Gentleman's Guide to Vice and Virtue*

The novel *The Gentleman's Guide* sees three adolescents embark on a Grand Tour across Europe. One of them, Felicity, is an avid reader who has acquired massive amounts of knowledge from reading books, and she often gets herself and her companions out of trouble thanks to what she has learned. The premise of this thesis was precisely this notion, backed up by research (Bruns, 2016; Mar & Oatley, 2008; Oatley 2016b) that fiction is a source of social knowledge, and it can meaningfully expand a person's worldview. The five studies in this thesis sought to examine how audiences from either high-status (Studies 1, 2, 3, and 5), or low-status (Study 4) groups gain

this knowledge through stories featuring low-status groups, and the extent to which this knowledge transfers into real-life attitudes.

The first subsection below describes the main findings of the five studies. First, the results of each study are described in terms of how they answer the study's hypotheses. Next, these findings are discussed in contrast with relevant literature on fiction and/or contact theory. The last subsections of this chapter develop the contributions of this thesis to the field of social psychology, as well as the theoretical and practical implications of this research.

### *8.1.1. Summary of findings*

The main results of each of the five studies are reported below. This summary includes the study design and nature of the sample. Four studies in this thesis tested the relationship between fiction exposure and either lower sexual prejudice (Study 1) or transnegativity (Studies, 2, 3, and 5), while another (Study 4) tested the role of self-perception in fiction engagement.

The aim of Study 1 was to compare sexual prejudice levels reported by participants exposed to fiction with gay characters and participants who undertook an imagined contact task. This study used a between-subjects design, and the sample consisted of 248 participants, university students or adults from the general population, from either a country with high sexual prejudice (El Salvador) or with low sexual prejudice (United Kingdom). Results showed that exposure to either fiction or imagined contact did not impact levels of sexual prejudice ($H_1$). Moreover, imagined contact was rated as more engaging than fiction, eliciting higher transportation, more positive affect, and more familiarity (attributes) and usefulness (functions) of the imagined situation. This response was independent of whether participants imagined contact with a gay person or a stranger, and only higher familiarity was a mediator between imagined contact and lower prejudice ($H_2$). Individual differences, measured by Right-Wing Authoritarianism (RWA), Social Dominance Orientation (SDO), generalised affect, and heterosexual identification ($H_3$), and coming from a high-prejudice or low-prejudice country ($H_4$), did not moderate the relationship between imagination-based contact and sexual prejudice. These findings suggested that fiction featuring gay characters was not associated with lower sexual prejudice; neither did individual differences interact with fiction. Initial encounters with gay fictional characters elicited lower engagement with the story than imagined contact, suggesting the possibility that heterosexual audiences encountering gay characters may initially respond in negative terms (i.e. negative affect, low engagement).

After Study 1, the studies centred on prejudice towards transgender people, or transnegativity. This choice was made over the course of Study 1, while extending work on both contact theory and prejudice towards sexual and gender minorities. The first reason for this choice was a theoretical gap: there is scarce research on how contact can reduce transnegativity

(Schiappa et al., 2005; McDermott et al., 2018). The second reason, underlying to this academic interest, was the motivation to address a worldwide pressing matter (see Mackey, 2016; Trans Respect versus Transphobia, 2015; Perez, 2016): the ongoing dehumanisation of transgender people by the media, the law, and the general public (Wodda & Panfil, 2014). Public's awareness of transgender issues has increased since early 2010s (Faye, 2018), but this visibility continues to position transgender individuals at higher risk of social exclusion, and of becoming targets of discrimination and lethal violence, than other sexual and gender minorities (Clarke et al., 2010; Lee & Kwan, 2014). Therefore, three studies in this thesis sought to examine the relationship between fiction exposure and transnegativity. One more study, Study 4, included transgender participants as the audience, to expand on the social functions of fiction by understanding how low-status groups engage with representations (or lack thereof) of their own group in fiction and overall media (Vincze & Harwood, 2013).

Building on the above considerations, Study 2 examined transnegativity responses after fiction exposure, proposing that attitudinal changes may be linked to semantic changes (i.e. changes in the words that an individual associates with a given concept in order to define it). This study was a qualitative comparison of the meanings that cisgender participants ascribed to the concept "transgender", after reading fiction featuring either transgender or cisgender characters. These meanings were observed via semantic networks. A qualitative experiment (Ravasio et al., 2010) was conducted with a sample of 40 university students; participants were recruited to take part in an online study for which they read one of the two stories. Results from this study showed that the overall sample reported "Change" and "Hormones" as the main definers of the concept, in line with literature about the social representations of transgender people. However, the content of these semantic networks varied when examined separately based on the type of character (transgender or cisgender) featured in the story assigned to participants. Participants who read fiction featuring transgender characters appeared to link their definers of "transgender" to themes addressed in the story; the top two definers for this condition were "Difficult" and "Brave". Participants who read fiction without transgender characters seemed to rely more on stereotypes to define the concept of "transgender"; the top two definers for this condition were "Weird" and "Gay". This comparison suggested that participants' definition of "transgender" was susceptible to change after reading a story with or without transgender characters.

Study 3 followed up on Study 2 by fine-tuning the stimuli (i.e. equivalent stories) and the measures (i.e. including quantitative analysis) used. Like its predecessor, Study 3 aimed to compare transnegativity responses from readers exposed to fiction stories with or without transgender characters. This study investigated two mechanisms in this association: experience-taking as a mediator ($H_1$); and the participants' identification with their cisgender ingroup as a moderator ($H_2$). Additionally, Study 3 used a quantitative test to compare differences in semantic

networks for the concept of "transgender" provided by readers in each condition ($H_3$). Seventy-seven university students came into the lab to read one of four stories: two with transgender characters, two with cisgender characters. Results showed that fiction exposure to transgender characters was not associated with lower transnegativity. Experience-taking and cisgender identification were not significant mediators in the fiction-transnegativity relationship, while semantic networks for "transgender" did not significantly differ between conditions. One significant finding, in line with previous research, was the relevance of group membership for fiction engagement: participants who encountered cisgender characters reported higher experience-taking (i.e. higher simulation of the character's mindset) than those who encountered transgender characters.

The notion of experience-taking was the basis for Study 4, which focussed on transgender audiences. It was expected that participants in this study would report higher experience-taking for transgender (i.e. ingroup) than cisgender (i.e. outgroup) fictional characters ($H_1$), and that identity congruence (individuals' perceived correspondence between their expected and actual self) would moderate this response ($H_2$). The sample consisted of 28 adult transgender participants. Using a repeated measures design, participants responded to an online questionnaire, in which they were asked to either view or read two fictional stories, each presented one week apart; one of the stories featured transgender characters, and the other cisgender characters. Findings supported previous literature showing that experience-taking relates to shared group membership between the character and the audience, but this type of identification was independent of congruence. Additional measures in this study showed that participants considered that transgender representation in the media was mostly negative. However, positive evaluations of media representation were linked to long-term reading habits, suggesting that frequent exposure to reading materials lead participants to finding more narratives that provided characters with whom they could identify. This latter suggestion should be taken within the context of transgender-related media, considering that transgender populations remain scarcely, and often poorly, represented in mass media. When it comes to sensible portrayals of gender identity, transgender audiences must actively search for characters like them (e.g. there were zero transgender characters in mainstream American films in 2018, per GLAAD, 2019). Media representation of cisgender identities, on the other hand, is ever-present. Cisgender audiences are more likely than their transgender counterparts to spontaneously find less objectionable media content (e.g. cisgender characters to identify with), and then be driven to consume more media that aligns with their interests. Lastly, another relevant finding from Study 4 was that positive affect was associated with higher experience-taking and higher congruence. In contrast, those who rated themselves as more anxious tended to report that transgender media representation was of lower quality, and considered this representation as

more personally important. The findings of this study highlight the interplay between emotions and engagement with media and fiction in low-status groups.

Lastly, returning the focus to cisgender audiences, Study 5 tested whether exposure to transgender fictional characters was linked to lower explicit and implicit transnegativity, compared to exposure to a science article as a control condition ($H_1$). Intergroup anxiety ($H_2$), and transportation ($H_3$) were tested as mediators in this association. Using a between-subjects designs, 80 adult participants came into the lab to either view or read a story with transgender characters, or read a science article about space exploration (control condition). Findings demonstrated that explicit transnegativity was significantly lower in participants who read or viewed trans-related fiction, compared to those who read a science article; these results were also significant in participants who reported not knowing any transgender individuals (i.e. no previous contact). On the other hand, there were no differences between participants based on the story they read regarding implicit preferences towards gender conforming or gender nonconforming targets, a proxy for transnegativity. Higher transportation into a fiction story was linked to lower intergroup anxiety, which in turn was associated with lower explicit transnegativity. These findings, in line with previous evidence, identified transportation as a sufficient component for fiction to function as mediated contact.

This thesis conceptualised fiction as mediated contact, and it aimed to examine two sets of mechanisms that may help explain the link between fiction exposure and prejudice reduction. The first set of mechanisms involved psychological processes related to engagement with the story. This engagement was measured through affect, transportation, and experience-taking. Findings from all five studies supported previous research showing that these three variables can be linked to exposure to a story and some of its elements, such as its fiction-nonfiction genre, or the character's group membership. However, in the four studies that measured prejudice as the outcome, it was not clear that higher engagement was associated with lower prejudice; this relationship was seen only in Study 5. The second set of mechanisms in the fiction-prejudice relationship addressed in this thesis were audience characteristics. These characteristics related to the participants' group membership, such as group identification and identity congruence, and were examined as moderators of the fiction-prejudice relationship. Findings in this thesis did not support the hypothesised role of audience characteristics in engagement with the story, nor with the latter's relation with lower prejudice. Nevertheless, the next subsection describes how these results can contribute to the literature on fiction as contact.

### *8.1.2. Mechanisms involved in fiction as mediated contact*

*Emotional engagement with the story as mediator*

Four studies in this thesis addressed emotions and narrative engagement as mediators between fiction exposure and prejudice reduction. The mediators examined in Studies 1, 2, 3, and 5 are discussed below: Transportation, emotions, experience-taking, and attributes and functions.

The most frequently probed mediator in this thesis was the emotional engagement with a story, termed transportation, in Studies 1, 4, and 5. In Study 1, transportation was not linked to the stimulus, whether a fictional story or imagined contact. It can be hypothesised that participants did not find the stimuli to be immersive enough, or that the online setting of the experiment did not encourage an immersive enough experience for participants. Next, transportation was a secondary measure in Study 4, used to support experience-taking (discussed below), and it was the main measure of Study 5. This last study showed that transportation was linked to fiction more than to non-fiction. In turn, higher transportation into a story with a transgender character was associated with lower transnegativity, as expected from previous evidence (Chapter 3) that reported an inverse relationship between immersion in a story and prejudice.

Another set of mediators tested in this thesis were emotions, in Studies 1 and 5. Study 1 examined affective valence and arousal, finding that valence (measured as a continuum of "happy-sad") was a link between imagination-based contact and lower prejudice. However, this result was significant for imagined contact, not for fiction; the implications of this finding is similar to those of attributes and function, discussed below. Study 5 focussed on intergroup anxiety, a set of emotions related to potential contact with outgroup members. Findings from Study 5 linked intergroup anxiety to transportation, pointing to this serial mediation as a condition for fiction to have a significant effect on prejudice.

Another mediator tested in the fiction-prejudice studies was experience-taking, or the readers' ability to adopt a character's mindset, in Studies 2 and 3. Results for experience-taking supported its role as a measure of audience's identification with a character (Sestir & Green, 2010) with whom they share group membership (Kaufman & Libby, 2012); this role is also discussed for Study 4 in the moderators subsection below. Nevertheless, experience-taking was not associated with lower prejudice. It may be the case, as Sestir and Green (2010) proposed, that experience-taking influences audience's traits and self-concept, rather than their intergroup attitudes.

Lastly, the mediators termed attributes and functions were examined in Study 1. These mediators measured the participants' assessment of personal relevance, familiarity and usefulness attributed to the story (fiction or imagined contact). Results from Study 1 suggested that participants who imagined an encounter, whether with a gay person or a stranger (control), reported that the content of what they imagined was more personally relevant for them,

compared to those who read or viewed a fictional story with gay characters. This assessment, in turn, was linked to lower sexual prejudice. From these findings, imagined contact was positioned as a more effective form of initial imagination-based contact; audiences may not engage as easily with fiction showing outgroup members. Fictional stories may show individuals and situations with whom participants are not familiar, and thus they may respond not as positively as they would respond to content that they create on their own terms (i.e. the details of the instructed imagined encounter).

Overall, transportation and emotions appeared to have a significant impact in the relationship between fiction exposure and lower prejudice, whereas personal relevance and experience-taking showed no effect. Most of the published literature involving the variables above support their intermediary role in the relationship between fiction and attitudinal change (Chapter 3). However, findings in this thesis were mixed, and further research is needed for a clearer picture of the mediators between fiction exposure and prejudice reduction.

*Audience members' ingroup identification and intergroup attitudes as moderators*

In the studies of this thesis, group identification and intergroup attitudes were examined as moderators in the relationship between fiction exposure and prejudice reduction. Audiences' responses to media and fiction are influenced by their "socially, culturally, politically, ideologically and geographically located selves" (Zalipour & Athique, 2014, p. 6). In contact theory, Voci and Hewstone(2003) proposed that salience of group membership was a key moderator; in studies about evaluation of, and engagement with art and fiction, researchers have also underscored the role of the individuals' group membership in these processes (Adarves-Yorno et al., 2008; Deshane, 2013; Kauffman & Libby, 2012). Hence, ingroup identification and intergroup attitudes of the high-status audience members were considered of interest to better understand their engagement with fiction that portrayed low-status groups.

The moderators examined were Right-Wing Authoritarianism (RWA, Study 1), Social Dominance Orientation (SDO, Studies 1 and 5), and identification with the ingroup, either heterosexual (Study 1) or cisgender (Study 3) (see the next subsection to discuss findings from transgender audiences in Study 4; because this study does not focus on prejudice towards another group, but to perception of one's group in the media, the moderator examined was an assessment of participants' self-concept). Regarding the first two constructs (which are considered correlates of prejudice, see Chapter 2), participants completed RWA and SDO measures before exposure to the stories. These scores were low and did not moderate the fiction-prejudice relationship. In terms of group identification, participants reported high identification as heterosexual or cisgender individuals, as was expected given their membership of these groups. Ingroup identification, however, had no impact on the association between fiction and lower sexual

prejudice/transnegativity. One explanation for these findings might be that, in low-prejudice samples, high ingroup identification does not necessarily entail negative affect towards the outgroup (Brewer, 1999).

*Fiction resonates with the individual's self-perception and personal reality*

Fiction can resonate with an individual's sense of self. There is evidence for this experience from the field of Neuroaesthetics (Pearce et al., 2016; Vessel et al., 2013), the study of neural engagement with art, which shows that artworks can contribute to an evolving representation of the self (i.e. personal growth). Study 4 explored this resonance by examining the relationship between a form of self-perception termed identity congruence and engagement with a fictional character (experience-taking). Although congruence did not moderate this engagement, other effects of fiction on the individual's self-perceptions have been shown through anecdotal evidence (Whitney 2018a, 2018b), research findings (Richter et al., 2014), and complementary results from Study 4. The latter showed that lower perceived quality of transgender representation was associated with higher anxiety, which in turn correlated with lower congruence.

This link between perceived quality of media representation and anxiety recalls a notion stated elsewhere in this thesis (Chapters 2 and 6), that the mere presence of a character representing one's group does not have an automatic positive impact in the audience, either low-status or high-status. Participant feedback in Study 4 provided a reminder that identifying with a character is not always an enjoyable experience if one belongs to a group that is consistently misrepresented in stories (Chapters 2, 5 and 7). One Study 4 participant in the short story condition commented via email that they identified with the protagonist of the story, a transgender woman, but in a negative way. This participant declared that some of the dialogues reflected lack of awareness about what being transgender means, even among the transgender community itself.

Another finding related to how fiction taps into the individual's experiences comes from Study 1. A sense of familiarity with what was being imagined (termed Attributes) was a significant mediator between imagined contact and lower sexual prejudice. Although this study cannot apply this finding to fiction, previous research does: Prior knowledge or personal experience regarding the subject of a fictional story are crucial to process it (Green, 2004; Oatley, 2016b; van Laer et al., 2014). The topic of sexual orientation, while not entirely well-received by the public (Herek & McLemore, 2013), is sufficiently visible to elicit a sense of familiarity (Herek, 1996); for instance, the majority of participants in Study 1 reported knowing someone who was LGBT, lesbian, gay, bisexual or transgender. To complement these findings, recall the mediation effect found in Study 1 (Chapter 4), which showed that more familiarity with the story (measured through Attributes) was associated with more positive attitudes. Taken together, these findings stress a necessary

interplay between fiction and fact (Oatley, 1999), where each of these two dimensions can enrich or diminish the audience's experience with the other (see also Bruns, 2016).

*Story comparisons: content and medium*

Each study had a specific set of stories to be compared with each other (see Appendix A). Some stories were used in more than one study in this thesis, but overall, the equivalence of stories varied, both between studies and within each set. The discussion of each study (Chapters 4 to 7) addressed the issue of diverging content and quality between stories, as well as possible differences in audience responses based on the medium in which the story was presented. One divergence from previous research on fiction and social cognition was that some of the stories used in this research did not qualify as literary fiction, a characteristic that has been reported as central to finding effects in social cognition (Djikic et al., 2009a, 2009b; Kidd & Castano, 2013; Kidd et al., 2016).

The stories used in this research were chosen due to equivalency in certain criteria (i.e. length, public availability, ingroup authorship), and their key feature was the group membership of their characters (i.e. gay or heterosexual, and transgender or cisgender). In the five studies, participants reported higher engagement with the story when they encountered ingroup characters, as expected from previous findings (Kaufman & Libby, 2012; Smith, 2014). When encountering outgroup characters, participants reported more engagement with those stories that evoked positive affect (Study 1), or intimacy with the characters (Studies 4 and 5). Overall, participants' ratings of interest, artistic merit, and engagement suggested that the medium (text or film) in itself mattered less than what the story was about, and to who was featured in it. In other words, findings from these studies supported Mar and Oatley's (2008) assertion that the audience are more likely to be drawn to the story based on its contents (e.g. topic, characters), rather than on the format in which the story is delivered.

*Fiction as a distinct form of mediated contact*

Contact researchers have framed fiction as vicarious (Vezzali et al., 2012), parasocial (Schiappa et al., 2005; McDermott et al., 2008; Solomon & Kurtz-Costes, 2018), or media contact (Joyce & Harwood, 2014; Vincze & Harwood, 2013). In these five studies, fiction could indeed be characterised as any of these: overall as media contact; as vicarious/extended contact, showing heterosexual audiences contact with non-heterosexual people (Study 1); and as parasocial contact, prompting cisgender audiences to engage with transgender characters (Studies 2 to 5). Yet fiction allows for a much deeper engagement with "the other", even if it is through a medium, or perhaps because of it (i.e. a "safe space" to engage with others' mind and experiences, which may otherwise be seen as a threat in the real world).

While this thesis acknowledges that fiction can be categorised as more than one type of indirect contact (i.e. vicarious, parasocial), the studies conducted sought to approach one feature that separates fiction from these other types. Fiction allows the audience not only to feel for the characters or react to them as if they were face-to-face, but also to immerse in the characters' world, and even "become" the characters (Sestir & Green, 2010). Participants' responses regarding transportation into the story and experience-taking showed that fiction has the capacity to position audience members within new frames of reference (Green, 2004), be it the story-world or the character's mindset. These findings support Mar and Oatley's (2008) assertion that fiction is a social simulation, and thus encourage further research on this simulation's short-term and long-term effects on prejudicial attitudes (Appel & Richter, 2007; Bal & Veltkamp, 2013; Crisp et al., 2009;). .

## 8.2. Contributions and implications of this thesis

### *8.2.1. Contributions of this research to the study of fiction and prejudice*

This thesis fills a gap in the literature regarding the effects of fiction on attitudes towards sexual and gender minorities in three ways. First, it suggests new directions in measuring these effects, by including the study of implicit associations and language, both important components in the relationship that the audience establishes with media and fictional narratives (Chapter 2). Second, this thesis integrates features of fiction (immersion into the story) and of contact (intergroup anxiety) as conjoint mechanisms that can be potentially involved in the relationship between fiction exposure and attitudinal change. Previous studies have characterised fiction as contact (Vezzali et al., 2012), and identified mediators in this fiction-prejudice relationship (e.g. transportation, intergroup anxiety) (Johnson, 2013), but these studies did not relate to prejudice towards sexual and gender minorities. Alternatively, research on the effects of fiction on sexual prejudice and transnegativity (Hoffarth & Hodson, 2018; McDermott et al., 2018; Schiappa et al., 2018; Solomon & Kurtz-Costes, 2018) focus on these variables as direct outcomes, with scarce examination of the intermediary variables involved. Lastly, this thesis contributes to the field by including transgender people not only as characters (mis)represented in the media and fiction, but as audiences that engage with the same media as cisgender people. Involving low-status groups as audiences in the study of socio-cognitive effects of fiction can help establish a common ground in fiction that can be as beneficial for the high-status group (i.e. reducing intergroup anxiety) as for the low-status group (i.e. lower anxiety linked to media misrepresentation of their own group).

The main conceptual contribution of this thesis is twofold, related to the examination of the relationship between fiction exposure and socio-cognitive outcomes. First, some studies in this thesis sought to measure participants' responses to fiction beyond self-report attitude scales.

Studies 2 and 3 (Chapter 5) examined whether readers reported differing semantic associations regarding transgender people after exposure to either transgender or cisgender characters. Study 5 (Chapter 7) investigated the study of participants' implicit evaluations (i.e. positive or negative) of gender nonconforming men after exposure to either transgender fictional characters or a space exploration article. These associative measures were used to explore cognitive processes activated by fiction, specifically, schemas, mental representations—in this case— of low-status group members (Chapter 2). For Moscovici (1988, p. 227), these representations are a precondition for attitudes: "we can become favourable or unfavourable towards something only after we have perceived and evaluated it in a different way". Although findings in these studies were not significant regarding group comparisons of associations with the word "transgender", this thesis encourages that future research of fiction as mediated contact connects media exposure with attitudes (and presumably social norms, see Section 8.1.4) by influencing audiences' language and implicit associations.

The second contribution of this thesis is furthering the understanding of socio-cognitive effects of fiction. Whether the studies focussed on group differences in prejudice level (Studies 1 to 3, and 5) or in identification with characters based on their group membership (Study 4), the questions about these effects centred on why and how such effect might occur. The questions thus approached two sets of variables: those related to fiction engagement, such as emotions, transportation, and experience-taking; and those related to audience characteristics, such as intergroup attitudes, ingroup identification, and self-perception. The findings from the four prejudice studies in this thesis showed psychological processes that arise in response to a fictional story (i.e. emotions, immersion), but only one study (Study 5) suggested that these processes can mediate the association between fiction and lower prejudice. Also according to these studies, individual characteristics of audience members (group identification, intergroup attitudes) were not involved in their responses to the stories. Lastly, the self-perception study (Study 4) was conducted in the context of low-status audiences exposed to media and fiction which traditionally misrepresents these audiences. This study provided no evidence of the role of identity congruence in differential responses to ingroup (transgender) versus outgroup (cisgender) characters.

### *8.2.2. Implications for future research and interventions*

Fiction is ubiquitous in everyday life, and researchers can use it as part of intergroup contact interventions in the field (Paluck & Green, 2009). One example is Paluck's (2009) intervention using radio soap operas to influence social norm perception and improve conflict resolution in Rwandan communities. Furthermore, given that fictional narratives are easily accessible via mass media, fiction featuring low-status characters can reach audience members who otherwise may not have direct contact with the target low-status group. In this regard,

findings from Study 5 (Chapter 7) showed that fictional narratives had a stronger effect on individuals' transnegativity levels when participants had no previous contact with transgender people (i.e., differences in transnegativity after exposure to fiction or to a control story was seen among participants who reported not knowing transgender individuals. In this subsample, those exposed to trans-related fiction presented significantly lower transnegativity scores than those in the control condition, with an effect size of $d$ = .66). Fiction thus can serve as mediated contact; fiction is easily available (both for researchers to use it in a controlled manner, and for the public to consume it spontaneously), and it can improve the audience's stance towards a low-status group in the absence of direct contact.

Considering the accessibility and effectiveness of stories shown by research, fiction exposure can have a practical impact, at an individual and group level. Research reported elsewhere in this thesis have shown the benefits of engaging with fiction on literary (e.g. Oatley, 2016b) and interpersonal skills (e.g. Mar et al., 2006), and experiential growth (e.g. Barnes, 2015; Bruns, 2016). Furthermore, in the long term, exposure to fiction, specifically, exposure to print fiction, has demonstrated a protective effect for individuals, regardless of their level of education and wealth. Bavishi, Slade, and Levy (2016) found a 20% reduction of risk of mortality observed in those who read books (for an average of 30 minutes per day), compared to those who didn't, suggesting a survival advantage, due to the effects that book reading had on cognition (i.e. social cognition skills) because of its immersive nature.

The impact of fiction involving sexual orientation and gender identity can also be seen on a group level. As mentioned in Limitations (Section 8.3), Dixon et al. (2013) stated that contact theory has yet to explain how attitudinal change in a high-status group member can influence other members' attitudes towards the low-status. Potential explanations of this influence might benefit from looking at whether the individuals' attitude change can have an impact on others' perception of what is typical or desirable in a group, that is, how norms are perceived. For Tankard and Paluck (2016), it is this perception of the norm, and not the norm itself, that is key for social change. Mass media can contribute to this change in perception (Bandura, 2011; see also the model of van Laer et al., 2014, for transportation which includes readers' pre-existing social norms). Research on media representation indicates that the quality of the portrayals of sexual and gender minorities shape the public's perception of, and behaviour towards, these minorities (e.g. Lee & Kwan, 2014; McLaughlin, & Rodriguez, 2017; Trans Media Watch, 2010). For instance, the "Bury your gays" trope (Chapter 2) can illustrate Tankard and Paluck's (2016) assertion that often a social norm is made salient by punishing those who deviate from it. That is, the storytelling device of giving LGBTQ characters a tragic story ending that relates to their sexual orientation or gender identity—regardless of the sympathy that this ending evokes in the audience—reinforces

the notion that such tragedy may have been avoided had the character not been a "sexual deviant"[22] (Miller, 2012; Whitney, 2018b).

In the present, sexual and gender minorities are producing narratives, fictional or not, to counteract their negative media portrayals. These narratives can be produced in a number of ways (photographs, documentaries, films, novels, autobiographies, personal stories), and can be widely shared through online platforms (Deshane, 2013). One example is the *It Gets Better Project,* in which LGBTQ individuals shared their personal experiences to reach out and comfort victims of anti-LGBTQ violence, while confronting its perpetrators, and eliciting awareness and empathy from cis-heterosexual individuals (Jones, 2015). As stated in Chapter 2, a non-fictional story can serve the same function of changing audience's attitudes as a fictional one, because both can be artistic and engaging. Non-fiction, however, conveys knowledge and facts; even if it portrays a personal experience and the audience can identify with it, the audience remains a spectator. On the other hand, fiction, as a simulation of selves and worlds (Mar & Oatley, 2008), allows the audience to "borrow" the characters' experience and make it their own, even if only temporarily.

The above considerations support the use of fiction as part of prejudice reduction interventions (Paluck & Green, 2009) in community contexts (see Section 8.3.7. regarding limitations to engage with fiction). Paluck's (2009) study of the impact of soap operas in Rwandan communities after the genocide is an important example of the social functions of fiction. Moreover, the increasing presence of complex representations of sexual and gender minorities in the media (e.g. GLAAD, 2017a) presents an opportunity for researchers to investigate how high-status and low-status groups become involved with, and respond to, societal trends that seek social equality.

## 8.3. Limitations and future research

> If I wasn't a transvestite terrorist, would you marry me?
>
> –Patrick McCabe, *Breakfast on Pluto* (Film version)

*Breakfast on Pluto* is the story of a young transgender woman who, in her search for her mother, inadvertently gets involved in attacks by the Irish Republican Army. Behind the quote cited above, there is a common ground between fiction and research: imagining possibilities that may have been within reach if it wasn't for actual constraints. This section addresses such

[22] For the non-fictional counterpart of this trope, see Schoeneman et al. (2010), who showed that public portrayals (i.e. social representations) of AIDS framed this disease as punishment for homosexual behaviour (e.g. "the Wrath of God", "Gay plague").

constraints in the context of this thesis, that is, the limitations of its five studies, as well as recommendations to overcome them in future research. These limitations are listed here. The first limitations relate to those specific to these studies, in terms of sample characteristics, measures, story content, and the use of implicit associations. Other limitations acknowledged in this research relate to the scope of contact theory applied to fiction studies, and the practical obstacles for fiction engagement.

### *8.3.1. Sample characteristics*

The samples in the four studies that addressed prejudice presented characteristics that the literature has consistently linked to low prejudice (Chapter 2). The majority of participants in these studies reported low scores on prejudice-related measures (RWA, SDO), were female, university students in the fields of social sciences and humanities, and left-leaning in their political orientation (Acker, 2017; Brandelli et al., 2015; Forscher et al., 2016; Norton & Herek, 2012; Nagoshi et al., 2008; Tebbe & Moradi, 2012). Participants from Study 1 reported regular contact with LGBTQ individuals, which also correlates with lower prejudice (Herek & McLemore, 2013), while the low transnegativity scores in Studies 2, 3 and 5 reflected those from other studies with university samples (Acker, 2017; McDermott et al., 2018). The sample in Study 5, similar to the *Transphobia Scale* validation study by Hill and Willoughby (2005), was older and more varied than an undergraduate population, and the majority of this sample reported lack of previous contact with transgender people. This latter characteristic was relevant in the association between fiction and transnegativity levels, that is, those who had no previous contact reported lower transnegativity levels (Vezzali et al., 2012; Vezzali et al., 2015; Johnson, 2013; Vincze & Harwood, 2013; West et al, 2015; West et al., 2017). However, most Study 5 participants had university-level education. Overall, the samples that took part in the studies of this thesis were unrepresentative of the general population, and findings from these studies can only apply to populations with similar characteristics.

Another limitation regarding the samples is the likelihood that these samples were self-selected, as the call for participants indicated that the studies were about reading/viewing stories. Those already interested in these activities were more likely to get involved in this research. Researchers of mediated contact might find it difficult to recruit samples with characteristics that correlate with high prejudice (Chapter 2), as individuals with these characteristics may not be motivated to get involved in university research (e.g. see Obstacles for fiction engagement below). Future studies should aim to include more varied samples, in terms of socio-demographic characteristics (i.e. more likely to hold higher prejudice towards sexual and gender minorities), and of their degree of daily media and fiction exposure.

### *8.3.2. Content of the stories*

All studies in this thesis used pre-existing stories that were available to the public. The key criterion to select them was the characters' group membership, in terms of sexual orientation or gender identity. For the four studies that addressed transgender issues (Chapters 5 to 7), this criterion included that the authors of the stories belonged to the same group as the protagonists (transgender or cisgender authors), to ensure appropriate representation of transgender characters. The limitation of this choice was that fictional narratives are multidimensional, built upon multiple components regarding plot, characters, style, mood, and extra-narrative features, all of which can be hard to match for comparison in case they produce different responses in an audience. In Study 5, the only study which used a non-fiction story as control, fiction and non-fiction were not matched on content, so it cannot be said whether it was the presence of the transgender character itself, or the genre of the text (fiction or non-fiction) which triggered the differences between conditions.

Researchers have pointed out that it seems unlikely that a single aspect of a story can be identified as the cause of attitudinal change (Bruner, 1986; Johnson, Jasper, et al., 2013; Schiappa et al., 2005). In the studies in this thesis, analysis of nuances between the stories, and the potential influence of these nuances on engagement with the story, were omitted to prioritise the comparisons based on character group membership. Nevertheless, the nature of the components of a story that make intergroup attitude change more likely can be pursued in future research. Previous studies on the nature of the outgroup representation in traditional contact (e.g. Brauer et al., 2012), and those that have successfully used fictional stories to improve intergroup attitudes (e.g. Małecki et al., 2016; Paluck, 2009; Vincze & Harwood, 2014) can inform this line of research.

### *8.3.3. Research design and measures used (and not used)*

The first limitation regarding measures was the cross-sectional design of the studies. Results thus refer mostly to the specific time in which data was collected, and it cannot be established whether differences observed in participants' responses to the stories remain over time. Additionally, the majority of measures in these studies examined responses to the specific stories presented as part of the experiment. Some questions were included to assess the participants' frequency of engagement with fiction (i.e. Study 1), but overall, long-term fiction engagement was not included as a factor that may have influenced the participant's engagement with a specific fiction piece. For these reasons, researchers investigating fiction as contact should include a longitudinal approach in these studies, to better capture the audience's constant relationship (or lack thereof) with fictional narratives.

Longitudinal measures of fiction engagement can be defined here in two ways. The first one involves examining participants' spontaneous engagement with reading and fiction over time (e.g. Vezzali et al., 2012). Except for the use of the Author Recognition Test (ART) in Study 4, this sort of measure in these studies was secondary and not included in the main analysis. A second form of longitudinal measurement of fiction engagement involves researchers actively providing participants with fiction pieces to read over a specific period, and then examining their responses of interest (e.g. Hormes et al., 2013; Małecki et al., 2016; Vezzali et al., 2012). In contact theory, the effectiveness of contact involves, among other conditions, sufficient time and required attempts (Cuhadar & Dayton, 2011; White & Abu-Rayya, 2012). In their study about media exposure/parasocial contact with transgender women, Solomon and Kurtz-Costes (2018) also asserted that long-term exposure to transgender female characters is needed for audiences to overcome the stigma they attribute to this group. Future studies should thus account for the degree of participants' engagement with fiction-related activities in their everyday lives, as a potential moderator, and to better elucidate the causal relationship between fiction exposure and prejudice reduction.

A second limitation for all studies was that there were no pre-post prejudice measures. Right-Wing Authoritarianism (Study 1) and Social Dominance Orientation (Studies 1 and 5) were measured before exposure to the stories, as a baseline estimation of sexual prejudice and transnegativity. Pre-post measurements were omitted to avoid alerting participants about the research themes at the start of the questionnaire, but due to the lack of parameters for comparison before and after exposure, it is not possible to speak of an effect of fiction on prejudice.

One last measurement limitation was the measures of prejudice that were used in the studies. In their meta-analysis of the effect of contact on sexual prejudice, Smith et al. (2009) found that conceptualisations and measures of this construct can vary among researchers. This variation, in turn, can influence the type of relationship observed between contact and prejudice. Moreover, Durrheim et al. (2016) stated that authoritative definitions of prejudice used by social psychology researchers can diverge from definitions by lay people. The literature on prejudice, in general and specifically towards sexual and gender minorities, suggests that this sort of measures may focus on certain aspects of prejudice and omit others.

What is, and what is not prejudice towards sexual and gender minorities, is a moving target. Durrheim et al. (2016), and Herek & McLemore (2013) explained that the way ordinary people define prejudice changes strategically to fit personal and societal goals, and to meet psychological needs (e.g. to perform one's identity as a member of a non-stigmatised group, to manage one's anxiety about contact with outgroup members). For instance, Cramwinckle et al. (2018) showed that heterosexual people who support formal rights and legal protections for gay and bisexual people can still reject public displays of affection between same-sex partners.

Another example comes from Elischberger et al.'s (2016) research, who found that adults who reported a positive attitude towards gender variance in children were still reluctant to allow a transgender child share gender-appropriate toilets and bedrooms with cisgender children, which suggested that participants suspected sexual motives from transgender youth.

Therefore, the operationalisations used in this study for sexual prejudice (Voci & Hewstone, 2003) and for transnegativity (Tebbe et al., 2014) may have fallen short in their measurement of this phenomena. Omitting the possibility of prompting socially desirable responses in participants, these measures may have elicited honest responses from participants, while failing to address other everyday domains in which prejudice can manifest (Tomsen & Markwell, 2009). Researchers should thus account for subtle and implicit forms of prejudice, by contrasting diverse operationalisations of the same construct, and using direct and indirect measures to complement one another (Gawronski & De Houwer, 2014).

### *8.3.4. Implicit associations and the importance of language*

The need to study implicit associations has been asserted by media psychology researchers (Blanton & Jaccard, 2015; Payne & Dal Cin, 2015), and, less frequently so far, in fiction studies (Johnson, Jasper, et al., 2013). This need derives from the understanding that direct measures cannot access evaluative associations cemented in the individual's social environment, and which are communicated within social networks (Hinton, 2017). In this thesis, Studies 2 and 3 (Chapter 5) used the Natural Semantic Networks Technique (NSNT) to access participants' social representations of transgender people. Study 5 (Chapter 7) used the Implicit Association Test (IAT) to assess participants' automatic evaluations of gender conforming and non-conforming men, as a proxy for transnegativity. Contrary to what was expected, the approach of this thesis to measuring implicit associations did not provide significant information about effects of fiction on social cognition.

The limitations regarding the validity and generalisability of results of the NSNT and IAT were discussed in their respective chapters, but, in general, these limitations stem from the lack of verified psychometric properties. While the NSNT has been analysed using quantitative approaches (Flores et al., 2015; Keczer et al., 2016), this measure was designed to quantify relationships between words (Valdes, 1998), but not to compare these relationships between groups. As for the IAT, as discussed in the previous chapter, it presents a series of difficulties when it comes to measuring transnegativity (i.e. the language and images used). Moreover, Study 5 opted for measurement of implicit evaluations of gender non-conformity in men as a proxy of implicit transnegativity, an equivalency that may work for theoretical but not for measurement purposes.

Despite the shortcomings of the associative measures, the use of such measures is highly encouraged in future fiction research. Previous research on semantic networks (e.g. DuBois et al., 2017; Keczer et al., 2016) and implicit transnegativity (e.g. Wang-Jones et al., 2017; West et al., 2017) can help build more robust measures in this regard. The study of implicit associations in fiction must involve language, in agreement with Bruner (1985) who stated that language imposes reality. Furthermore, Muth et al. (2015) posited that meanings that individuals attribute to an object are constantly changing, based on their interaction with their social environment. This is notable in the field of sexual and gender minorities studies, where part of the progress in making LGBTQ issues more visible to the public relates to shifts in language (e.g. the evolution of the meaning of the word "queer", from slur to reclaimed identity label, Clarke et al., 2009). Therefore, researchers examining fiction as contact should test the extent to which fiction influences ingroup audiences' associations and meanings regarding the outgroup; and whether these associations can "move" among individuals, to the point of becoming shared knowledge in the wider ingroup.

### *8.3.5. Limitations of contact theory*

The framework for this thesis was contact theory, which researchers champion as an important tool for prejudice reduction (Brown & Paterson, 2016; Hewstone & Swart, 2011). Nevertheless, researchers have pointed out several limitations of direct and indirect contact (Brandelli Costa et al., 2015; Case, Hensley, and Anderson, 2014; Cuhadar & Dayton, 2011; Dixon et al. 2005; Dixon et al., 2013; McDonald et al., 2014; Tausch, Hewston & Roy, 2009), which should be accounted for when interpreting research findings. Overall, contact is characterised as an individual-level intervention on members of the high-status group, to prompt changes in their perception and responses to low-status groups (Tankard & Paluck, 2009). Only those limitations that are considered relevant to contact through fiction are addressed here.

The first limitation is that the opportunity for contact through fiction with outgroup members may be presented, but ingroup audiences can disregard it. For instance, LGBTQ-themed literature has been proposed to counteract sexual prejudice and transnegativity in schools (Clark, Blackburn & Gardner, 2009; Curwood et al., 2009), but administrators, parents and other members in the communities can actively oppose the introduction of this literature (Banks & Gardner, 2009; Dittman & Meecham, 2006). Prejudice towards sexual and gender minorities involves cis-heterosexual individuals' perception of threat to personal values and deep-seated identity processes (Durrham et al., 2016; Herek & McLemore, 2013; Tausch et al., 2009). For these individuals, opportunities for contact can be "quietly endured but still resented" (Tomsen & Markwell, 2009, p. 214). Hence, cis-heterosexual audiences may not necessarily disregard media presence of LGBTQ groups, but paying attention to this presence can also exacerbate intergroup tensions (Brown & Paterson, 2016).

Related to the above, contact interventions using fictional narratives may not have the same effect on all individuals along the prejudice spectrum. Research shows that people with extreme negative intergroup attitudes are strongly resistant to change their attitudes, especially when these attitudes are linked to self-defining values (Asbrock et al., 2013; Cuhadar & Dayton, 2011) and social status (Guinote, Willis, and Martellotta, 2010). On the other hand, as has been discussed for the studies in this thesis, individuals on the extreme of low prejudice may also not benefit from contact interventions (Ku et al., 2015; Vorauer, 2008).

There is an obstacle faced by traditional contact theory that fiction studies may help overcome. This obstacle is the reported difficulty of surpassing individual level effects to influence attitudes at the group level (Cuhadar & Dayton, 2011; Tausch et al. (2009). Dixon et al. (2013) declared that the literature on contact is not clear how and why the transfer from psychological change (i.e. positive attitudes and emotions) to social change occurs. In other words, research has yet to translate individual attitudinal change into a collective one.

One channel for this transfer from psychological to social change, as it was suggested in Studies 2 and 3, may occur through social representations, starting by shifts in language. In this regard, Johnson, Jasper et al. (2013) proposed that reduction of implicit prejudice occurs via changes in semantic networks. These researchers found that participants who read a fictional story with Arab-Muslim characters reported an increase in positive semantic associations with Arab-Muslims (i.e. on a semantic differential measure). These associations can become, as Moscovici (1988) stated, the common ground between the individual and the collective; these associations can be shared among members of the group, and thus define or redefine the target group. A second channel that can help turning individual change into collective change, as described in Implications (Section 8.2.4), is the change in perception of social norms. Future studies should investigate the relationship between fiction exposure, semantic associations, and social representations. This line of research may further test whether media narratives can influence the overall social context in which these narratives circulate (see also Bandura, 2011).

Another limitation of contact to consider in fiction studies relates, coincidentally, to the use of language by contact researchers. This thesis speaks of prejudice reduction, which is a "prevention focus". In the context of imagined contact, West and Greenland (2016) advised that framing the goal as preventing negative intergroup emotions may backfire in these interventions, compared to using a "promotion focus" (i.e. promoting positive intergroup emotions). Phils et al. (2011) also suggested the use of a promotion focus in the reduction of implicit prejudice, that is, speaking of approaching equality (improving attitudes) rather than avoiding prejudice. The promotion focus discussed in these studies is meant for the participants, but research in line with this thesis can benefit from setting its aims in terms of approaching a positive outcome, as the

positive focus can better emphasise the significance of the research findings in everyday life (e.g. positive emotions towards a low-status group).

### *8.3.6. Obstacles for fiction engagement*

Stories abound in the social world, but there are certain boundaries to the impact they can have on audiences. These obstacles addressed here refer to individual differences in motivation and abilities to engage with fiction, and in the practicalities of everyday life (e.g. access to fiction). These obstacles may decrease the ecological validity of changes in social cognition seen in the lab.

The first obstacle for fiction engagement is that engaging with stories entails an important investment of time, mental energy, and money. Arts Council England (2017) asserted that the general public might perceive literary fiction as "difficult" and expensive, compared to other forms of entertainment, which are cheaper and less demanding of concentration. Findings from Study 5, however, as well as Oatley (2016b) and Kidd and Castano (2013), suggest that literariness of a story can contribute to the understanding of other people, but fiction does not need to be difficult or highbrow to move the audience. As suggested from some findings in Study 5, high quality of the stories might be less important than the elicited intimacy with the characters.

Two other obstacles for engaging with fiction is motivation and abilities. Outside fiction, Carpenter, Green, and Vacharkulksemsuk (2016) distinguished between the ability and the desire/willingness to understand the perspectives of others. Hence, those more open to imaginative, perspective-taking and empathetic experiences may seek fiction (Koopman, 2015; Panero et al., 2016). Findings from literacy and fiction studies have suggested that it is reading-related skills which determines motivation to read (Bergen et al., 2018; Oatley, 2016b; Panero et al., 2016). For instance, a meta-analysis by Mol and Bus (2011), about leisure time reading from childhood to early adulthood, showed that early print exposure stimulates language and reading development, which, in turn, stimulates the quantity of subsequent print exposure.

The issue of motivation to engage with fiction has another caveat: interest in, and engagement with fiction is due largely to choice, that is, to individuals self-selecting their narratives. Although the studies in this thesis did not show that intergroup attitudes (RWA, SDO, ingroup identification) had an impact on participants' engagement with the stories, previous research asserts that these attitudes can guide the audience's choices of media content (Payne & dal Cin, 2015). This was addressed as the first limitation of contact theory in the realm of fiction, where cis-heterosexual audiences may choose not to engage with narratives portraying sexual and gender minorities. Solomon and Kurtz-Costes (2018) pointed out at this difficulty in their study about media exposure to transgender women, stating that "self-selection may drive media exposure" (p. 44).

An additional limitation related to self-selection is that giving individuals an assigned/compulsory narrative with which they *should* engage, can significantly decrease their enjoyment of the narrative, and their overall engagement with it (Creel, 2015). Nevertheless, fiction can be an important component for prejudice reduction interventions, and there is at least one way to increase audiences' motivation to engage with fiction portraying outgroup characters: providing audience members with a variety of narratives (i.e. varying in genres, characters, formats, etc.) from which they can choose (Creel, 2015). From findings of this thesis and previous research, it can be asserted that the narratives offered to the audience must comprise immersive stories, and complex LGBTQ representation, in order to increase the likelihood of cis-heterosexual audiences engaging with them. Moreover, these narratives should emphasise group membership to different degrees, in order to reach out to sociodemographic audiences besides those already interested in the subject of sexual and gender minorities (Solomon & Kurtz-Costes, 2018). For instance, the choices presented to audiences should include stories that reveal the character's minority membership later on in the narrative (Kaufman & Libby, 2012), or emphasizing other aspects of the story or the characters besides their sexual orientation or gender identity.

The obstacles for engagement with written narratives in particular can be overcome by testing alternative forms for delivering fiction. For instance, Payne and dal Cin (2015) asserted that more immersive media experiences, such as video games, can also have effects on attitudes towards minority groups; these effects can range from increased negative stereotypes if the portrayal is negative (e.g. a game depicting Arab characters as terrorists), to reduced prejudice when portrayals are positive. Another immersive media experience comes from virtual reality (VR). Like fiction, VR entails a simulations of worlds, selves, and situations. Mantovani (1995) argued that fiction stimulates interpretation, while the latter aims for an interaction. For instance, VR presents "complete" environments, compared to the ambiguity or "incomplete sketch" (Mantovani, 1995, p. 678) of literary fiction, which the reader fills in with their own imagination. Nevertheless, VR can be a complementary tool in prejudice reduction interventions using fiction, as emerging research suggests that VR can enhance the experience of stepping into somebody else's shoes (Schoeller et al., 2019).

Lastly, there is the question of generalisability of fiction effects to everyday social cognition. Based on social cognitive theory, Joyce and Harwood (2014) stated that humans generalise learning from one context to others (see also Bandura, 2011), but changes in social cognition prompted by fiction exposure may be context-specific. This specificity was reported by Bischoff and Peskin (2014), who found that writers and non-writers did not differ in perspective-taking abilities. Also, Abad and Pruden (2013) questioned that children's decreased gender stereotypes after reading gender-atypical storybooks translated to gender belief changes in other domains of their life that are not addressed in those books. A third example comes from Joyce and

Harwood (2014), who warned that improved attitudes towards one group after fiction exposure does not necessarily transfer to other groups. In sum, as Bruns (2016) states, acquiring a repertoire of selves and experiences through fiction does not necessarily entail the capacity to intervene in the world.

Acknowledging these obstacles does not diminish the value of fiction as a tool to reduce prejudice, but rather adjusts researchers' and the public's expectations regarding what can be achieved through it. Brown and Paterson (2016) underscored that using stories as indirect contact has stronger effects when combined with post-story, nonfiction-based interventions. In the realm of contact with transgender people, McDermott et al. (2018) supported this assertion by showing that transnegativity can be further reduced by combining direct and mediated contact. This mixed intervention included both fictional and non-fictional narratives, that is, it targeted participants' subjective experiences as well as objective knowledge (i.e. facts) about transgender people. As Bischoff and Peskin (2014) suggested, those who engage with fiction can maximise the socio-cognitive benefits of this engagement if they balance this activity with regular face-to-face interactions.

## 8.4. Conclusions

> —Is [the newborn] a boy or a girl?
> — I'd think it's a little early to start imposing roles on it, don't you?
>
> —*Monty Python's The Meaning of Life*

Fiction is a simulation of social worlds, a creation of possibilities. Hence, researchers have attempted to capitalise on narratives to improve relationships between individuals in everyday life. This research demonstrates that fiction can be a safe space for low-status individuals to express themselves and communicate with one another (Deshane, 2013; Elderton et al., 2014; Vincze & Harwood, 2013); and it can be a safe space for high-status individuals to learn to feel at ease with low-status peers (Johnson, 2013). In other words, fiction, when it is engaging and presents complex characters, can be a safe space for cis-heterosexual and LGBTQ individuals alike. In this sense, fiction pushes forward beyond the coexistence approach of contact theory (Hammack & Pilecki, 2015). As they establish commonality between groups, fictional narratives can, at the same time, emphasise the different identities at play between groups. A good story can be useful for both sexual and gender minorities and the normative group, promoting the acceptance of differences while finding a common ground (White & Abu-Rayya, 2012).

This thesis showed that cis-heterosexual individuals exposed to fiction portraying LGBTQ individuals can report lower prejudice towards them; and that this same exposure can also be associated with positive experiences for LGBTQ individuals themselves. However, there are mechanisms that account for this association. In these studies, with low-prejudice individuals, the association between fiction exposure and prejudice reduction was not moderated by individual differences related to group membership, such as identification with one's group, RWA, and SDO. Instead, the relationship was mediated by emotional engagement with the story.

Group membership is one of the first sources of social knowledge about oneself and others. Fiction can expand a person's worldview because, as a simulation of social worlds, it is inhabited by social groups of all kinds. In the realm of sexual and gender minorities, fiction can help uncover the complexity of experiences linked to one's sense of self, which are, at best, ignored or misunderstood in the real world. Cisgender and heterosexual individuals who encounter narratives from their LGBTQ counterparts can learn about them, and even adopt their point of view, not through facts but through simulated emotional experiences. Fiction allows audiences to experience this aspect of the social world: Normative and non-normative sexual orientations and gender identities comprise the diversity of human existence. Fiction works as contact because it does not tell us about this diversity, it shows it.

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# APPENDIX A

# LIST OF STORIES USED IN EACH STUDY

| Study No. | Experimental conditions | | | Control conditions | | |
|---|---|---|---|---|---|---|
| | Title | Synopsys | Medium | Title | Synopsys | Medium |
| Study 1 | *Pride* (2014) | A group of gay men and lesbians raise funds to help a miners' community. | Film trailer | Imagined contact script with a gay person | Participants were asked to imagine getting help from a gay person to promote a cause they cared about. | Text |
| | *Lilting* (2014) | A man attempts to connect with the mother of his deceased same-sex partner. | Film trailer | | | |
| | *Fakes* (Sylvia Chutnik) | Neighbours suspect that a kind and helpful man is gay. | Short story | Imagined contact script with a stranger | Same script as above, but participants were asked to imagine getting help from a stranger. | Text |
| | *Grace* (Isabel Roper) | A police officer struggles to be open about her same-sex life partner with her colleagues at work. | Short story | | | |
| Study 2 | *How to stay friends* (Casey Plett) | A trans woman reunites with her ex-girlfriend six months after transitioning. | Short story | *The Bet* (Anton Chekhov) | A man reflects on a 15-year long bet with another man who became his prisoner. | Short story |
| Study 3 | *I met a girl named Bat who met Jeffrey Palmer* (Imogen Binnie) | A woman contacts a message board user who met her idol. | Short story | *Eyewall* (Lauren Groff) | A woman recalls her past amid a hurricane. | Short story |
| | *Birthrights* (M. Robin Cook) | A husband is caught by his wife trying on women's clothes. | Short story | *The Vandercook* (Alice Mattison) | A man sees his wife overtaking his family's print-shop. | Short story |
| Study 4 | *Her Story* (Episodes 1, 2, and 4). | Violet, a waiter, and Paige, an attorney, are two trans women living in Los Angeles. | Web-series | *Martians might be real. That's what makes Mars explorations more complicated* (Wired magazine) | An article about Mars exploration. | Science article |
| | *What decent people do; To finish the row* (Suzie Chase) | Transgender women deal with romantic relationships. | Short story | | | |
| Study 5 | *Her Story* (Episode 1) | Violet, a waiter, and Paige, an attorney, are two trans women living in Los Angeles. | Web-series | *Darwin* (Episode 1) | The life of a failed "life coach" and his family. | Web-series |
| | *To finish the row* (Suzie Chase) | A conversation between an elder woman and a trans woman. | Short story | *Colours* (Nathan Webber) | A romantic relationship examined through a song. | Short story |