SOCIAL MEDIA FOR SOCIAL GOOD:

Understanding, creating, and harnessing

the strength of parasocial relationships

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Abstract

Social media is often criticised for detracting users from the benefits of the 'real' world, but are there situations where the connections we form with social media personalities benefit us, despite them not knowing we exist? Across seven studies ($n = 4491$), this thesis focuses on the concept of parasocial relationships. Such one-sided connections formed by masses of viewers towards single parasocial targets can develop in multiple environments, but this research uses social media as a tool - specifically the connections formed by viewers towards creators on the YouTube platform - to explore parasocial relationships in three ways. Firstly, to understand the place of parasocial relationships in our social networks, and their influence on emotion regulation, wellbeing, and behaviour. Secondly, to determine the psychological mechanisms that create and strengthen one-sided relationships with parasocial targets, and thirdly, to establish whether the power of these relationships can be harnessed for prosocial change. The present research found that unidirectional parasocial ties were considered to be more effective at fulfilling emotional needs than bidirectional weak ties, and in some contexts, just as effective as bidirectional strong ties (e.g., close friends and family; Studies 1 & 2). Parasocial targets were also perceived as closer than, and just as responsive as, weak ties (e.g., acquaintances; Studies 1 & 2), perceptions that increased when participants felt strong ties were under threat (Study 3). Parasocial relationship strength also intensified wellbeing and behavioural outcomes of emotion regulation strategies (such as seeking information or focusing on positivity) during the coronavirus pandemic (Study 4). Further, unidirectional self-disclosure, in various forms, was established as a mechanism for creating parasocial relationships (Studies 5 & 6). Finally, parasocial relationships with someone disclosing about mental health issues resulted in lower levels of prejudice, encouraging prosocial societal change (Study 7).

Declaration

I do declare that this thesis, Social Media for Social Good: Understanding, creating, and harnessing the strength of parasocial relationships, represents my own work, except where otherwise stated. None of the work referred to in this thesis has been accepted in any previous application for a higher degree at this, or any other University or institution. All quotations have been distinguished, and all sources of information specifically acknowledged. I was responsible for experiment design, data collection and analysis, and writing, under the guidance of my supervisory team. Additional contributions for each section are detailed below.

Submitted by Shaaba Lotun.

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Additional Contributions

Chapter 1| Introduction. I am the primary author of this section.

Chapter 2 | Understanding. I am the primary author of this section. A version of this chapter has been submitted for publication. Lotun. S., Sandstrom. G. M., Matran-Fernandez. A., Lamarche. V. M., (in preparation for submission), Subscribe to my friendship: Parasocial relationships and emotional need fulfilment. I designed the experiments, collected the data, conducted analyses, and prepared the manuscript. Veronica Lamarche and Gillian Sandstrom provided design guidance, intellectual contributions, analysis support, and edited the manuscript.

Chapter 3 | Understanding During COVID-19. I am the primary author of this section. A version of this chapter has been accepted for publication. Buchanan. K., Aknin. L., Lotun. S., Sandstrom. G. Brief exposure to social media during the COVID-19 pandemic: Doom-scrolling has negative emotional consequences, but kindness-scrolling does not. I designed the YouTube experimental study, collected the data, conducted analyses, helped prepare the manuscript of the paper, and wrote this thesis chapter. Gillian Sandstrom, Kathryn Buchannan, and Lara Aknin provided design guidance, intellectual contributions, analysis support, and contributed to the paper manuscript. Gillian Sandstrom edited the thesis chapter.

Chapter 4 | Creating & Strengthening. I am the primary author of this section. I designed the experiments, collected the data, conducted analyses, and prepared the manuscript. Gillian Sandstrom, Veronica Lamarche, and Ana Matran Fernandez provided design guidance, intellectual contributions, analysis support, and edited the manuscript.

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Chapter 6 | Discussion. I am the primary author of this section.

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With YouTube in mind, I would also like to thank my fellow creators for making this research possible, many of which I consider good friends. I will never forget your contributions with recruitment, stimuli, and of course, playing ping pong. Thank you also to my viewer community, for not only being participants, but also for your encouragement. I don't know what I've done to deserve such a wholesome community, but I am grateful to have found you.

Alongside these contributions, I would also like to acknowledge the equally invaluable personal support. Throughout a PhD, yes, but also a global pandemic, family turbulence, losing and gaining loved ones, moving house, and wedding planning - three times, no less.

To my special loved ones, thank you for accommodating my rants and celebrating my successes. Your support means more to me than words can express. Alex, Nate, Stefan, Will, Lucy, Ollie, and more, you are my chosen family, and I appreciate you. Thank you to my mum for your good intentions, to my dad and Lindsay for reminding me I'm good enough, and to Aunt Zoubie and Uncle Mo for believing in me. Thank you also to Christine and Malcolm, for your love, support, and top-tier dad jokes. If it wasn't for you, I wouldn't have any degree, and I am lucky to have you in my life.

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You have all helped me more than you realise, not just with my PhD, but for the rest of my life, and I am forever grateful.

If you take anything away from my research, I hope it's the importance of feeling seen, feeling loved, and feeling supported. We all deserve to feel this, even if it's from the people and places we least expect.

COVID-19 Impact Statement

The global pandemic that began in Spring 2020 has impacted every aspect of life for far longer than expected. Consequently, postgraduate candidates were asked to consider including a statement, outlining the effects of COVID-19 on undertaken research. Whilst I hope the consideration and application of my research will outlive the pandemic's restrictions that continue to be felt worldwide, I acknowledge that COVID-19 has impacted my doctoral research journey, both directly in terms of research, and indirectly in terms of general life, which I feel is important to address. The pandemic has changed the direction of my research and methods used, but I strongly believe that the academic standard has not faltered, nor has my intention to present original contributions of intellectual rigour.

The University went into lockdown after I began my second year. I had completed three studies and was two days away from commencing electroencephalography (EEG) data collection. Since then, I have not been able to return to campus and have been working from home, prompting a complete redesign of my research. With supervisory support, I altered my research timeline and explored alternative methodology to collect data virtually instead. Dr Matran-Fernandez kindly provided additional research funding that allowed me to access paid online subject pools, and Dr Sandstrom helped me recruit a team of research assistants, a process that has helped me develop multiple transferrable skills. During the inevitable research procedure delays, Dr Sandstrom and I designed and conducted an entirely new study to analyse PSRs within the context of the pandemic (Study 4). Further, the inability to collect EEG data resulted in using less-preferable methods to measure implicit behaviour for Study 7 which did not confirm hypothesised results in ways that EEG was more likely to do. I am grateful for the dynamic supervisory support provided during this turbulent time.

The pandemic also indirectly effected my doctoral journey as many scheduled opportunities to network and collaborate were cancelled, including two training courses and three conferences taking place nationally and abroad. Despite this, I am grateful to the two institutions that swiftly organised virtual replacements of research events that I could attend from home, including the Three Minute Thesis competition of which I placed runner up.

Finally, I would like to acknowledge the tertiary effects on everyday life that also impacted my research experience. Let me begin by extending my deepest sympathies to those worldwide who have been hurt most by this pandemic, as I humbly recognise my privilege to have my health, financial scholarship support, and a place to live and work. Like most people, my wellbeing has been impacted during these difficult times in ways of extenuating circumstance. I lost two loved ones, and experienced great levels of stress with delaying and re-arranging both moving house and getting married, milestones that are already considered stressful in ordinary circumstances. The additional stress this has caused whilst not being able to see my loves ones indeed affected my motivation and wellbeing, and I am certain I am not alone in feeling this way.

Despite the obstacles faced by COVID-19, I truly believe I have emerged as both a stronger researcher, and person. I would like to think that my research has not suffered, but instead, taken an alternative direction that allows me to revisit my initial research intentions in the future. This pandemic has highlighted how much I value my supervisory team and close support network, the aspects of life that are truly important, and in terms of my research, has also highlighted another way in which parasocial connections can be of value to society.

I thank the university for their ongoing support to student and staff with regards to the pandemic, and remain optimistic as the world shows signs of healing from this historical event.

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CHAPTER 1 | INTRODUCTION

Have you ever wanted to have a coffee with the six Friends in Central Perk? Or join a house and cast spells at Hogwarts? Perhaps you watch weekly YouTube videos or follow updates from a favoured celebrity. And perhaps you feel that if you were to spend time with any of these beings, you would be good friends. You would not be odd for feeling this way, many people do. This is because humans have the capacity to form unidirectional psychological bonds, known as parasocial relationships, with real and fictional entities (Horton & Wohl, 1956).

> Rewatching Schitt's Creek and while I understand that
> David Rose is a fictional character I also understand that I
> would die for him
>
> 2:22 AM · Apr 26, 2021 · Twitter for iPhone
>
> **653** Retweets   **36** Quote Tweets   **6,622** Likes

This thesis explores parasocial relationships (PSRs) in the context of social media, and this introductory chapter begins by outlining personal motivations for conducting this research. It continues to review the existing literature in the field of social media, parasocial relationships, relationship formation, and prosocial intervention, all areas that are explored within the present studies. This chapter concludes by setting out the research objectives and organisation of this thesis.

1.1 Personal motivations for pursuing this research

Before choosing to embark on this postgraduate research project, I had been a professional content creator in the online media industry for five years, and generally creating on social media for many years before. The 'professional' aspect was not intentional, I might add. I

began to create content on YouTube for two reasons: first as an outlet for creative expression, and secondly as a means to share the unique journey my partner and I had gone through (to document the experience for ourselves, and because it felt nice to know that we were not alone in our struggles to feel anything other than comfortable with our authentic identities).

When I first discovered social media, the content presented on my feeds felt empty, a superficial means of entertainment at best. But as time went on, I discovered corners of YouTube that seemed to serve a greater purpose. Niche pockets of creators were using social media as a unique form of self-disclosure. Those from minority groups, or who possess characteristics that mainstream society would often discriminate against, were sharing their personal journeys and gathering large numbers of invested viewers along the way. LGBT+ people, people of colour, people struggling with physical and mental health, and so on. Self-expression, self-therapy, and providing advice for others in similar situations, were all motivations that creators seemed to have for disclosing in this way, and as a creator myself, it felt incredible to be a part of something bigger.

Money, however, was not a motivation, as the idea of 'doing social media for a living' was not properly introduced until the mid-2010s. This brings me back to my unintentional profession, as before this time, creators were seen as a little odd. Through the worst lens, they were social rejects who turned to the internet for company, a far cry from the fashionable and financially thriving jetsetters that people typically think of when they hear the term 'YouTuber' today. The catalyst of this change in perception was marketing. Enabling advertising revenue and brand placements on videos presented opportunities to monetise, which in turn attracted more people to create and develop audiences with millions of viewers. It revolutionised the

landscape of social media platforms like YouTube, as the bonds created by viewers towards their favourite creators began to be harnessed for corporate gain.

I began to wonder whether, beyond monetary value, the trust that viewers felt towards creators, and the influence that creators were now recognised as holding, could be used beyond profitable campaigns. Specifically thinking about the niche creators who shared their personal journeys, I began to wonder if this influence could be harnessed to better society. It was with this motivation that I discovered the psychological concept of parasocial relationships. Recognising the lens that motivated me to conduct this research - as a creator and invested user of social media – also meant being able to recognise and navigate around any potential bias that could affect its quality. I set out to understand how these parasocial bonds were formed, what benefits they could provide compared to our in-person social networks, and ultimately, whether they could be used for prosocial change.

1.2 Introducing viewer-creator PSRs on social media

To date, an oligopoly of social media platforms dominate the market and have become household names, notably YouTube, Instagram, Twitter, Snapchat, and most recently, TikTok (Robinson, 2020). Each platform allows people to create an online identity and discover other users sharing their thoughts and interests in text, image, or video formats. Users may also choose to immerse themselves further by actively interacting with other users, such as virtually replying to posts with electronic text comments, or reacting to posts with electronic emojis, or with the notorious 'like' symbol.

This thesis particularly focuses on the social media platform YouTube, the largest video sharing platform in the world. Whilst anyone can create a YouTube account and upload videos,

users that are more notable, as determined by the number of subscribers they possess (viewers who choose to receive active notifications of their online activities) and the number of views they receive, are known as 'creators', 'influencers', or 'YouTubers' (Holmbom, 2015). Specifically, this thesis is particularly interested in the PSRs formed between creators that upload videos of themselves talking about their own lives and experiences onto YouTube, and the viewers who regularly watch their content.

This is different to social media relationships between two users who both know each other and mutually reciprocate via online platforms. Such user-to-user social media relationships can have benefits of their own, sustaining a sense of belonging among communities that span geographical and temporal distances (Keep & Amon, 2017), which in turn, is often associated with better health outcomes (Tomaka, Thompson, & Palacios, 2006), life and relationship satisfaction (Mellor, Stokes, Firth et al., 2008), and reduced stress (Young, Russell, & Powers, 2004). But viewer-creator PSRs are not mutually recognised by both parties, they are only recognised by viewers towards creators. Whilst this thesis does not explore the relationship formed by creators towards viewers, it is worth noting that such a bond may exist, but generally towards a community of viewers depicted to creators by a numeric value of subscriber or view count, not as individual people.

1.3 Does social media cause harm?

One of the primary reasons this thesis focuses specifically on PSRs formed on social media, is because of the inherently bad reputation that social platforms have received in relation to their effects on young users. In most cases, the negative effects of new online technologies are broadcast with concern. Social media has been found to be more addictive than smoking or alcohol (Hofmann, Vohs, & Baumeister, 2012), and has generally been linked to lower

wellbeing (Allcott, Braghieri, Eichmeyer et al., 2020). Having an online profile has been reported to decrease wellbeing in young users (Devine & Lloyd, 2012), older adolescents (Jelenchick, Eickhoff, & Moreno, 2013), and users across the world (Best, Manktelow, & Taylor, 2014; Vandoninck, d'Haenens, & Roe, 2013).

However, instead of painting all social media with a negative brush, research over the years has found that the impact of social media (and online technology as a whole) is more nuanced than that. As more recent findings focus less on variables concerning the intensity of social media use, and more towards the impact of different online activities (Best et al., 2014), it seems that different contexts of social media allow for positive and negative effects. For example, posting on social media benefits wellbeing, whilst solely observing does not, (Verduyn, Ybarra, Résibois et al., 2017). Active Facebook participation by users who regularly share and communicate with others online does not negatively affect wellbeing (Bailey, Matz, Youyou et al., 2020) whilst passive consumption can (Verduyn, Lee, Park et al., 2015). Similarly, receiving positive feedback online increases self-esteem, whilst negative feedback diminishes it (Valkenburg, Peter, & Schouten, 2006).

As types of activities contextually determine the impact of social media on wellbeing, particular platforms contribute towards this nuance. Multi-million-pound industries have been built around one's desire to self-represent idealistically online, with popular apps like Facetune providing the ability to virtually modify the smallest of appearance features, editing how one presents to others (Chua & Chang, 2016). Some apps such as TikTok have built-in features set automatically to airbrush and contour skin, all tools that encourage users to virtually curate their online selves (Hogan, 2010). Whilst it is clear to see how using such tools regularly can lead to distorted feelings about one's image, research has indicated that Facebook users for

example, are more likely to express their actual personalities rather than idealised (Back, Stopfer, Vazire et al., 2010). When analysing different social media platforms and their effects on wellbeing, The Royal Society for Public Health found that more image-based platforms that are known for manipulation (e.g., Instagram) fared worst, providing a net negative impact. Meanwhile, platforms that allow for greater authentic expression (e.g., YouTube) fared best, and had a net positive impact overall (Cramer & Inkster, 2017). Such findings further speak to conflicting findings on the effects of social media on wellbeing.

Figure 1

You Tube / YouTube

-1   -0.5   0   0.5   1

Health awareness
Access to health information
Emotional support
Anxiety
Depression
Loneliness
Sleep
Self-expression
Self-identity
Body image
Real world relationships
Community building
Bullying
FoMO
Average weighted score

Instagram

-1   -0.5   0   0.5   1

Awareness
Access
Emotional support
Anxiety
Depression
Loneliness
Sleep
Self-expression
Self-identity
Body image
Real world relationships
Community building
Bullying
FoMO
Average weighted score

The impact of YouTube and Instagram on wellbeing factors (where 1 = better and -1 = worse) taken from the #StatusOfMind report, Cramer (2018), The Royal Society for Public Health

Some research claims that there is little good evidence that using technology decreases mental health (Dickson, Richardson, Kwan et al., 2018), nor that social media becomes more harmful over time (Vuorre, Orben, & Przybylski, 2021). Others suggest that the beneficial outcomes of social media may vary depending on who uses it. Adults with autism spectrum

disorder for example, have been found to be happier when using social media sites such as Facebook compared to those who do not, and social media consumption in moderation has even been suggested as a protective factor against secondary mental health concerns, such as depression, within this particular population (Ward, Dill-Shackleford, & Mazurek, 2018). Further claims state that social media effects are often conflated with other human behaviours such as bullying (Orben & Przybylski, 2019), and in reality, social media's contributions to negative wellbeing tend to be very small or non-existent (Heffer, Good, Daly et al., 2019; Valkenburg, Meier, & Beyens, 2021). In fact, concerns over the impact of digital technologies have been seen to slalom alongside societal apprehension as they are gradually adopted by younger communities (Orben, Tomova, & Blakemore, 2020). This always seems to have been the case, as dime novels were accused of eliciting mania and risk taking (Furedi, 2015), comic books for antisocial behaviour and maladjustment of readers (Wertham, 1954), and radio dramas for predisposing listeners to anxiety and illness (Preston, 1941). Most popularly, video games have been consistently seen as guilty of encouraging violence and criminal activity (Bushman & Anderson, 2002), accusations which have since been refuted (Drummond, Sauer, & Ferguson, 2020).

Whilst deconstructing arguments that pose media (and particularly social media) as negative, positive effects have also been reported. Authentic self-expression on social media has been found to predict greater life satisfaction regardless of individual differences (Bailey et al., 2020), and editing one's social media profile has also been found to increase self-esteem and positive self-view (Gentile, Twenge, Freeman et al., 2012). Such positive findings are relieving to see, as social media continues to become a pervasive part of modern social life (Wilson, Gosling, & Graham, 2012). It has revolutionised how we share information individually and as a society, with 25% of people choosing to use the aforementioned main

platforms worldwide (Whiteman, 2015). Over 80% of Americans use social media to communicate, 75% of them daily (Clement, 2019). But despite its increasing prominence and the fact that 91% of young adults regularly use social media in the UK, research has only recently taken an interest in assessing its impact more recently (Cramer & Inkster, 2017), and very little research has examined the impact of the parasocial relationships formed on social media specifically.

In recognising that social media can have a varying impact on wellbeing based not only on whether people *use* certain platforms, but also *how* they use them (Bailey et al., 2020), this thesis aims to determine whether PSRs are one of the contexts that can benefit social media users.

1.4 The potential of social media

Not only is there evidence that social media may not harm users, in certain contexts it also presents considerable capacity for good beyond improving wellbeing too. Such opportunities include social media's ability to address mental health issues and promote self-expression (Cramer & Inkster, 2017; Farnan, Snyder Sulmasy, Worster et al., 2013). These online platforms also provide a space to socialise that has unique benefits compared to socialising in-person.

The theory of preference of online social interaction attempts to explain this benefit (Caplan, 2003). It suggests that our want to communicate online is a cognitive individual difference construct, which we create through believing that people are more safe, confident, comfortable, and successful via this method in comparison to traditional in-person socialising. This could be because social interactions online have certain affordances that we do not benefit

from in in-person interactions, such as conversational control where we can determine how and when to respond, and editability which allows us to consider and re-write responses before we send them (Fox & McEwan, 2017). Such features can be particularly useful for people who experience social anxiety (Coduto, Lee-Won, & Baek, 2020), and can seem even more valuable in specific online platforms such as dating apps. This is because they allow people to choose who they interact with in the first place, and determine how long they wish to wait before responding (Ramirez, Sumner, Fleuriet et al., 2015).

These benefits of control make social media a powerful tool, as they allow individuals to maintain a social network, particularly those who are concerned that they may struggle or become isolated due to a lack of interpersonal skills (Segrin, 1990). However, some research suggests this can come at an expense too. The social skills model of problematic internet use (Caplan, 2005) recognises individual preference for online social interaction particularly with those who fear (or lack confidence when) interacting, but states that this could result in compulsive use where individuals substitute online communication in place of in-person interaction altogether. Like many things, social media could become harmful if overconsumed.

When social media is used non-excessively, though, as well as helping those with anxiety, it can also aid identity development. Adolescents increasingly rely on peers for social support (Furman & Buhrmester, 1992), but this support can also come from parasocial relationships. People spend more time alone during adolescence than in any other point in their lifespan (Larson, 1997). As one shifts away from identification with parents in this critical phase of identity development (Cramer, 2001), media figures, such as social media content creators (and the PSRs we form towards them), provide us with examples of how to think and feel in different circumstances (Larson, 1997).

These PSRs may act as 'secondary attachments', distant figures that play a transitional role during the adolescent period (Erikson, 1968). Parasocial partners do not only act as occupational role models or social entertainment (Maltby, Houran, Lange et al., 2002), but can also serve social and emotional functions (Giles & Maltby, 2004). Such functions could be considered more trivial, for example, most young adults report strong attractions to celebrities (Boon & Lomore, 2001). They can also serve more meaningful functions, being likened to extended family (Hermes, 1995) where gossiping about media figures with in-person ties has been proved important to develop shared standards of morality.

In addition to develop the identity of social media users on an individual level, benefits to wellbeing also seem to be possible from an overall sense of 'fan identity' (Vinney, Dill-Shackleford, Plante et al., 2019). Fan identity occurs when individual social media users who derive enjoyment from a single source, feel a sense of unity with others because of this enjoyment. An example of a single source could be a parasocial partner, such as a loved actor, book character, or member of the royal family. Not only has fan identity been related to overall wellbeing, social fan identity has also been related to relationship wellbeing specifically (Vinney et al., 2019).

Overall, parasocial partners can seem to function as healthy extensions to our social networks (Giles & Maltby, 2004), and may also be a nuanced context in which social media can further benefit its users. With this in mind, it may be that PSRs already help us as bidirectional ties do. This is a question this thesis intends to explore, understanding the role of PSRs in regulating emotion generally, and during the context of the pandemic.

1.5 Understanding PSRs

A term coined in the fifties, PSRs have been created with parasocial targets on various mediums over time, such as characters in live theatre, animated television shows, celebrities, and even royalty (Brown, Basil, & Bocarnea, 2003; Horton & Wohl, 1956; Rubin, Perse, & Powell, 1985). Despite their one-sided nature, people often feel like they 'know' the parasocial targets they are being exposed to, even if this acknowledgement is not reciprocated. Typically, non-parasocial connections are qualified by two parties mutually depending on each other (Kelley & Thibaut, 1978), but PSRs provide a unique circumstance where this does not, and cannot, happen. Take David Rose for example, one of the most beloved characters from the television sitcom *Schitt's Creek*. As a fictional being with no capacity to think, receiving acknowledgement from him would be quite literally impossible. Even in rare interactions with 'real-life' PSRs (such as a chance encounter with Dan Levy, the actor who plays David Rose), the mutual interaction experienced is fast and fleeting, never amounting to meaningful responsiveness. It is therefore surprising that we form such bonds. What benefits could one possibly derive from a parasocial partner who may never know that we exist?

One potential answer is that parasocial targets within media serve as a surrogate for us to experience belonging (the social surrogacy hypothesis; (Derrick, Gabriel, & Hugenberg, 2009), as technological advances 'deceive' our mind into thinking needs have been fulfilled (Pinker, 1997) even when a real bona-fide belonging is not being experienced. This is because the human brain processes media experiences in a similar way to direct experiences, so people typically react to media characters as they would to real people (Kanazawa, 2002). Parasocial relationships may not seem 'bona-fide', but the benefits they provide are still real to the people experiencing them. This could explain why people who watch more television feel like they

have more friends (Kanazawa, 2002). It does not mean that people form relationships with their television, but that televised media acts as a vehicle for parasocial relationships to form (Derrick et al., 2009), as regular watching allows people to immerse themselves into a recognisable world in which to make these connections (Eyal & Cohen, 2006).

A further clarification to be made, is that parasocial relationships are still interpersonal, and they are still two-sided. This is because they still involve more than one person, even if the disclosure itself is one-sided. For the purpose of this thesis, the term 'bidirectional relationships' will be used to refer to in-person connections (as they exhibit equal mechanisms of disclosure between the people involved in the relationship), and 'unidirectional relationships' or 'unidirectional PSRs' when referring to PSRs in a comparative way to bidirectional relationships.

Previous research has established the existence of PSRs across many mediums, including television, radio, and most recently, the internet and social media. Media use has increased, with it consuming multiple hours of our lives on a daily basis (Larson & Verma, 1999), and a lot of this time is spent on social media (Clement, 2019). But despite this greater prevalence, the exploration of PSRs on social media platforms in particular, remains under-researched.

1.6 The evolution of and differences within PSRs

As this introduction has so far demonstrated, PSRs cover a wide array of targets. From fictional characters to real beings, humans and animals to completely abstract figures, and traditional media celebrities to personalities on social media. The one unifying trait of PSRs, is that they are supposed to be one-sided (Horton & Wohl, 1956) where the disclosure is

unidirectional from the parasocial partner towards the person forming the PSR, who in turn, has no capacity to respond.

It is however, important to note three reasons used to suggest PSRs are *not* truly one sided. The first reason is categorical and concerns the difference between fictional and non-fictional parasocial targets. Fictional targets simply do not have the means or capacity to exist beyond their creators. Take, for example, a cartoon character such as Winnie the Pooh. Regardless of how much one may relate to Winnie and wish to converse with him, this fictional being will never be able to respond, demonstrating true unidirectionality. When we compare such fictional parasocial partners to non-fictional ones, such as a social media creator online, the concept of unidirectionality seems less black and white, as there *is* a capacity for viewers to respond to their parasocial targets. For example, viewers can interact with creators in a manner beyond passively watching by liking or disliking content (with a virtual thumb symbol) and can send comments that can even be read and acknowledged by creators. Since the notion of social media creators has boomed in recent years, commercialisation of these roles also means that viewers are able to attend conventions and see creators in-person, or purchase tickets to live shows, tours, and 'meet and greets'.

Distinctions between fiction and non-fictional media have also been made in other academic contexts. For example, participants who read fictional extracts have been found to experience social support, whilst non-fictional reading was negatively related to social support, and instead associated with loneliness (Mar, Oatley, & Peterson, 2009). If fiction and non-fiction can be distinguished in terms of supportive outcome, it may seem plausible to argue that fictional and non-fictional cannot fall under the same umbrella of 'PSR'. However, despite the additional opportunities of interaction that non-fictional parasocial targets may be able to

provide, viewer-creator connections still largely remain parasocial in nature. They are still unlikely to know the names of, or maintain any form of genuine connection with the hundreds, thousands, or sometimes millions of viewers who follow them. Unlike the bidirectional relationships we maintain with our in-person loved ones who can listen to us rant after a difficult day, creators, celebrities, and all forms of 'real life' non-fiction parasocial partners do not have the capacity to respond meaningfully, and should thus still be considered parasocial targets, in a similar vein to fictional parasocial targets.

The second reason to suggest PSRs may not be truly one-sided, is the evolution of technology. Since the coining of the term 'PSR' in 1956, internet and social media developments have been vast and pervasive, and the capacity of PSRs seem to have evolved too. As a result of social media, PSRs that were once identified broadly have gone from a limited context to a whole myriad of potential PSRs within different contexts, some of which do allow for a sense of reciprocity. Take celebrities for example, an actor or a musician who may once have only been reachable through seeing their work (such as a movie or concert), or incredible rare chance encounter, may now also engage in more personal self-disclosure online (Kim & Song, 2016). A musician that once may only have communicated information through curated lyrics in a song can now share their weekend plans with their millions of listeners through a single tweet. This enhances viewer feelings of social presence and positively affect PSRs, as does the act of retweeting what a creator publishes (Kim & Song, 2016), but importantly, the additional disclosure opportunities presented by technology advancements still do not match the meaningful reciprocity of bidirectional relationships with close friends and family.

Social media perhaps makes non-fictional PSRs feel more two-sided, as one can reciprocate disclosure to a parasocial partner with more chance for said partner to acknowledge their results. It may mean that modern PSRs are not one-sided in the purest form, but again, the reciprocity and bidirectional interaction social media allows for does not in any way match the meaningful reciprocity involved in bidirectional relationships in person.

Thirdly, another categorical distinction within PSRs may be noticed between social media creators and traditional celebrities, where some suggest that social media creators allow for more bidirectional interaction. This may be an assumption because the presence of notable social media creators specifically develops through interaction with viewers online. In order for PSRs to form between viewers and creators on YouTube, the creators provide a digital construction of the self, present this online, and then parasocially interact with online viewers (Chen, 2016). These viewers often feel like they can disclose back, even if such reciprocal disclosure is not acknowledged by the creator.

Traditional celebrities and social media celebrities have been directly compared before, with social media creators being perceived as more trustworthy, and capable of creating stronger social presences than traditional celebrities (Jin, Muqaddam, & Ryu, 2019). Despite such differences, the two-way interaction capable from both types of parasocial partners remain the same: limited. Traditional celebrities and social media creators alike cannot provide the bidirectional interaction one would receive from a family member or close friend. Additionally, interaction tools of liking content or leaving comments are novel, but not dissimilar to how fans of celebrities or news personalities would be contacted before social media was invented (Giles, 2018), and are still contacted today. For example, creators may receive fan mail or be approached in public by viewers asking for photographs, comparable to celebrities before social media, and in the present day. Therefore, despite the more modern advent of social media

creators compared to traditional celebrities, and the differences in self-presentation each provide, the connected formed with social media creators and traditional celebrities both similarly remain largely one-sided.

The minimal reciprocal interaction and acknowledgement from parasocial partners today do not provide sufficient substantive contact to qualify as anything beyond a PSR. So whilst not *purely* one-sided, PSRs with non-fictional people, be it traditional celebrities or social media creators, are still *primarily* one-sided. For this reason, they should still be considered within the umbrella of PSRs overall.

1.7 Understanding the role of PSRs in social networks

A sensible starting point to exploring PSRs more deeply is to acknowledge the value that traditional bidirectional relationships provide, as these are the relationships that make up most of our social activity. It is only by doing this that one can understand how PSRs place within the 'matrix of usual social activity' (Horton & Wohl, 1956), an aspect of parasocial research that is seldom addressed (Giles, 2002). This is of particular importance, as the relationships we experience with others are among the strongest predictors of wellbeing (Helliwell & Putnam, 2004), motivating our behaviour (Baumeister & Leary, 1995), and showing stronger correlations with happiness than money or fame do (Helliwell & Putnam, 2004). People who are more socially integrated experience better mental health and are less sad and lonely (Helliwell & Putnam, 2004; Umberson, Chen, House et al., 1996), and research consistently associates relationships with higher wellbeing all-round (House, Landis, & Umberson, 1988).

We seek to create and maintain these relationships for various reasons. Hill (1987) outlines four particular reasons in the multidimensional construct of affiliation motivation, each of which has a pivotal influence on human behaviour, and correlates more with certain situational contexts. The first motivation is social comparison, which typically occurs in situations such as job interviews. The second motivation for affiliating with others is attention, which typically occurs in similar contextual situations such as work projects. The third affiliation motivation, positive stimulation, correlates more with social situations such as parties, and finally, the fourth motivation for affiliation is emotional support, correlating most with situations where one may feel unwell and therefore in need of help. To our knowledge, no research has attempted to examine whether PSRs reflect affiliation motivation, a gap that this thesis addresses (Chapter 2).

The last of these motivations in particular, emotional support, has been thoroughly explored in research on bidirectional relationships. People use their relationships to help regulate their emotion and fulfil social needs, which is crucial for mental health, as relationships partly aid wellbeing through emotion regulation (Rimé, 2009). Attachment figures such as parents and partners help us to buffer stress (Cohen & Wills, 1985) and communicating positive events to them can increase our positive affect and wellbeing, sometimes more than the positive event itself (Gable, Reis, Impett et al., 2004), further demonstrating emotional support and regulation.

Whilst our closest relationships may provide a great sense of security and comfort, research has found that placing too many emotion-regulation needs on a single relationship can be detrimental to our wellbeing, as no single person can have the ability or resources required to meet the majority of one's emotional needs (Cheung, Gardner, & Anderson, 2015).

Diversifying social support is particularly important in scenarios where a primary support provider is lost. This is demonstrated in bereavement and divorce cases where women tend to suffer fewer health detriments than men, a distinction linked to the fact that women often maintain more diverse support networks (Cheung et al., 2015; Kiecolt-Glaser & Newton, 2001).

Whilst it is important to have primary attachment figures for emotion regulation (Bowlby, 1969; Shaver & Mikulincer, 2007), studies have found that having a more diverse 'emotionship portfolio' with different connections that regulate different emotional needs, such as savouring happiness, reducing guilt, and calming anger, leads to greater wellbeing (Cheung et al., 2015). This diversification process begins in adolescence when people rely less on their parents and draw closer to peers (Furman & Buhrmester, 1992), and whilst peer support and parental support both contribute to wellbeing individually, the highest levels of wellbeing are experienced when people have both (Helsen, Vollebergh, & Meeus, 2000).

Looking across these findings, it is clear to see that relationship and happiness research centres on the bidirectional connections made between significant others, such as close friends. More recently, there has been a growing interest on examining 'weak ties' as well, alongside strong ties (Granovetter, 1973). These less-intimate relationships hold a large presence in our lives, as demonstrated in one study where participants recorded interacting with an average of over four hundred different people in just over three months (de Sola Pool & Kochen, 1978). Unlike strong ties, such as one's spouse or best friend, weak ties can come in the form of any type of relationship and are instead characterised by a subjective judgement of closeness (Sandstrom & Dunn, 2014). A colleague may be a strong tie if you interact with them daily and confide in them, but could also be a weak tie to someone who may not interact with them as

often. Weak ties such as the coffee barista one may often interact with, are still found to positively impact our wellbeing and sense of belonging too (Sandstrom & Dunn, 2014), making us happier (Fowler, Christakis, Steptoe et al., 2009) and less lonely (Cacioppo, Fowler, & Christakis, 2009).

Despite being unidirectional, PSRs have also been found to provide psychological hallmarks that are similar to those of bidirectional strong and weak ties. For example, watching characters on a favoured television programme can decrease loneliness in similar ways to in-person conversations (Derrick et al., 2009). Alongside affective responses, PSRs also elicit behavioural, and cognitive outcomes that are typically experienced during interactions with bidirectional close others (Gabriel, Valenti, & Young, 2016). For instance, PSRs can influence important decisions such as who to vote for in presidential elections (Gabriel, Paravati, Green, & Flomsbee, 2018), and can alter moral standards in alignment to that of a media figure (Hermes, 1999). PSRs have also been found to reflect negative impacts from relationships. Seeing television characters die, or losing parasocial relationships when shows end, can induce distress, and elicit similar feelings to losing a friend in real life, including experiencing stages of grief (Cohen, 2003; Daniel Jr & Westerman, 2017; DeGroot & Leith, 2018; Eyal & Cohen, 2006; Sanderson & Cheong, 2010). In fact, parasocial relationships have repeatedly been found to complement bidirectional relationships in their ability to fill one's needs, enabling experiences of belonging, reducing feelings of rejection, and making people become more like their ideal selves, behaviours that are normally only elicited by bidirectional strong ties (Derrick, Gabriel, & Tippin, 2008; Drigotas, Rusbult, Wieselquist et al., 1999).

It is useful to understand how all these relationship types play a role in our social networks, which are inherently dynamic in nature. Over a hundred years ago, socialisation for

young people had restricted sources of influence, only from peers, relatives, neighbours, and teachers. Today, young people are increasingly exposed to an immense range of influential figures, through mediums including television, printed media, radio, popular culture, and the internet (Boon & Lomore, 2001). If the breadth and diversity of social networks is so important to wellbeing, understanding the role that unidirectional PSRs play within them is of value, and is a gap in the research that this thesis aims to address.

It is true that unidirectional PSRs and bidirectional relationships are fundamentally different. PSRs are typically one-sided, and even if certain PSRs allow for bidirectional interaction, it is often incredibly limited and does not provide opportunity for *meaningful* and *equal* reciprocity. Consequently, people can therefore engage in as many PSRs are they would like, terminating them with little consequence (Branch, Wilson, & Agnew, 2013), especially when compared with traditional bidirectional relationships. But despite this, PSRs have demonstrated that they can fulfil other cognitive needs (Derrick et al., 2009). With this in mind, it seems possible that PSRs may have the capability to cater towards more complex cognitive needs, such as regulating emotion, in the same way bidirectional strong and weak ties do. The present research attempts to determine whether this capability exists, comparing how effectively relationship types within our social networks can regulate emotion.

1.8 Creating and strengthening PSRs

If unidirectional PSRs can benefit people who form them, there would also be value in understanding how these relationships are created in the first place. In terms of maintaining relationships, theoretical models from interpersonal relationship research have been used to also explain PSRs. It was found that the same psychological commitments that contribute to maintaining bidirectional relationships were also found to contribute to PSRs. In studies with

both fictional parasocial targets (Homer Simpson) and non-fictional ones (Oprah Winfrey), viewers were more committed to the unidirectional relationship itself when they felt satisfied with the viewing experience, when they felt committed to watching the target, and if there was no good alternative (Branch et al., 2013). However, no such exploration has established whether models of relationship formation (as opposed to maintenance) with bidirectional relationships can also apply to PSRs.

Self-disclosure is understood to be a primary driver of relationship formation, more so than proximity, or time spent with a relationship partner (Chaudoir & Fisher, 2010). This is particularly true when the self-disclosure is emotive, as opposed to being simply factual (Collins & Miller, 1994). The act of self-disclosing itself is also known to provide many benefits, away from the perks of creating and maintaining relationships. For example, disclosing can contribute to one's sense of self, and provide increased enjoyment to both the person self-disclosing, and the person on the receiving end (Tamir & Mitchell, 2012; Tsay-Vogel & Oliver, 2014).

Two theories aim to inform how self-disclosure creates and strengthens relationships. The first is social penetration (Altman & Taylor, 1973), which is derived from social exchange theory (Emerson, 1976). Social exchange theory suggests that relationship contributors unwittingly weigh up the values and costs of a relationship to determine whether it is worth maintaining, whereas social penetration theory applies the same idea to self-disclosure. As two people self-disclose to each other, the information is used as a type of social currency, where the greater the amount received, the more one assumes they are liked (Altman & Taylor, 1973). Consistent with findings that increased self-disclosure predicts closeness (Morry, 2005; Welker, Slatcher, Baker et al., 2014), self-disclosure can also be retained to avoid intimacy,

and comparing the breadth and depth of the self-disclosure exchanged between two parties can help determine how close a relationship actually is (Collins & Miller, 1994). Whilst insightful, this theory is limited in its ability to explain PSR formation, as it relies on reciprocal self-disclosure for emotional equity to be established. As unidirectional relationships do not allow for reciprocity by definition, this would suggest that the self-disclosure from performers or creators to viewers alone, would not substantiate the formation of a parasocial bond.

The second theory is information processing (Ajzen, 1985). This theory poses that the association between self-disclosure and relationship formation occurs when Person A processes the disclosure given to them by Person B, and forms positive perceptions towards Person B, because Person B provided such disclosure. Even when disclosers reveal negative intimate details (such as the fact that they occasionally enjoy hurting those they love), the honesty of this self-disclosure still resulted in positive cognitions from the recipients of this self-disclosure (Ajzen, 1985), as those disclosing are viewed as warm and trustworthy (Collins & Miller, 1994). The positive feelings associated with the disclosure may then be generalised to the interaction overall, leading to not only increased liking, but also an increased desire for future interaction and greater relationship intimacy (Shearer, 2017), encouraging even more self-disclosure in a cyclical process (Kleinke & Kahn, 1980).

Regardless of theoretical grounds, a key pattern of the self-disclosure associated with relationship formation, is the fact that it is affective, sustained, escalating, and reciprocal (Altman & Taylor, 1973; Aron, Melinat, Aron et al., 1997; Berg & Clark, 1986; Collins & Miller, 1994; Derlega, Metts, Petronio et al., 1993; Dindia & Allen, 1995; Dindia, Fitzpatrick, & Kenny, 1997), and multiple procedures have been created to leverage self-disclosure and create relationships artificially. One such procedure is the Fast Friends Paradigm, a closeness-

generating methodology designed with affective, escalating, and reciprocal self-disclosure at its core (Aron et al., 1997). In this process, pairings of two strangers would take turns to answer questions in three stages. Each stage lasted fifteen minutes and required those self-disclosing at alternating prompts to reveal increasingly intimate details of themselves. This process was carried out in a version where pairings were matched for agreement on important attitudes, where pairings were informed to expect to like their partner, and even where the goal of achieving closeness between the two strangers was made explicit to them. In all of these scenarios, none of these variances affected relationship formation outcomes, and the exercise of increasing and mutual self-disclosure was consistently successful at relationship formation. Inspired by the Fast Friends paradigm, Sedikides, Campbell, Reader et al. (1999) outlined a shortened process of self-disclosure, in which each of the three stages required three minutes instead of fifteen minutes, and still found similarly successful relationship intimacy as a result.

Whilst both of these procedures have been implemented countless times to create relationships in artificial contexts, neither work to verify PSR formation, as they each rely on reciprocal turn taking, known to generate liking, closeness, and similarity, more than when only one person discloses or listens (Sprecher, Treger, Wondra et al., 2013). The assumption of mutuality and reciprocity has always led relationship formation literature, but this thesis attempts to explore whether unidirectional self-disclosure from a parasocial target is sufficient for relationship formation. Inspired by past closeness-generating procedures, it presents an alternative paradigm that aims to create PSRs between parasocial targets and viewers who have never been exposed to them, and who cannot interact back.

Having understood the place of PSRs within the matrix of social activity, and the mechanisms that initiate their formation, the final aim of this thesis is to understand whether their influence can be harnessed for prosocial change.

1.9 Harnessing PSRs for prosocial change

Colours, sizes, histories, experiences. People are different, yet ironically, not conditioned to embrace difference positively. Prejudice is defined as intergroup attitude (Fiske, 1998), and multiple theories attempt to understand its origin, as it remains one of the most active areas of inquiry in social psychology (Jost & Burgess, 2000).

Theories that centre individual contribution purport that prejudiced behaviour derives from our conscious and unconscious. Authoritarian personality theory, for example, illustrates blind patriotism and strict adherence to convention as leading to unsettled feelings for anything other than the status quo (Adorno, Frenkel-Brenswik, Levinson et al., 2019). Subtle racism theory poses that discomfort with outgroups leads to less blatant discriminatory avoidance (McConahay & Hough Jr, 1976), ambivalence leads to exaggerated and contradictory treatment of outgroups (Katz & Hass, 1988), and aversion to racism caused by concern to one's own egalitarian self-image leads to justifying prejudiced behaviour with alternative intent (Dovidio & Gaertner, 2004). Not everyone is prejudiced to the same extent, of course, and different levels of dissociation between learned cultural stereotypes, and conscious control over personal beliefs (Devine, 1989) determine this disparity (Devine & Monteith, 1993). Outgroup prejudice manifests due to perceived threat. Meeting an outgroup member can be disruptive from the onset (Pettigrew & Meertens, 1995), they may not know your ingroup rules or norms, such as how to interact with others. Once the novelty subdues, presumed or actual differences between ingroups and outgroups can cause continual anxiety, discomfort, and irritation (Pettigrew &

Meertens, 1995). Building upon social identity theory, both perceived harm from the outgroup, and benefits to the ingroup, instigate strong emotions that are directed to the outgroup as a whole (Tyler & Smith, 1995). That is to say, as long as the concepts of ingroups and outgroups exist, prejudice will too.

Another notable theory of prejudice is contact theory, and it is the idea that contact with an outgroup will reduce prejudice (Allport, Clark, & Pettigrew, 1954). As long as degrees of difference exist, such as skin colours and genders, self- and other- categorisation will exist simultaneously (Turner, 1989), and due to the human need of positive social identity with an ingroup, outgroups will be relatively devalued (Tajfel, 1981). Such ingroup favouritism and outgroup derogation exists to boost one's sense of self by attributing positive characteristics to our own group, and negative ones to others (Aberson, Healy, & Romero, 2000). Research is yet to discover how to successfully reduce prejudice, and its understanding of the media's contribution to prejudice and behaviour is limited further still (Paluck, 2009).

From the widespread use of propaganda in world wars (Lewin, 1952) to anti-prejudice commercials (Paluck, 2009), even shows like Sesame Street (Browne Graves, 1999), the media has long played a role in shaping societal beliefs, so much so that 'educational entertainment' is recognised as its own genre of shows that advocate social change (Rosin, 2006). Rising media coverage of intergroup differences can reduce social distance, or the avoidance of people who may seem different to ourselves (Wong, Lookadoo, & Nisbett, 2017). For example, people who are more distanced from mental health issues often have higher stigma towards it, and the rise in media coverage surrounding mental health awareness (such as movies and celebrity interviews) can help reduce this stigma by allowing viewers to learn about outgroups (Wong et al., 2017). Celebrity health disclosure for example has helped raise awareness of Parkinsons

(Moe, 2012), and reduced stigma to diseases such as cancer and AIDS (Wong et al., 2017). For example, when Magic Johnson came out as H.I.V. positive, this dramatically increased understanding, knowledge, and testing among society (Cohn, Miller, Yamaguchi et al., 1992).

Despite beliefs being extremely resistant to change (Bem, 1970), the influence from media on perceptions of society can occur most when norms are broadcasted (Kallgren, Reno, & Cialdini, 2000). Whilst this could be used to inspire empathy through fiction and non-fictional content that can be generalised to one's real-world society (Zillmann, 2006), it is not always used prosocially. A more recent recognition of malicious and persuasive fake news has spread throughout social and traditional media (Franklin & McNair, 2017), and ongoing concern exists over the power of political and corporate elites to shape public agenda (Bullock, 2011). This can, and often does, lead to unfavourable or biased media portrayals of outgroups (Mutz, Goldman, Dovidio et al., 2010). Concerning race, black and Hispanic people are more commonly portrayed as criminal perpetrators than victims (Dixon & Linz, 2000; Oliver, 1994). Black suspects on local television are also more likely to be shown in mugshots, poorly dressed, and without a published name (Entman, Rojecki, & Jackson, 2001). Such negative and stereotypical portrayal of outgroups can reinforce feelings of stigma, which in turn can cause individuals to withhold help or avoid personal contact with those that possess minority characteristics (Corrigan & Watson, 2002). Many scholars have attempted to use prejudice reduction interventions to help combat this.

Prejudice reduction interventions involving communication with the outgroup have proven successful, with some even have lasting effects despite brief durations of contact (Broockman & Kalla, 2016). In one field experiment where canvassers went door-to-door and asked people to partake in perspective-taking, participants increased their acceptance of

transgender people (Broockman & Kalla, 2016). In a separate study, intergroup contact with outgroup members of sexual minority also increased positive feelings towards the outgroup (Ortiz & Harwood, 2007). Cross-group friendship and on-going contact among white and south Asian children also positively altered outgroup attitude, suggesting that greater communication could lead to less prejudiced attitudes (Turner, Hewstone, & Voci, 2007). Similarly, Daryl Davis, a black man, dedicates his time to conversing with members of the Ku Klux Klan, over two hundred of which have given up their robes and membership after befriending him (Jehn-Olszewska, 2021).

Alongside these studies that demonstrate in-person contact can help reduce prejudice, research has also begun to explore whether parasocial relationships are capable of this societal benefit. As aforementioned, PSRs such as favoured television characters have the capacity to reduce loneliness (Derrick et al., 2009; Nowland, Necka, & Cacioppo, 2018), incite grief (DeGroot & Leith, 2018), and influence voting behaviour (Gabriel, Paravati, Green, & Flomsbee, 2018), so it is understandable why research has explored the idea that parasocial targets could lead to similar changes in prejudice and attitude that bidirectional contact is able to facilitate.

Schiappa, Gregg, and Hewes (2005) extended the contact theory to incorporate parasocial relationships, known as the parasocial contact hypothesis, in a study where viewers experienced reduced prejudice towards homosexuality following exposure to the television sitcom *Will and Grace* (an American sitcom following the lives of Grace, a straight interior designer, and her best friend, Will, a gay lawyer). Recurring exposure to a diverse depiction of an outgroup, where viewers have a positive opinion towards the outgroup, can result in prejudice reduction (Schiappa et al., 2005). Further supporting this hypothesis, strong

parasocial experiences have also been noted to result in higher commitment to social norms (Hartmann & Goldhoorn, 2011) The present thesis intends to build upon the parasocial contact hypothesis and challenge its boundaries by creating a PSR from scratch and seeing if it provides a mechanism for prosocial change. This seems achievable, as it is the quality of an interaction (as opposed to quantity of exposure) that contributes towards the strength of parasocial connections (Rubin et al., 1985), and if successful, could provide a more scalable and efficient prejudice intervention method.

Some scholars doubt whether media alone can convert personal opinions, suggesting that personal discussions must take place after viewings (Bandura, 2001), but interventions that rely on parasocial interactions have demonstrated success, albeit inconsistently. Reading *Harry Potter* excerpts improved attitudes to homosexuality and immigrants in children (Vezzali, Stathi, Giovannini et al., 2015), *Shrek* promoted a higher understanding of stigma (Melchiori & Mallett, 2015), and the broadcast of a Tanzanian radio soap opera about H.I.V. led to an increased use of condoms (Vaughan, Everett, Arvind et al., 2000). In live theatre performances, those reporting greater empathy held opinions most consistent with issues highlighted in the show, and donated more money to charities related to these issues (Rathje, Hackel, & Zaki, 2021).

Furthermore, one study found that 59% of participants changed their attitudes and behaviours, mostly positively, in areas such as creative writing, taking up sport, and doing community work, due to their celebrity idols (Boon & Lomore, 2001). Listening to music that contained prosocial lyrics also increased the accessibility of prosocial thoughts and behaviour (Greitemeyer, 2009). Similarly, another study found that children observing puppies being saved were more likely themselves to assist other animals in need of help (Hearold, 1986).

More recently, video games where participants played a heroic protagonist role in which the goal is to save as many characters as you can, acted in a more pro-social manner in a lab-constructed real-life situation after playing the game when compared to participants who played negative video games that involved killing characters (Greitemeyer & Osswald, 2010). Exposure to such media clearly provide certain benefits. It may be that PSRs with those portrayed in the media explain why, or that PSR strength can be used to harness these benefits further.

As a final example of media converting opinions, people were found to report more favourable attitudes towards transgender outgroups when they had watched a documentary on the life and family of a transgender girl, and undertaken a perspective-taking task, compared to people who only received education on transgender identity (Tompkins, Shields, Hillman et al., 2015). The additional success from the documentary may be attributed to a parasocial connection being created between participants and the transgender individual in the video. All of this is to say that exposing ourselves to outgroups and the stories of people different to us can inspire positive changes in society, and parasocial targets present a prime opportunity for this to happen, as audiences may be able to infer norms from the behaviour of real or fictional personalities in media, similar to how one infers norms from peers (Rubin & Perse, 1987).

Attitude-changing interventions that compare media vehicles provide interesting insights also: a television advert featuring celebrity Demi Lovato reduced prejudice towards bipolar people significantly more than a magazine interview or public service announcement (Wong et al., 2017), and a music video portraying Muslim people doing relatable and likeable things proved more successful at reducing religious prejudice than imagined contact, or reading exercises (Murrar & Brauer, 2018). Perhaps this is because certain mediums allow deeper

transportation into the narrative, making individuals more susceptible to accepting messages due to absorption into the story (Slater & Rouner, 2002). The series of emotional shifts in an unfolding story for those listening, for example, can promote and sustain engagement within a narrated world, thus enhancing the influence of the narration (Nabi & Green, 2015).

Very few intervention studies have been carried out specifically on social media. This feels like an area that could provide substantial levels of educational entertainment, as creators share their lives and opinions in ways that present a preeminent resource for nuanced representation of outgroups. For example, a transgender YouTube creator can talk about their own experiences of transitioning, or a mental health creator may disclose their journey with a particular disorder. Both of these examples show life from a candid perspective.

Such real perspectives would benefit society too, as traditional media is often sensationalised and inauthentic (McInroy & Craig, 2015). For example, in the first decade of television, homosexuals were mostly absent or portrayed as deviants (Gould & Davenport, 1973). Such portrayal does not reflect the accuracies of the gay community in the real world, but parasocial relationships with real gay creators sharing their own personal stories could combat such misrepresentation. In lieu of in-person contact, the increasingly accessible information of outgroups in this way could significantly improve the condition of outgroups in society by de-stigmatising their identities (Miller, 2017). For example, when Mohamed Salah joined Liverpool Football Club, fans halved the rate of anti-Muslims communication on Twitter compared to fans of other clubs (Alrababah, Marble, Mousa et al., 2019).

However, not all attitude change interventions have been effective. A year-long soap opera radio show in Rwanda was able to influence perception of norms, but not beliefs on prejudice (Paluck, 2009), and in an intervention where viewers of *The Walking Dead* sitcom

assimilated the white, black, and Asian protagonists, no behavioural changes reflecting lower racial prejudice were found (Britton, 2017). Inconsistent success may be due to the boomerang effect that finds interventions diving too deep too quickly can have the opposite effect and backfire (Brauer, Judd, & Jacquelin, 2001); or it may be because media interventions in this way simply do not work, or produce minimal effect sizes (Paluck, Porat, Clark et al., 2021). Alternatively, it may be as a result of various study limitations such as biased samples and a reliance on retrospective reporting. Of intervention studies executed between 1958 and 2008, only twelve published papers evaluated prejudice reduction in a randomised field study with a non-student population, and many designs only measure post-intervention prejudice, only use explicit self-report surveys (often based on recollection), and are correlational, not experimental (Murrar & Brauer, 2018).

Good intervention study designs would have random assignment, examine longevity, aim to reduce prejudice to highly stigmatised groups, provide a convincing cover story, and include implicit, explicit, and behavioural measures, which most intervention studies, parasocial or otherwise, lack (Murrar & Brauer, 2018). A more recent systematic review from 2005 to 2015 found only thirty eligible studies that used implicit measures (such as the IAT), many of which did not observe longitudinal effects, and were not pre-registered (FitzGerald, Martin, Berner et al., 2019). Further, of hundreds of prejudice reduction studies, only 11% set out to test the causal effect of interventions outside of the lab, and far fewer tested prejudice reduction among adults (Paluck, 2016). With so much correlational work and lab experiments that may not reflect real life, we still know little about prejudice reduction in the real world (Paluck, 2016). The present study intends to contribute towards this gap, using genuine social media creators and authentic social media stimuli that already exists in society, to test a method of intervention that functions the same in a laboratory setting or in one's own home. Finally,

many existing prejudice studies have aimed to target prejudice concerning race, religion, and sexual orientation using traditional media platforms. In contrast, the present research intends to reduce prejudice levels towards those with mental health disorders, an outgroup that faces frequent prejudice (Pescosolido, Medina, Martin et al., 2013). A handful of prejudice reduction interventions have explored parasocial stimuli, and fewer still have included statistical models that measure parasocial strength. No previous experiment has attempted to create a PSR and measure its effect on prejudice levels, a gap that this thesis also addresses.

1.10 The commercial influence of PSRs

An additional reason to support why PSRs may be able to encourage society to behave in less prejudiced ways is because in the field of commercial influence and purchase intention, PSRs have proven consistently successful in influencing consumers. Parasocial interaction theory suggests that PSRs and the interaction between involved parties may explain the behaviour of consumers who use internet-based communities (Ballantine & Martin, 2005).

Social media creators in particular are recognised as playing an important role in marketing within certain industries, by introducing products to the viewers that form PSRs with them (Sokolova & Kefi, 2020). Having similar attitudes as the parasocial target is also found to increase parasocial interactions, and attitude, credibility, and their social capital has been found to predict positive and significant purchase intent (Kim, Kang, & Lee, 2020; Sokolova & Kefi, 2020; Turner, 1993), particularly in industries such as fashion and beauty (Kim et al., 2020).

More specifically, the level of PSR strength may affect how influential parasocial partners can be. In one study that looked at child viewers on YouTube watching parasocial partners disclosing about a product they are attempting to sell, viewers who formed low to

moderately strong PSRs had less positive brand attitudes, whilst the brand attitudes for viewers with high PSRs were not affected negatively by selling intent (Boerman & Van Reijmersdal, 2020).

Thus, commercial contexts seem to be a channel in which viewers connect with parasocial partners in a more influential manner. The extension of the self into others, and bringing others into the self in this way, helps people use media to develop and alter their own beliefs and feelings (Dill-Shackleford, Vinney, & Hopper-Losenicky, 2016). If this can be done in commercial situations to develop purchase intentions successfully, it seems very possible that PSRs may also be capable of developing beliefs around prejudice and societal interaction in a similar way.

1.11 The present research

Together, the studies in the present research aim to use social media as a tool to better understand PSRs and how they can be leveraged for social good. More specifically, to understand how they fit in our social networks, understand their impact on our wellbeing and behaviour, determine what psychological mechanisms are used to create them, and once we know this, examine whether PSRs can be harnessed to reduce prejudice in society.

Having provided a research overview, the experimental part of this thesis begins in Chapter 2, 'Understanding'. It describes the first set of studies (Studies 1-3) and the conclusions found for how parasocial relationships fit within our social networks, how relationship network dynamics interact when one is under threat, and whether individual differences have an effect on the perception of parasocial targets.

The work continues in Chapter 3, 'Understanding During COVID-19', which aimed to analyse how PSRs can support wellbeing and prosocial behaviour, particularly as participants sought information or fixated on positive information, as strategies of emotion regulation. Whilst this is not a study about COVID specifically, the impact of PSRs is explored within the context of the coronavirus pandemic (Study 4).

Chapter 4, 'Creating and Strengthening', investigates the mechanisms involved in parasocial relationship formation across two studies (Studies 5 and 6). Proposing an amended version of the bidirectional Fast Friends paradigm to create friendships quickly, it assesses the success of creating parasocial relationships using unidirectional self-disclosure instead, comparing this to the effectiveness of bidirectional disclosure.

Having understood the place of parasocial relationships and how they are created, Chapter 5, 'Harnessing', attempts to establish whether these connections can be harnessed for prosocial change. This chapter concludes the experimentation in this thesis, exploring whether creators sharing their personal journeys of being different can be used to reduce the prejudice of viewers exposed to them (Study 7).

The overall contributions and limitations are detailed in Chapter 6, alongside proposed avenues for future work.

CHAPTER 2 | UNDERSTANDING

This research describes a program of study that uses social media as a tool to examine the concept of parasocial relationships. The first objective was to understand how parasocial relationships are perceived in terms of their effectiveness to fulfil needs, and how this perception fits within our social networks compared to how bidirectional strong and weak ties are viewed. We also proposed that PSRs could be split into strong and weak counterparts, similar to bidirectional ties. Further, we examined the effects of parasocial relationships on wellbeing and mental health, and whether individual differences such as self-esteem affected how parasocial relationships are perceived, particularly when participants feel their other relationship types are threatened.

Introduction

When people traditionally think of how social contexts shape internal experiences, they often restrict their focus to scenarios in which multiple individuals directly interact and mutually exert influence on one another (Rusbult & Van Lange, 2008; Thibaut & Kelley, 1959). Although bidirectional conceptualisations of relationships reflect the vast majority of interpersonal experiences, focusing only on these overlooks a rich social resource that humans are capable of creating: parasocial relationships. Parasocial relationships (PSRs) are one-sided psychological bonds that people build with real or fictional figures they never directly interact with (Horton & Wohl, 1956), such as television characters and celebrities (Brown et al., 2003; Rubin et al., 1985). Despite being unidirectional attachments, PSRs nonetheless impact people's thoughts, feelings, and behaviours across a myriad of situations (DeGroot & Leith, 2018; Derrick et al., 2009; Gabriel et al., 2016; Hermes, 1999). Yet, the full scope of how PSRs influence psychological experiences remains unknown.

One domain in which the potential influence of PSRs has been largely overlooked is emotion regulation. Emotions often feel like completely internal experiences. In reality, the social worlds we interact with not only shape how emotions are experienced (Coan, 2011; Cohen & Wills, 1985; Gable et al., 2004), but can even be leveraged to fulfil and regulate emotional needs (Cheung et al., 2015). If PSRs mimic traditional bidirectional relationships in other ways, it is possible that they not only passively affect emotional experiences (e.g., reducing loneliness (Derrick et al., 2009), but may also be actively engaged with to help regulate important emotional needs. This has important implications, not only for understanding the psychological importance and utility that these unique unidirectional bonds offer, but also for understanding emotion regulation strategies and their potential consequences more broadly. The present research addresses these existing gaps by examining whether people use PSRs for emotion regulation in a similar capacity as bidirectional relationships.

The psychological influence of parasocial relationships

The immediate psychological benefits of PSRs are often overlooked, as these bonds defy the traditional ways in which we think about the impact of relationships. Acknowledgement from fictional PSRs is impossible, and parasocial targets can rarely be responsive or provide tangible support. Despite this, prior research suggests that PSRs nonetheless offer many of the same interpersonal benefits as bidirectional relationships. For example, PSRs elicit similar thoughts, feelings, and behaviours as friends and family (Gabriel et al., 2016). Favoured television shows can reduce feelings of loneliness, (Derrick et al., 2009), and the death of beloved figures can induce genuine grief (Cohen, 2003; DeGroot & Leith, 2018; Sanderson & Cheong, 2010). Similarly, PSRs also influence important real-world decisions, such as who to vote for in presidential elections (Gabriel, Paravati, Green, &

Folmsbee, 2018), and act as moral compasses as role models, similar to how bidirectional relationships with close others influence decision-making and morality (Hermes, 1999; Hughes, 2005).

Despite the many ways in which people use PSRs, they are still largely seen as temporary 'social snacks' to satisfy needs when bidirectional relationships are unavailable (Jonason, Webster, & Lindsey, 2008). Researchers have questioned whether PSRs are capable of fulfilling emotional needs, or merely helps suppress certain emotions, such as a need to belong (Derrick et al., 2009). Establishing that PSRs mirror our more tangible social networks by regulating emotion would demonstrate that they are more than 'close but not quite' substitutes for bidirectional relationships, and instead offer social connections and associated benefits in a context which is more resilient against atrophy and dissolution.

Emotion regulation and social networks

Emotion regulation involves shaping how emotions are experienced and expressed, either deliberately or automatically based on the feedback from one's environment (Gross, 1998). This process is crucial for wellbeing, providing better affective, cognitive, and social outcomes when compared to suppressing emotions (Gross, 2008). Emotion suppression decreases positive experience, leads to worsened memory (Johns, Inzlicht, & Schmader, 2008; Richards & Gross, 2000), and less liking from social partners (Butler, Egloff, Wlhelm et al., 2003). By contrast, emotion regulation increases positive experiences (Feinberg, Willer, Antonenko et al., 2012; Gross, 1998), enhances memory (Richards & Gross, 2000), and can lead to reports of closer peer relationships (Gross & John, 2003).

Emotional experiences are directly affected by the real and imagined presence of bidirectional social targets (Holmes & Murray, 2007; Thibaut & Kelley, 1959). We trust our close others in ways that we do not expect of strangers (Clark & Mills, 1993; Helliwell & Putnam, 2004; Reis, Clark, & Holmes, 2004), and even distant weak ties offer clear personal value by supporting happiness and a sense of belonging (Cacioppo et al., 2009; Sandstrom & Dunn, 2014). Further, people also actively and strategically engage with relationships to regulate their emotions. When savouring happiness for example, or reducing anger after a stressful situation, relying on a broad portfolio of connections to regulate such emotion predicts better wellbeing (Cheung et al., 2015). Given the similarities between PSRs and bidirectional relationships in other domains, people may use PSRs for emotion regulation as well, thus contributing to overall psychological wellbeing (Cheung et al., 2015).

Overview of the present research

The aim of the current research was to examine whether people perceive PSRs as an effective way to help regulate emotion, and if so, whether the tendency to engage with PSRs to regulate emotions was similar to how people perceive their reliance on bidirectional relationships. Weak ties have long been an underestimated resource within our social networks (Sandstrom & Dunn, 2014), and strong ties are understandably often perceived as very effective at fulfilling our emotional needs. The question lies for PSRs: will these parasocial partners, with no meaningful capacity to acknowledge us, be perceived in line with bidirectional weak ties, as they realistically are not as close or responsive, or in line with bidirectional strong ties, and therefore as people who can respond to emotional needs when they, in fact, cannot?

In Studies 1 and 2, we aimed to compare the regulation potential of PSRs and strong and weak bidirectional relationships. We hypothesized that people would perceive PSRs as

capable of regulating emotions in ways that mirror traditional bidirectional relationships (H1; Studies 1 & 2) by comparing perceived emotional need fulfilment from PSRs, to fulfilment by strong and weak bidirectional ties. Our hypothesis as to the relative differences between strong, weak, and PSR abilities was directionally agnostic. As strong bidirectional relationships exert greater influence than weaker bidirectional relationships (Holmes & Murray, 2007; Thibaut & Kelley, 1959), PSRs may provide relatively less emotional fulfilment than strong and weak ties (H1a). Alternatively, PSRs may offer a readily available social resource that people cultivate to fulfil emotion regulation needs addressed by traditional relationships. Thus, PSRs may be perceived as providing similar emotional fulfilment as strong and/or weak ties (H1b).

We also examined whether people create strong and weak PSRs (Study 2) and whether emotion regulation patterns across them mirror those of strong and weak bidirectional relationships (H2). H2 is also directionally agnostic as strong and weak PSRs may offer relatively less (H2a) or similar (H2b) perceived emotional regulation fulfilment compared to their bidirectional counterparts. Finally, we empirically manipulated conditions under which emotional need fulfilment is needed (e.g., interpersonal rejection) and examined whether participants affirmed feelings of perceived responsiveness in their PSRs, consistent with how people use close others in times of need (e.g., (Caprariello & Reis, 2011; Holmes & Murray, 2007)) (Study 3). Studies 2 and 3 were both pre-registered on the Open Science Framework, details of which can be found in the appendix.

Study 1

The aim of Study 1 was to examine whether people perceived PSRs as effective in helping to regulate emotion, and how this engagement compares to that of bidirectional strong and weak ties that typically make up social networks. The University of Essex provided ethical

approval for Studies 1 & 2 in January 2019. Participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection.

Method

Participants. A total of 160 participants were recruited in person at a social media convention, VidCon London, in February 2019. Of these, 13 responses were removed due to participants being under consenting age, resulting in 147 usable responses (104 identified as female, 41 as male, and 2 in another way, between the ages of 16 and 75; M_{age} = 25 years, SD = 10.29). All participants were given the opportunity to enter a prize draw for gift vouchers by way of reimbursement.

Procedure. Participants completed a self-report survey on an electronic tablet. In the survey, participants were asked to nominate one figure for each of three types of relationships: a strong bidirectional partner (close people who you know well and confide in), a weak bidirectional partner (less-close people who you are unlikely to confide in), and a content creator, to represent a unidirectional parasocial partner (somebody you watch videos of online, who you feel you know the most). Content creators (also known as 'YouTubers' or 'influencers') were used to represent parasocial partners, as we had unique access to them, providing access to participants who frequently form PSRs with certain creators. Definitions and examples of each social tie were provided to participants, influenced from previous research (Sandstrom & Dunn, 2014). Examples included 'mum' and 'best friend' for strong ties, 'co-worker' and 'neighbour' for weak ties, and 'name' or 'channel name' for parasocial partners. Participants were also asked to report on how close and responsive they perceived each relationship to be, and their own self-esteem. Bidirectional strong and weak tie nominations were not used as controls to the capability of PSRs, but instead as comparisons to

how PSRs may be perceived in the wider context of social networks. Scale and item presentation were randomised where possible to follow good practice.

Measures

Emotional need fulfilment. Participants responses to 10 items that assessed the extent to which social partners (a nominated bidirectional strong tie, bidirectional weak tie, and PSR) helped them regulate various emotions. Seven items were from Cheung et al's (2015) original measure, and three were added, tailored to the context of PSRs. Items were measured on a 10-point scale (1 = least effective; 10 = most effective), but values were converted to a $1 - 7$ scale before any analyses were conducted, to ensure consistency with Study 2 scales (α = .88). All items for all measures can be found in appendices *B-D.*

Relationship closeness and responsiveness. In order to better understand the nature of the relationships people form with parasocial partners relative to strong and weak bidirectional relationships, we included two exploratory measures of closeness and responsiveness in Study 1. Three items assessed how close participants felt with each social target ('how close do you feel with [X]','how satisfied are you with your connection with [X]', 'how authentic is your connection with [X]'), (α = .86) and four items assessed the perceived responsiveness of each social target, (how understood/liked /respected do you feel by [X], how confident would you be to disclose information to [X]), (α = .84). These items were measured on a 10-point scale (1 = not very; 10 = very).

Affiliation motivation. We also assessed affiliation motivations with each relationship type using an amended version of the Interpersonal Orientation Scale (Hill, 1987). The original 26-item scale included four subscales of affiliation motivation: emotional support (e.g. 'If I

feel unhappy […] I usually try to be around [X] to make me feel better'), attention (e.g. 'I mainly like to be around [X] who thinks I am an important, exciting person'), positive stimulation (e.g. 'I think being close to [X] […] is one of my favourite and most satisfying pastimes'), and social comparison (e.g. 'I find that I often look to [X] to see how I compare to others'). The two items from each sub-scale that explained the most variance based on Hill's (1987) factor analysis were used to create an overall eight-item scale for this measure ($\alpha = .88$).

Results

To test for differences between relationship types, repeated measures analyses of variance (ANOVA) were used separately for each dependent measure. A significant effect was found when comparing emotional need fulfilment between the three relationship types, $F(2, 292) = 186.12$, $p < .001$, $\eta^2 = .560$, with an LSD (Least Significant Difference) post-hoc test confirming that all three relationships significantly differed from each other, p's $< .001$ (see Table 1). Strong ties were perceived as the most effective at fulfilling emotional needs, followed by parasocial ties, and then weak ties.

Table 1 Study 1 | Emotion regulation, perceived closeness and responsiveness, and affiliation motivation

	Strong ties		Weak ties		Parasocial ties	
	M	SD	M	SD	M	SD
Emotion regulation	5.43	1.11	2.53	1.54	4.77	1.48
Perceived closeness	6.4	0.86	2.82	1.49	4.54	1.46
Perceived responsiveness	6.17	1	2.92	1.55	4.99	1.31
Affiliation motivation	5.49	1.24	2.42	1.47	4.82	1.56

The same significant pattern was found when comparing perceived responsiveness between the three relationship types, $F(2, 292) = 242.38$, $p < .001$, $\eta^2 = .624$, and perceived closeness, $F(2, 292) = 288.82$, $p < .001$, $\eta^2 = .664$. LSD post-hoc testing found that strong ties were perceived as the most responsive and close, followed by parasocial ties, and then weak ties.

Finally, a significant effect was also found when comparing affiliation motivation between the three relationship types, $F(2, 292) = 196.18$, $p < .001$, $\eta^2 = .573$. Again, LSD post-hoc testing found that participants reported higher affiliation motivation towards strong ties, followed by parasocial ties, and then weak ties.

In summary, Study 1 found that people perceive PSRs as regulating emotion in similar ways to bidirectional relationship targets. Whilst strong ties were perceived as most effective at this, PSRs were perceived as more effective than weak ties.

Study 2

This study aimed to replicate Study 1's finding that people perceive PSRs as a way to regulate emotion, and the exploratory findings that people reported feeling close and anticipating responsiveness from parasocial partners. Study 2 also aimed to address the limitation that although Study 1 distinguished between strong and weak bidirectional relationship targets, it did not provide such a distinction for PSRs. The difference in intimacy between strong and weak bidirectional others has long been established (Granovetter, 1973), but whether or not people apply such distinctions to PSRs has not been examined. As varying perceptions of closeness can occur, even within the same category of relationship (e.g., parents and friends (Clark & Lemay Jr, 2010), it seems plausible that PSRs may exist in similar strong

and weak forms, and that this difference may affect any potential ability to regulate emotion effectively. We thus hypothesised that PSRs would be perceived as less close and responsive than bidirectional relationships (H3a), or to a similar extent (H3b).

Method

Participants. Participants for Studies 2 and 3 were simultaneously reached through a content-diverse group of creators who were paid to promote the survey link in a YouTube video. Creators emphasised that participation was completely voluntary, and informed viewers of an optional prize draw for gift vouchers. Those between 16-18 years old were sent directly to Study 2 (which had ethical approval to recruit younger participants), and those over 18 were randomly assigned to either Study 2 or Study 3. There were 1688 participants in Study 2 (1161 identified as female, 399 as male, 128 in another way), between the ages of 16 and 78 years, M_{age} = 22 years, SD = 8.36).

Procedure. As in Study 1, participants nominated a bidirectional strong tie and a bidirectional weak tie, however this time, they nominated two YouTube creators: a unidirectional (parasocial) strong tie they knew very well, and a weak parasocial target they did not know very well. Instructions for selecting the social ties were made as similar as possible to Study 1 (see pre-registration for detail, link in appendix), and survey sections and items were again presented randomly where relevant.

Measures

Emotional need fulfilment. Participants completed the original 7-item measure of emotional need fulfilment from Study 1 for each of the four nominated relationships. However,

in Study 2, a 7-point scale instead of a 10-point scale was used for consistency across new measures (α = .89).

Relationship closeness and responsiveness. Instead of the ad-hoc items used to measure closeness and responsiveness in Study 1, validated measures were used in this study. The Unidimensional Relationship Closeness scale was used to measure relationship closeness (e.g. 'I disclose important personal things to [X]'; Dibble, Levine, & Park, 2012), (α = .92). While the original scale includes 12-items, three were removed to better fit the context of PSRs (see appendix for final items). The 12-item Perceived Responsiveness Scale was used to measure relationship responsiveness (e.g., '[X] sees the 'real' me'; Reis et al, 2011), (α = .95). Items were measured on a 7-point Likert scale (where 1 = strongly disagree, and 7 = strongly agree).

Results

The aim of this study was to investigate the extent to which people perceived strong and weak, traditional and parasocial relationships, as capable of fulfilling emotional needs. We used a separate repeated measures analysis of variance (ANOVA) with relationship type as the within-subject factor for each dependent measure (need fulfilment, responsiveness, and closeness), and followed up with LSD post-hoc tests to examine between-target differences. As hypothesised, there were significant differences between relationship types predicting emotional need fulfilment, $F(3, 4956) = 2893.05$, $p < .001$, $\eta^2 = .637$, responsiveness, $F(3, 4911) = 4609.18$, $p < .001$, $\eta^2 = .738$, and closeness, $F(3, 4935) = 6342.06$, $p < .001$, $\eta^2 = .794$ (see Figure 2).

Table 2 Study 2 | Emotion Regulation, Perceived Closeness, & Perceived Responsiveness

	Strong ties		Weak ties		Strong PSRs		Weak PSRs	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
Emotion regulation	5.67	1.02	2.96	1.24	4.64	1.36	2.32	1.30
Perceived closeness	6.39	0.80	2.80	1.31	3.39	1.35	1.51	0.84
Perceived responsiveness	6.19	0.90	3.03	1.41	3.08	1.58	1.48	0.89

Strong bidirectional ties were perceived as significantly most effective at fulfilling emotional needs, and were perceived as significantly most responsive and close, p's < .001. Strong unidirectional ties were perceived as significantly more effective than weak bidirectional ties at fulfilling emotional needs, p < .001, and were perceived as significantly closer than weak bidirectional ties, p < .001, but did not differ significantly from them in perceived responsiveness, p = .31. Weak unidirectional ties were perceived as the least effective at regulation emotion, <.001, and were perceived as significantly less responsive and close than all of the other relationship types (see Table 2 & Figure 2).

Figure 2
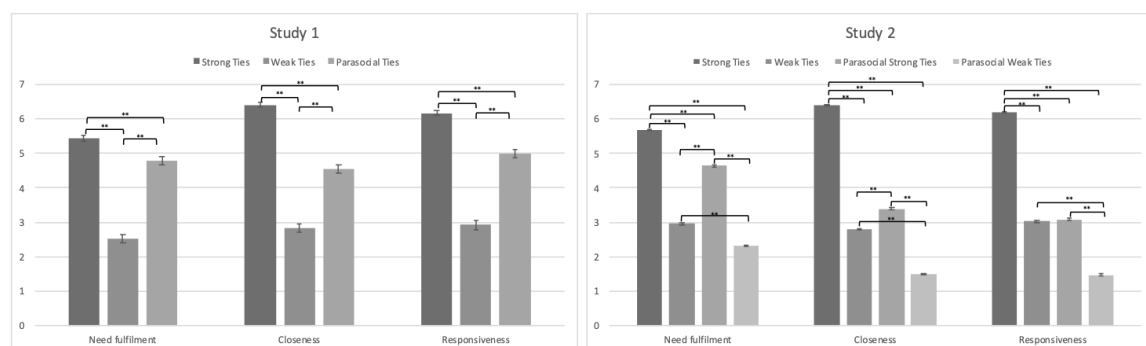
Studies 1 & 2: Comparing relationship types on need fulfilment, closeness, and perceived responsiveness with standard error bars

These analyses again suggest that people most commonly perceived strong traditional ties as capable of regulating emotions, and that people feel closest to them and see them as

more responsive than other relationship types. However, it also suggests that strong PSRs are more often seen as effective for emotion regulation, and are seen as closer, and as responsive, as weak traditional ties, despite being unidirectional in nature. This supports the hypothesis that the strength of the relationship supersedes directionality of relationship. It also shows another way in which parasocial relationships map the patterns found in bidirectional relationships once more.

Study 3

In Studies 1 and 2, people reported using PSRs to help regulate emotion. However, these studies are limited in that they rely on hypothetical and retrospective assessments of how effective they felt parasocial targets were with emotional scenarios. Study 3 addressed this limitation by asking people to describe an instance in which they have experienced a social threat and examined whether they use PSRs to reaffirm perceived social security (i.e., responsiveness, (Reis & Shaver, 1988)). Past research has shown that social threats motivate people to affirm that others are capable of meeting their needs (Lamarche & Seery, 2019; Murray, Lamarche, Seery et al., 2021). Thus, if people actively use PSRs to regulate emotion, social threats should motivate greater reported perceived responsiveness from PSRs (H4). As people with high compared to low self-esteem experience and respond to social threats differently (Lamarche & Murray, 2014; Murray, Derrick, Leder et al., 2008; Stinson, Cameron, Hoplock et al., 2015), we also tested whether social threat and self-esteem would interact, such that high self-esteem would report greater perceived responsiveness from PSRs under threat, consistent with how they engage with bidirectional close ties under similar conditions (Murray et al., 2008).

Method

Participants. A total of 1221 YouTube viewers were recruited and provided consent for Study 3, as described in Study 2. Of these, 116 responses were removed due to participants being underage or not complying with instructions (see below for details). This resulted in 1105 usable responses, of which 814 identified as female, 210 as male, and 81 in another way, between the ages of 18 and 69 (M_{age} = 24 years, SD = 7.90).

The University of Essex provided ethical approval in January 2018. Participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection.

Procedure. Participants were asked to nominate any YouTube creator that they felt they knew the most (i.e., had the strongest PSR with). They were then randomly allocated to recall and record in as much detail as possible an experience where they felt hurt and disappointed by a bidirectional strong tie (social threat condition) or were encouraged and supported by a bidirectional strong tie (control condition). Following this immersion exercise, participants were asked to report how close they felt towards their nominated parasocial tie, and how responsive they felt that person was to their needs.

To determine compliance with the social threat immersion exercise, two independent researchers reviewed responses. Responses that were not unanimously determined as compliant were excluded. For example, some participants did not write about a bidirectional strong tie (n = 4), and some were excluded for being nonsensical or irrelevant to the instructions (n = 3).

Measures

Relationship closeness and responsiveness. The same measures from Study 2 were used to measure perceived closeness to (α = .90) and responsiveness of (α = .95) the PSR.

Self-esteem. A 10-item measure of self-esteem (Rosenberg, 1965) was measured on a 7-point scale (1 = strongly disagree, and 7 = strongly agree), (α = .90).

Results

Perceived Responsiveness. Hierarchical regression analyses predicted perceived responsiveness from (1) the main effect of social threat condition (1=threat, -1=no threat), the main effect of self-esteem (centered), and (2) their 2-way interaction. For this analysis, participants who did not complete all variables (n = 210) were excluded to ensure consistency in centred means resulting in 895 responses for these analyses. First, social threat condition or self-esteem were not significantly associated with perceived PSR responsiveness in the main effects-only model (Condition, β = .026, t(892) = 0.783, p = .440, η^2 = .0007; Self-esteem, β = -.043, t(892) = -1.297, p = .195, η^2 = .0019). However, the predicted condition by self-esteem interaction was significant, β = .126, t(891) = 2.826, p = .005, η^2 = .0089 (see Figure 3). Next, we decomposed the 2-way interaction to test for the hypothesized simple effects of self-esteem for those in the social threat and control conditions, as well as the simple effects of condition for those high (+1SD) and low (-1SD) in self-esteem (Aiken & West, 1991).

The simple effects of social threat. There was a significant simple effect of condition for people with high self-esteem, β = .121, t(891) = 2.554, p = .011, η^2 = .0073, suggesting that these people perceive PSRs as more responsive to their needs when reminded of a social threat

than social support. The simple effect of condition was not significant for people with low self-esteem, β = -.069, t(891) = -1.456, p = .146, η^2 = .0024.

The simple effects of self-esteem. The simple effect of self-esteem predicting perceived responsiveness was not significant for people in the social threat condition, β = .063, t(891) = 1.250, p = .212, η^2 = .0018. However, the simple effect of self-esteem predicting perceived responsiveness was significant in the control condition, β = -.127, t(891) = -2.850, p = .004, η^2 = .009, suggesting that when people felt socially accepted, those with high self-esteem perceived their PSRs as less responsive than people with low self-esteem.

Figure 3
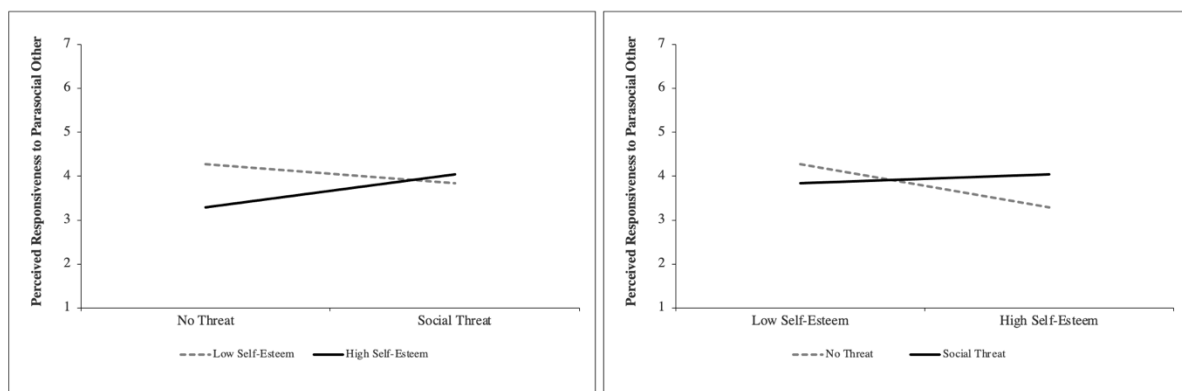
Study 3: Hierarchical regression simple slope analyses of condition, centred self-esteem, and the interaction between condition and centred self-esteem on perceived responsiveness to PSRs

Closeness. The same analytic strategy was used to test for closeness with the nominated PSR. As with responsiveness, there were no significant effects of condition, β = .033, t(892) = .384, p = .701, η^2 = .0002, or self-esteem, β = .077, t(892) = -1.676, p = .094, η^2 = .0031. However, unlike responsiveness, the condition by self-esteem interaction was also not significant, β = .100, t(891) = 1.472, p = .141, η^2 = .0024.

Discussion

Studies 1 to 3 examined whether people perceive using parasocial relationships to fulfil their emotion regulation needs in a way that mirrors how people engage with bidirectional relationship partners. They also proposed that PSRs could be distinguished into strong and weak counterparts, as bidirectional relationships are. Consistent with our hypotheses, people reported perceiving PSRs as capable of fulfilling their emotional needs (Studies 1 & 2). Stronger ties (both bidirectional and PSRs) were seen as more capable of emotional need fulfilment than weaker ties (bidirectional and PSRs). Additionally, people reported feeling significantly closer to their PSRs and saw them as more responsive compared to their bidirectional weak ties. PSRs were also reported to fulfil more affiliation motivation than bidirectional weak ties.

Furthermore, experimentally manipulating a need for emotion regulation via social rejection led people to reaffirm their social safety-net by perceiving greater responsiveness in their PSRs than those who had been unthreatened. This was particularly true for people with high self-esteem who are also more likely to affirm responsiveness and see the positives in their close relationships when threatened (Lamarche & Murray, 2014; Murray et al., 2008). However, unlike traditional bidirectional relationships where people with low self-esteem (LSEs) chronically doubt others (Murray, Holmes, & Griffin, 2000), LSEs in the experimental study perceived greater responsiveness from their PSRs than people with high self-esteem (HSEs) (albeit not significantly), regardless of social threat. Future research should explore whether LSEs, who struggle with chronic self-doubt and social connection, may derive more benefits from PSRs and engaging with them to fulfil needs not met by others. Social compensation theory suggests that LSEs, or those who perceived their social networks as

inadequate, rely more extensively on their online networks (Valkenburg, Schouten, & Peter, 2005) and so the resilience of PSRs against social atrophy and dissolution could further benefit them.

Until recently, PSRs have been seen as placeholders for when bidirectional relationships are unavailable (Jonason et al., 2008). However, the present research demonstrates that people feel they can engage with PSRs to fulfil important needs, to an even greater extent than weak in-person connections, consistent with a growing body of literature that argues PSRs are just as 'real' as traditional relationships (Paravati, Naidu, & Gabriel, 2021). The motivations for affiliating (Hill, 1987) are also just as relevant for PSRs as they are for bidirectional ties, further supporting their standing as part of our social networks. The present research also advances how PSRs can be conceptualised by being the first to demonstrate that PSRs of differing strengths exist, and that this variance alters how effective PSRs are perceived to be at regulating emotion. Thus, contrary to the believe that media undermines social connection (Green & Brock, 1998), the present research suggests that PSRs may instead add value to social networks, particularly when the connection is strong.

Limitations and future directions

The current research is not without limitations. First, all three studies in this project only examined one type of PSR (those formed with social media creators on YouTube). Past research has not found whether PSRs with different figures elicit different psychological responses. In order to understand whether the current findings extend to PSRs of all types, the current study should be replicated with PSRs from other media types. Further thoughts on the generalisability of this research can be found in the overall discussion chapter. Another limitation of this research is that the majority of the participants were women. As there are

gendered differences in how women and men engage with their social networks to fulfil emotional needs (Kiecolt-Glaser & Newton, 2001), future studies should examine whether gendered ideologies influence the observed pattern in our studies. Additionally, weak ties were used as one of the comparative roles to PSRs when assessing how effective they are perceived to be. As weak ties are consistently underestimated in their effectiveness anyway, future research may wish to replicate study designs with alternative relationship types to better understand how PSRs are situated. Finally, the observed effect sizes in the present research were small (Funder & Ozer, 2019), and future research is needed to understand the long-term consequences of our findings, such as any sustained effects on LSEs and HSEs.

The current research also identifies clear paths for future research. First, the current studies demonstrate that while people engage with PSRs to fulfil their emotional needs, the efficacy of this strategy—relative to engaging with bidirectional relationships—remains unknown. Ultimately, PSRs cannot respond to emotional needs or solicitations of support. Whether this impacts how effectively they regulate emotions, and the long-term consequences for wellbeing should be explored. The current findings also highlight the importance of understanding the full extent of how PSRs shape the self, and greater exploration of their varied social function (e.g., social comparison, self-evaluation maintenance, self-expansion) would be valuable to explore. A final avenue of research would be to investigate how people navigate threats from PSRs, and whether people continue to affirm their felt security through their PSRs—as they do with close relationships when experiencing a threat—or whether PSRs merely serve as a bastion of safety when the "real" social world is threatened.

Conclusion

Overall, this work contributes to our understanding of PSRs. For the first time, we established how effective PSRs are perceived as part of one's social network, distinguishing between strong and weak PSRs too. Beyond entertainment and relatability, strong PSRs are believed to help people manage complex emotional needs alongside traditional bidirectional relationships. Consistent with a growing body of research that shows the psychological importance of PSRs, this work suggests that they tap into the fundamental needs of what humans not only crave, but require: emotion regulation, feeling close to others, and having a social safety net who can respond to their needs.

CHAPTER 3 | UNDERSTANDING DURING COVID-19

So far, this research has strived to understand how PSRs and are perceived. In Chapter 2, we found that parasocial relationships are perceived as effective at fulfilling emotional needs, more so than bidirectional weak ties. We also found them to be perceived as just as close, and more responsive than bidirectional weak ties, even though parasocial targets possess no meaningful capacity to respond. Developing from how people *think* PSRs affect how they feel, Chapter 3 aimed to further this understanding by assessing whether PSRs actually *do* affect how they feel, specifically in relation to wellbeing. This study was carried out during the particularly turbulent context and applied real-world setting: the global spread of coronavirus. For this reason, we were also interested in examining whether PSRs had the ability to affect how prosocial one would act. As the first lockdown in 2019 took centre stage, Chapter 3 poses whether being exposed to a parasocial target, who themselves are experiencing positive or negative news, could also lead to us experiencing similar feelings. Further, if in an attempt to help cope with the pandemic, one attempted to seek further information, or focus specifically on news with a positive angle, could the added presence of a parasocial target that we have developed a PSR with, help us with using such strategies to cope better?

Introduction

The coronavirus pandemic began in November 2019 and impacted the whole world over. As the virus spread, so did stories about its negative consequences, from announcements of government regulations and lockdown restrictions to variants, vaccines, protests, and shortages in personal protective equipment and hospital resources. For the first year of the pandemic on any given day, society would find itself exposed to multiple news headlines and social media posts. Across the same timeframe, anxiety, depression, and reports of serious

psychological distress rose around the world (Aknin, De Neve, Dunn et al., 2021; Brooks, Webster, Smith et al., 2020; Hamilton, 2020; McGinty, Presskreischer, Han et al., 2020; Pierce, Hope, Ford et al., 2020), as the long-term, widespread, overwhelming, and multidimensional threat of an event like this presents a significant challenge for mental health (Gruber, Prinstein, Clark et al., 2020).

When faced with such stressful events that are unchangeable and uncontrollable, people tend to implement emotion regulation strategies to help with coping (Conway & Terry, 1992). In the process model of emotion regulation (Gross, 1998; Gross, Richards, & John, 2006), five families of strategy are identified. The first is situation selection, where one may approach situations to evoke desired emotions, or avoid situations that evoke unwanted emotions. One may, for example, visit a theme park to evoke excitement, or avoid anger by ignoring phone calls from an ex-partner. A second family of strategy is situation modification, where one directly changes aspects of a situation before an emotional response has developed. When delivering a speech for example, one may make jokes to elicit laughter.

The third identified strategy type is attentional deployment, which involves specifically shifting attention towards or away from certain emotional features. This can include strategies such as distraction (e.g., closing your eyes when watching a penalty shoot-out), rumination (e.g., repetitively focusing your attention on symptoms of distress), and thought suppression (Bosse, Pontier, & Treur, 2010). The fourth strategy is cognitive change, which involves reappraising a situation to alter its emotional impact. This could occur by reinterpreting the meaning of an event, such as blaming the weather for bad performance during a tennis match, distancing oneself from the situation by considering an objective perspective, or focusing on specific aspects of a situation. The fifth and final emotion regulation strategy category,

response modulation, is distinguished from its predecessors. Instead of being antecedent-focused and therefore applicable at different points of the process of emotion generation, it is response-focused and only occurs after an emotional response has been generated (Bosse et al., 2010; Gross, 1998). Response modulation occurs when one has experienced emotional responses and attempts to alter them. This can include small behavioural actions such as suppressing nerves when giving a presentation, or more substantial actions such as exerting physical activity or consuming drugs to reduce stress.

Specifically in relation to the coronavirus pandemic, emotion regulation has been recognised as a successful way to maintain wellbeing (Dovbysh & Kiseleva, 2020; Gubler, Makowski, Troche et al., 2021; Panayiotou, Panteli, & Leonidou, 2021). For example, ruminating on pandemic related news and catastrophising were both associated with greater loneliness, and suppressing emotion also negatively correlated with affective wellbeing (Gubler et al., 2021). The current research aimed to focus on the emotion regulation strategy of attentional deployment, specifically examining an approach of seeking further information about the pandemic which tends to be more negative, or alternatively, seeking specifically positive information to direct attention towards positive emotional features.

Information seeking as emotion regulation. According to various levels of threat perception, one strategy that people typically implement to regulate their emotions during such turbulent times, is to seek additional information as a way of reasserting control (Griffin, Neuwirth, Dunwoody et al., 2004; Kahlor, 2010; Yang & Kahlor, 2013). Gathering such facts can help people make sense of their environment and, in turn, improve wellbeing, potentially explaining why people may be drawn to negative news stories (Shoemaker, 1996). However, seeking information during the pandemic may present more problems than relief, as the

negative information stemming from its unfolding events are pervasive and unending, and no amount of information can truly eliminate the uncertainty stemming from it (Rettie & Daniels, 2020).

Early evidence suggests that nearly half of us spent around thirty to fifty-five minutes consuming pandemic-related information daily as the event first occurred, and those who reported spending more time seeking information also reported higher levels of anxiety, stress, and depression (Riehm, Holingue, Kalb et al., 2020; Wathelet, Duhem, Vaiva et al., 2020). Further, procuring this information, including through social media, was found to be one of the least enjoyable activities during lockdown (Bu, Steptoe, Mak et al., 2020; Lades, Laffan, Daly et al., 2020), all facts that suggest that seeking information may not be the most beneficial way to regulate emotion during the coronavirus pandemic.

Whilst this conclusion seems convincing, limitations in the rapidly emerging data must be considered. For example, due to the hurried expedition of data during lockdown, existing findings are mostly correlational, rely on retrospective report, and span a cumulative amount of COVID-19 information consumption since it first became available (as opposed to over a controlled period of time).

We set out to test information seeking as a strategy for emotion regulation during the pandemic with an experimental design that controls exposure and time, exploring whether brief exposure to related news can also lead to detrimental outcomes. If parasocial partners communicate such information seeking, sharing negative news in the process, does this affect viewer wellbeing? And if viewers adopt information seeking as an emotion regulation strategy of their own, how does a PSR presence affect this?

Positivity fixating as emotion regulation. An alternative strategy people can implement to regulate emotion, is focusing specifically on positive information, instead of information seeking in general (Gross, 1998). This may be difficult to do however, as human nature is often characterised as cold and callous. This portrayal disseminates through social media, where negative headlines dominate society's media consumption in particular (Leetaru, 2011). Stories of terrorist attacks, sexual abuse, and riots highlight negative behaviour, reinforce age-old claims that people are fundamentally selfish (Hobbes, 1968; Noreen, 1988; Schwartz, 1987). They prove successful for the social media platforms broadcasting them too; people tend to be captivated by such negative news, consuming and sharing it even more than its positive counterparts (Baumeister, Bratslavsky, Finkenauer et al., 2001; Hansen, Arvidsson, Nielsen et al., 2011; Trussler & Soroka, 2014). However, this is not without consequence to wellbeing and prosocial behaviour. Viewers exposed to negative media often experience increased anxiety, depression, and compassion fatigue (Arendt, Steindl, & Vitouch, 2015; Cameron & Payne, 2012; Galician & Vestre, 1987; Szabo & Hopkinson, 2007), and are also less likely to engage in philanthropy and eco-oriented action (Baden, McIntyre, & Homberg, 2019).

Despite the overwhelmingly negative portrayal of humans in the media, humans display extraordinary levels of kindness more often than not. From donating time and money to blood and organs, over a billion people worldwide volunteer help to charity, and over two billion people provide help to strangers monthly (Foundation, 2017). From giving up a seat on a bus, to holding an elevator door for a rushing stranger, society partakes and observes small acts of kindness every day (Baskerville, Johnson, Monk-Turner et al., 2000). It is widely believed that being kind and good is what we are naturally inclined to do, even without anticipating reciprocation, and even when such kindness comes at a cost to us (Brownell, 2013; Hepach, Haberl, Lambert et al., 2017; Warneken, Hare, Melis et al., 2007; Warneken & Tomasello,

2006). And just like the dissemination of negative headlines, the profusion of everyday kindness also has widespread impact, where seeing others modelling prosocial behaviour encourages people to act in more prosocial ways themselves (Jung, Seo, Han et al., 2020), ultimately increasing happiness (Curry, Rowland, Van Lissa et al., 2018). As being prosocial often requires resources that people may lack, such as money, effort, and autonomous motivation (Lyubomirsky, Dickerhoof, Boehm et al., 2011; Weinstein & Ryan, 2010), perhaps fixating on the positive behaviours from others as a strategy of emotion regulation, as opposed to carrying out acts of kindness oneself, may also induce happiness and encourage prosocial behaviour. Study 4 aimed to test this in the context of fixating on kind acts relating to the pandemic that were shared across social media.

PSR as a moderator. Social media is often accused of influencing impressionable teenagers in the wrong way, whilst prominent creators on platforms such as YouTube, Instagram, and TikTok, are often labelled as materialistic and troublesome. However, such negative claims that sweep social media with a damning brush often overlook the nuanced situations in which social media could be beneficial (Bailey et al., 2020; Dickson et al., 2018; Vuorre et al., 2021). For example, actively participating on certain online platforms such as Facebook does not contribute to lower wellbeing (Verduyn et al., 2015), and self-expressing authentically on social media predicts greater life satisfaction (Bailey et al., 2020).

In Chapter 2, we found that people in our network, including PSRs, were believed to help us make sense of the world. We further found that PSR strength mattered, with strong PSRs being perceived as even more capable of emotion regulation than their weak counterparts. In the present research, we therefore further wanted to examine whether PSR strength acted as a moderator in the real-world context of the pandemic, in both emotion regulation strategies of

seeking information, and fixating on positivity, whilst simultaneously assessing whether exposure to parasocial targets processing positive and negative information would affect viewer feelings also. Given that PSRs have a powerful influence over viewers, and that people are naturally inclined to view others as good, this study aimed to investigate whether PSR influence can amplify the effects of fixating on kind acts during the pandemic. This is also of interest as closeness towards parasocial partners has been found to significantly increase during the pandemic, particularly among those lower in attachment anxiety and higher in PSR engagement (Bond, 2021). We tested whether people who have a stronger (vs. weaker) PSR would experience more meaningful and positive consequences on wellbeing and prosocial behaviour. Similarly, we also wanted to explore whether PSRs may amplify any potential negative effects of information seeking generally about the coronavirus pandemic.

The current research

The present study (Study 4) examined the exposure to parasocial partners processing information during the context of the first lockdown of the pandemic in 2019. An experimental design was created to observe whether seeking information generally or focusing specifically on positive information (two common methods for regulating emotion) as modelled through the action of creators could lead to positive outcomes of wellbeing and prosocial behaviour in viewers. Further, it investigated whether having this information presented by a target that one has developed a PSR with, moderated the effectiveness of information seeking, or fixating on positives, as emotion regulation strategies for viewers themselves.

Three main predictions were made. Firstly, we predicted that focusing on positive information in the form of kind acts undertaken during the pandemic would lead to greater wellbeing and prosocial behaviour, compared to a no treatment control condition (H1).

Secondly, we predicted that focusing on general information concerning the pandemic would lead to lesser wellbeing and prosocial behaviour, compared to a no treatment control condition (H2). Finally, we predicted that PSR strength would moderate both above affects, amplifying both the positive outcomes from focusing on positive information (H3a), and the negative outcomes from focusing on general pandemic information (H3b).

Method

Participants. A total of 652 participants were recruited via a YouTube creator (the parasocial target) who posted a video on their channel advertising the survey link within it. Of these, one was removed for not satisfying the age of consent, two were removed for failing three or more embedded attention checks throughout the survey, and two were removed for having taken part in a partner study. The partner study did not fall under the scope of this thesis but explored exposure to pandemic-related information on the Twitter platform without parasocial influence (Buchanan. K, Aknin. L, Lotun. S et al., 2021). This resulted in 647 usable responses for this study (362 identified as female, 138 as male, 109 in another way, and 38 preferred not to disclose, between the ages of 18 and 73, $M_{age} = 26.19$ years, SD = 9.38). The University of Essex provided ethical approval in Spring 2020, participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection.

Procedure. Participants were invited by a creator they follow on the YouTube platform to take part in an online survey. The survey was designed to replicate an interactive YouTube video, where the creator guided participants throughout the survey by featuring in a series of embedded short clips. In separate short videos the creator introduced themselves and instructed participants on how to proceed. Participants reported on their PSR strength with the creator, and were randomly assigned to one of three conditions: kindness, information, or a no treatment

control. The creator then presented the intervention stimuli related to their condition, and participants then reported on wellbeing, prosocial intentions, and demographics. The survey ended with the creator thanking participants for taking part in the same way they would end a typical YouTube video.

Intervention stimuli. Participants in the kindness and information conditions watched a YouTube-style reaction video, featuring a YouTube creator with over 500k subscribers. The nature of the stimuli was a reaction video (a popular format of online video) where the creator explained they had been sent memes and headlines that they were going to react to. Ten images or screenshots were then displayed to the left of the screen in turn, as the creator read any displayed text out loud providing their candid reaction and brief commentary. Both conditions presented different stimuli, but to maintain consistency across conditions, they featured the same creator, were edited similarly, and were of a similar duration (4 to 4.5 minutes long).

For the kindness condition, the content displayed were of kind everyday acts that people had been carrying out during the coronavirus pandemic. This was to reflect what one may seek out when trying to focus on positive news as an emotion regulation strategy. The memes included someone leaving a surprise gift bag and thank you card to thank their delivery driver, a street that placed bears in windows to entertain children walking by, and a landlord waiving the rent for their tenant and buying groceries for them. This stimulus was designed to highlight to participants the everyday kind acts people within society have been doing to help during the pandemic.

For the information condition, the content displayed were from recent news headlines, also relating to the pandemic. This included news headlines on the United Kingdom's budget deficit that had been impacted by public expenses relating to the pandemic, two doctors who

were legally challenging the lack of personal protective equipment provided to them during work, and the most recent statistics of infections and death from the coronavirus outbreak. This stimulus was designed to reflect to participants the traditional news posts that society consumes daily on social media during the pandemic.

No stimulus was shown in the control condition.

Measures

Measures consisted of the mean score on reported items. Demographics were collected from each participant, including their age, gender, gender identity, and ethnicity.

Wellbeing. Three measures of wellbeing were used on a 5-point Likert scale (where 1 = strongly disagree, and 5 = strongly agree). Participants reported their current positive affect (α = .91) and negative affect (α = .87) on two separate indexes of six items each (Diener, Wirtz, Biswas-Diener et al., 2009). In addition, participants reported their state optimism (Millstein, Chung, Hoeppner et al., 2019), (α = .89).

Prosocial behaviour. Two measures of prosocial behaviour were used. Firstly, participants reported their likelihood of engaging in positive social actions concerning the pandemic on a 7-point Likert scale (where 1 = strongly disagree, and 7 = strongly agree). This measure was created specifically for this research and included three items on complying with lockdown rules to keep society safe (e.g., staying at home apart from essential outings and exercise), three items on providing financial support to the community (e.g., supporting local businesses by purchasing gift vouchers), and five items on conducting prosocial acts that went 'above and beyond' (e.g., displaying things to cheer up passers-by, such as rainbows or teddy

bears in windows; α = .80). Secondly, participants were given 10 tickets for a prize draw, and we examined how many they chose to donate to the World Health Organization's COVID-19 Response Fund rather than keeping all the tickets for themselves.

Parasocial relationship strength. PSR was used as a moderator. A seventeen-item version of the Celebrity Personal Parasocial Interaction Scale (Bocarnea, 2007) was used on a 5-point Likert scale (where 1 = strongly disagree, and 5 = strongly agree). Three items were removed from the original measure due to not fitting the context of an online creator persona. Higher scores indicate greater parasocial connection (α = .70).

Results

H1 predicted that participants in the kindness condition would experience greater wellbeing and prosocial behaviour, whilst H2 predicted that those in the information condition would experience lesser wellbeing and prosocial behaviour, both compared to the no treatment condition. One-way ANOVAs were conducted to compare all three conditions in relation to each dependent variable. These analyses revealed significant differences between conditions in all three wellbeing measures, $F_{PA}(2, 626) = 19.67$, $p < .001$, $\eta_p^2 = .059$, $F_{NA}(2, 626) = 18.36$, $p < .001$, $\eta_p^2 = .055$, $F_{SO}(2, 622) = 6.85$, $p = .001$, $\eta_p^2 = .022$, and only the draw prize measure of prosocial behaviour, $F(2, 601) = 3.04$, $p < .048$, $\eta_p^2 = .01$.

Figure 4
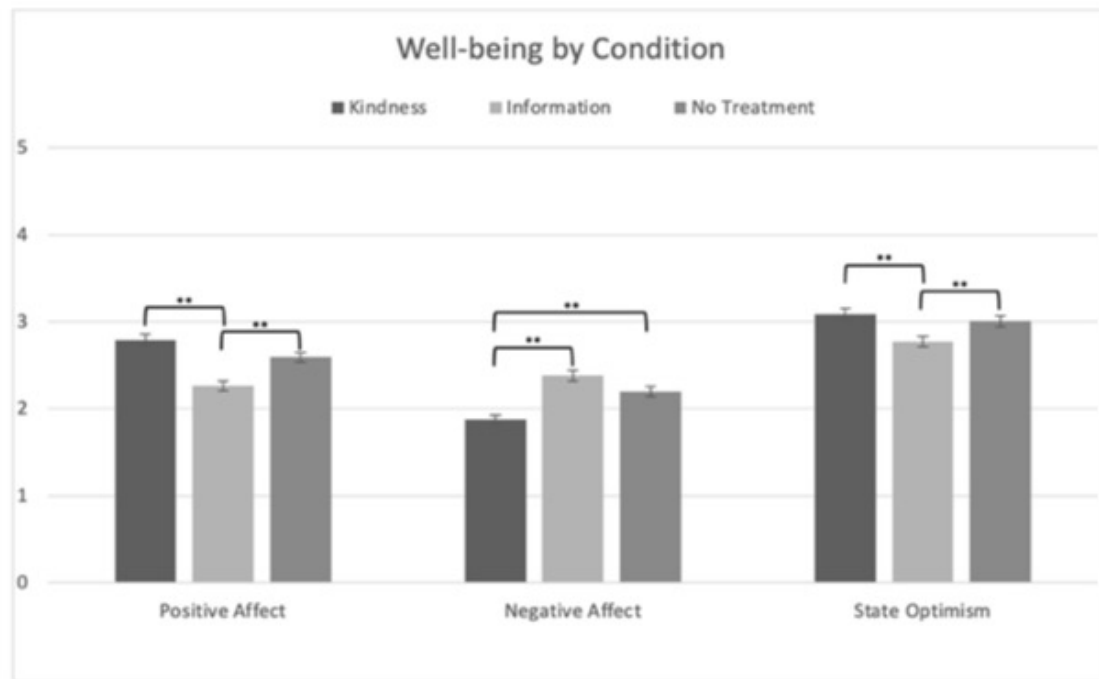
Comparing wellbeing between conditions with standard error

Kindness vs. no treatment. Using follow-up testing with Bonferroni corrections, we found that participants in the kindness condition did not experience significantly greater positive affect than those in the no treatment control condition ($p = .055$), nor did they report greater optimism ($p = 0.999$). Participants in the kindness condition did however experience less negative affect than those in the control ($p < .001$). Follow up comparisons for prosocial behaviour found no significance for the custom prosocial measure, although the greater amount of donations from participants in the kindness condition when compared to the control was close to significance ($p = .086$).

Information vs. no treatment. Similarly, follow up testing with Bonferroni corrections compared the information condition with the no treatment control. Participants in the control condition did experience greater positive affect than participants in the information condition ($p < .001$), but the conditions did not significantly differ in terms of negative affect

(p = .082). Participants in the control condition did report greater state optimism than participants in the information condition (p = .023), and again, no significance was found on the prosocial measures, including the raffle prize exercise (p = .109).

To summarise these findings, participants exposed to positive kind acts relating to the pandemic seem to increase wellbeing when compared to receiving no information at all, whilst exposure to general information seems to decrease wellbeing. There are also indications that exposure to kind content, compared to general information content, increases prosocial behaviour.

Moderation. The final hypothesis, H3, posited that PSR strength would act as a moderator for the relationship between condition and wellbeing, and condition and prosocial behaviour. We therefore expected PSR strength to amplify the positive outcomes on wellbeing and prosocial behaviour in the kindness condition (H3a) and amplify the negative outcomes in the information condition (H3b). We first confirmed that participants across conditions (M = 3.23, SD = 0.37), reported similar PSR strength levels by conducting an ANOVA analysis, $F(2, 644) = .18$, p = .839, $\eta_p^2 = .001$. PSR was directly regressed on dependent variables. Finally, two sets of hierarchical linear regressions were then conducted for each dependent variable to analyse moderation effects of PSR, where condition was regressed onto each dependent variable, and the PSR moderator was then added to the model in a secondary step. The first set of regression analyses assessed the moderation of PSR when comparing participants in the kindness condition with those in the no treatment condition. The second set assessed the moderation of PSR when comparing participants in the information condition, also with those in the no treatment condition (see Table 3).

Table 3 Moderation analysis of parasocial relationship strength (PSR) where bold expressions represent significance

	Direct effect of PSR	Kindness v no treatment PSR moderation	Information v no treatment PSR moderation
Wellbeing			
Positive affect	**B = .343, SE = .094, p < .001, CI$_{95}$ = [.159, .527]**	**B = .419, SE = .111, p < .001, CI$_{95}$ = [.201, .637]**	B = .126, SE = .107, p = .241, CI$_{95}$ = [-.085, .337]
Negative affect	**B = .224, SE = .095, p = .019, CI$_{95}$ = [.038, .410]**	B = .167, SE = 1.07, p = .119, CI$_{95}$ = [-.043, .377]	**B = .402, SE = .116, p = .001, CI$_{95}$ = [.175, .629]**
State optimism	**B = .240, SE = .095, p = .012, CI$_{95}$ = [.053, .427]**	**B = .245, SE = .115, p = .034, CI$_{95}$ = [.018, .472]**	B = .195, SE = .115, p = .090, CI$_{95}$ = [-.031, .422]
Prosocial behaviour			
Prosocial measure	**B = .763, SE = .094, p < .001, CI$_{95}$ = [.578, .948]**	**B = .723, SE = .112, p < .001, CI$_{95}$ = [.502, .943]**	**B = .769, SE = .114, p < .001, CI$_{95}$ = [.546, .993]**
Raffle donation	**B = -.852, SE = .314, p = .007, CI$_{95}$ = [-1.469, -.235]**	B = -.744, SE = .394, p = .059, CI$_{95}$ = [-1.518, .029]	B = -.690, SE = .365, p = .059, CI$_{95}$ = [-1.408, .028]

Wellbeing. In direct regressions of PSR strength on dependent variables, PSR strength directly, positively, and significantly predicted positive affect, negative affect, and optimism. When comparing the kindness condition to the no treatment condition, having a stronger relationship with the featured parasocial target enhanced positive affect and state optimism, but had no effect on negative affect. This suggests that if the parasocial target is experiencing more positive content and reacting in a more positive way, the positivity experienced by participants are amplified with greater PSR strength. However, any negative feelings experienced by participants about the underlying experience of the pandemic may also be amplified with greater PSR strength.

In contrast to the kindness condition comparisons, when comparing the information condition with the no treatment control, having a stronger PSR with the creator did not moderate the relationship between condition and positive affect or optimism, but it did increase the effect of condition on negative affect. This suggests that if the parasocial target is experiencing more negative content and reacting in a more negative way, such negative

feelings will also be amplified with greater PSR strength. This further suggests that information seeking (comparing the information condition with the control) may not be an effective way to regulate emotion, whilst fixating on the positive (comparing the kindness condition with the control) may be effective.

Figure 5
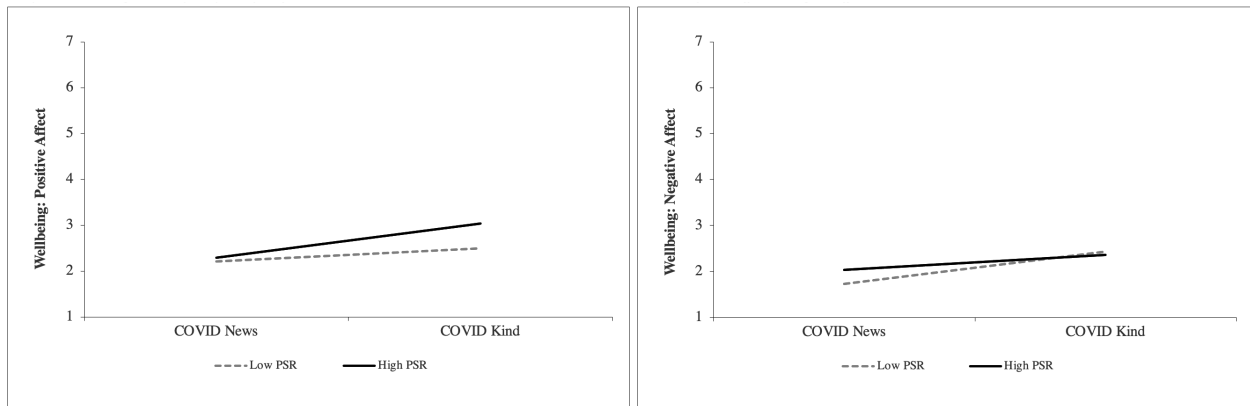
Prosocial behaviour. In direct regressions, greater PSR strength was associated with participants reporting greater prosociality (e.g., that they would comply more with lockdown rules). However, participants with stronger PSRs with the featured target donated fewer raffle tickets to a charitable cause.

Greater PSR strength also enhanced the effect of condition on prosocial behaviour when comparing participants in the kindness condition with those in the no treatment control. Similarly, when comparing participants in the information condition with the control, PSR strength also boosted prosocial behaviour (though as with the kindness condition, PSR moderation was not reflected in the raffle donation exercise). PSR strength moderated the effect of condition on prosocial behaviour in both the kindness and information conditions where participants exposed to pandemic-related news demonstrated different prosocial behaviour

depending on whether the parasocial relationship to the featured creator was high or low. Higher PSR strength resulted in greater prosocial behaviour scores, whilst lower PSR strength resulted in smaller prosocial behaviour scores, where prosocial behaviour was reported on the custom self-report measure. The same variance in prosocial behaviour from PSR strength was not found in the control condition.

In summary, PSR strength was directly associated with wellbeing and prosocial behaviour. In terms of wellbeing, PSR strength amplifies the positivity and negativity of the information portrayed by the parasocial target in the kindness and information conditions, respectively, when compared to no treatment. Finally, PSR strength also moderated the effect of condition on prosocial behaviour, across both the kindness and information conditions.

Discussion

Participants were exposed to acts of kindness and general information concerning the pandemic, presented to them by a parasocial target on social media. Such exposure directly affected wellbeing and indirectly affected wellbeing and prosocial behaviour, moderated by parasocial relationship strength.

We found that focusing on kind acts that others have done during the pandemic does not increase positive affect or optimism but does reduce negative affect. Contrastingly, seeking general information about the pandemic which tends to be more negative in nature, does reduce positive affect and optimism but did not increase negative affect when compared to no treatment.

Additionally, greater PSR strength amplified positive wellbeing effects of focusing on kind content and amplified negative wellbeing effects of general information seeking. It also amplified the effects of condition on prosocial behaviour when both fixating on the positive, and information seeking, were adopted as emotion regulation strategies.

Theoretical and practical implications

These findings corroborate the powerful nature of kindness. Whilst past research has found that *being* kind can lead to emotional rewards for an actor (Curry et al., 2018), these results suggest that being *exposed* to the kind acts of others on social media, particularly through a parasocial relationship intermediary, can also be beneficial. Specifically, sharing kind acts in daily life can encourage viewers to act in a more prosocial way themselves, even if they are not extraordinary portrayals of kindness, but small, general, and easily replicable ones. Among a relatively large and diverse sample, associations were consistently found between observing the kindness of others, and wellbeing and prosocial behaviour, even throughout the stressful context of the COVID-19 pandemic.

The current results also shine an important light on the powerful impacts that parasocial targets seem to have. Viewing a parasocial partner regulate their own emotions by focusing on positive or negative information does indeed impact viewer wellbeing. Further, based on the successful moderation by PSR strength, these one-sided figures that we may try and use to regulate emotion not only encourage positive outcomes and behaviour, but can also encourage negative wellbeing outcomes, suggesting that parasocial relationships act as a general amplifier of emotion regardless of benefit or harm. This further emphasises the importance of considering what content is shared on social media, specifically by creators that have the power to influence mass platforms of viewers, and more broadly.

For example, creators could use the PSRs formed with them to benefit viewer wellbeing by creating content that features and focuses on kindness. This seems especially important in times of crisis such as the recent global pandemic, as the coverage of information relating to COVID-19 negatively impacts wellbeing in its current form when compared to the control condition. This outcome further adds to the more progressive perceptions of social media in research, providing yet another context in which social media can be used to benefit users through encouraging emotion regulation, and in turn, influencing wellbeing.

This converges with a recent call for media to report at least one positive story for every three negative stories (VanderWeele & Brooks, 2020), especially considering the damning evidence that documents negative impacts of catastrophically framed online content on viewers' mental health, wellbeing, and intentions to act in a more prosocial way (Baden et al., 2019).

Limitations and future directions.

Several avenues exist for future research, including using more behavioural measures of prosociality to strengthen claims (Baumeister, Vohs, & Funder, 2007). Whilst this was attempted in this research by examining the number of raffle tickets donated to a prize draw for COVID-19 related causes, this proved problematic, as nearly 50% of all participants chose to donate all 10 tickets, limiting statistical variability. Future research could also investigate regular and reliable ways to disseminate everyday acts of kindness and draw attention to them.

Another limitation of this study is in its design to explore emotion regulation strategy. Whilst the findings demonstrate that PSRs can directly affect how viewers exposed to them feel, the study design does not truly allow for the exploration of emotion regulation from the

point of the viewer themselves adequately. To do this successfully, the study design would need to be amended to ensure that participants were able to actively choose an emotion regulation strategy to proceed with, instead of being randomly assigned to an emotion regulation condition. For this reason, this study can only preliminarily suggest implications of fixating on positivity and seeking further information as emotion regulation strategies. Future research may wish to improve the study design to better assess this question. One way to potentially address this whilst still randomly assigning participants to 'information seeking' and 'positivity fixating' conditions could be to add a retrospective item at the end of the study, asking whether their experimental activity is something they would typically engage in themselves. An alternative option would be to allow participants to choose their own condition, and thus inadvertently choosing the emotion regulation strategy they would typically choose to engage with.

Further, this research only examined one family of emotion regulation strategy, namely attention deployment. Future research may wish to examine whether other strategies of emotion regulation and coping could provide better outcomes for wellbeing and prosocial behaviour. For example, it could be insightful to assess a situational modification strategy, such as exposure to a comedy act regarding the pandemic. Such a study could firstly assess whether this would provide positive or negative outcomes, secondly, if PSR strength to the disclosing comedian moderated effects, and thirdly, if this is a successful way to regulate emotion, compared to seeking information or positivity-fixating. This could help inform which category of emotion regulation strategy works best. It would also help to further understand the capacity of PSRs and what they are useful for.

One final limitation to note about this study is the generalisability to other situational contexts. The coronavirus pandemic is an unprecedented experience for most of today's society and it may be that emotion regulation strategies may not impact prosocial behaviour or wellbeing in less traumatic events. Again, the generalisability of sample should also be considered as explored in the previous chapter, and further discussed in the general discussion chapter below.

Conclusion

This research examined information seeking and positivity fixating as emotion regulation strategies, and how PSRs may moderate the impact such strategies on wellbeing and prosocial behaviour. We wanted to see if viewing the kind acts of others could increase wellbeing and encourage others to act similarly, particularly in a world where sensationalised and negative media content shines a spotlight on the lowlights of humanity, particularly during the bleakness triggering by living through a global pandemic, and particularly when the information is presented by a parasocial target. These benefits were evident, even during the COVID-19 crisis, encouraging viewer wellbeing and prosocial behaviour. Creators can use their influence over viewers to amplify both positive and negative outcomes, exposing opportunities to embrace, and dangerous consequences to avoid.

Overall, this research helps us to understand the role of PSRs in our lives, particularly in stressful situations. Not only are parasocial targets seen as capable of regulating a range of emotions (Chapter 2 of this thesis), but in this real-world applied setting, they do so by boosting results of emotion regulation strategies and increasing the effects that condition has on wellbeing and prosocial behaviour. With this in mind, future research can now explore how PSRs are created so we can further experience the benefits that come from them (Chapter 4)

and determine whether PSRs can be harnessed for more generalised contexts of prosocial change (Chapter 5).

CHAPTER 4 | CREATING & STRENGTHENING

In Chapters 2 and 3, we found parasocial relationships are considered to provide meaningful emotion regulation capabilities, and even encourage wellbeing and prosocial behaviour during the context of a global pandemic. If PSRs can provide those who form them with such benefits, there may be value in comprehending exactly how these one-sided connections are formed, and whether the mechanisms involved in this creation are similar to those of traditional bidirectional relationships. Chapter 4 therefore shifts the focus of this research from understanding the outcome of PSRs, to understanding their creation.

Introduction

Understanding the process of relationship formation is valuable, as the interactions we have with those around us are one of the highest influences on wellbeing (Helliwell & Putnam, 2004). As relationships are typically understood to involve two people interacting with one another (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959), it seems reasonable that most of the exploration of relationship formation focuses on two parties mutually interacting (Aron et al., 1997; Sedikides et al., 1999). In the case of PSR's, not only do relationship partners not interact back, or possess any knowledge of a relationship being formed with them, they may also be literally incapable of reciprocating interaction (e.g., fictional characters). PSRs have been compared with traditional bidirectional relationships in their ability to quench loneliness (Derrick et al., 2009), fulfil a need to belong (Paravati et al., 2021), and even help regulate emotion (Chapters 2 & 3 of this thesis), but research is yet to explore how relationship formation takes place in the contexts of PSRs, and the potential mechanisms that guide this process.

Within the well-understood context of traditional bidirectional relationships, relationship formation is driven more by the act of self-disclosure than proximity or time spent with another (Chaudoir & Fisher, 2010). Self-disclosure describes the process of showing yourself so others can perceive you (Jourard, 1971), and verbally revealing your thoughts, feelings, and experiences about yourself to others (Derlega et al., 1993). Disclosing in this way not only benefits relationships through developing intimacy (Collins & Feeney, 2014), but it can also contribute to one's sense of self (Derlega, Anderson, Winstead et al., 2011; Derlega et al., 1993), and increase enjoyment for both the discloser (Tamir & Mitchell, 2012) and the recipient (Tsay-Vogel & Oliver, 2014). A key pattern of the self-disclosure associated with developing close relationships, is its sustained, escalating, reciprocal, and personalistic nature (Altman & Taylor, 1973; Aron et al., 1997; Berg & Clark, 1986; Collins & Miller, 1994; Derlega et al., 1993; Dindia & Allen, 1995; Dindia et al., 1997).

Researchers who wanted to study relationships in laboratory settings without the variations of existing connections, sought a process to create relationships, naturally turning to self-disclosure to do so. The closeness-generating methodology commonly known as the Fast Friends Paradigm (FFP) was structured with such self-disclosure at its core (Aron et al., 1997). Across three stages, pairings of two strangers would ask and answer increasingly intimate self-disclosure prompts in turn, a process that successfully fostered closeness in a 45-minute period. Multiple versions of this task were tested. Pairs were matched for non-disagreement on important attitudes, were led to expect mutual liking, or were explicitly told that the goal of the task was to achieve closeness, but none of these manipulations significantly affected results. Instead, the exercise of escalating mutual self-disclosure was consistently successful at creating the intimacy of relationships in less than an hour, feelings that would typically take multiple encounters over multiple days, to develop in an organic setting.

Inspired by the FFP, the Relationship Closeness Induction Task (RCIT) validated a faster version of the paradigm. In a similar task design, pairings of strangers self-disclose through three stages of increasingly intimate self-disclosure prompts to form a relationship, except this task version only takes nine minutes to administer (Sedikides et al., 1999).

Such closeness-generation processes contribute valuably to relationship research in two ways. Firstly, correlational studies of pre-existing relationships experience biased sampling (e.g., people interested in taking part in such studies may already be more extraverted, and social participants may volunteer with friends), and extraneous variance derived from naturally formed connections (e.g., the length of a relationship, or how partners come to meet). And secondly, manifesting new relationships within experimental designs without a formulated procedure was notably difficult to achieve.

Turn-taking features in both the FFP and the RCIT, and the reciprocal self-disclosure derived from this is known to generate greater feelings of liking, closeness, and similarity, compared to when only one person discloses or listens (Sprecher et al., 2013). This is consistent with the theory of social penetration, which suggests that self-disclosure becomes a form of social currency when two people interact, and the more self-disclosure received, the more one assumes they are liked (Altman & Taylor, 1973). Facilitating reciprocity may therefore explain why these tasks are able to generate closeness, and until now, the assumption has always been that the benefit of tools such as the FFP and RCIT work optimally with two interaction partners who can disclosure, and absorb the disclosure of the other. Yet meaningful and mutual interaction is not possible in the context of PSRs. After all, reciprocity cannot exist if a parasocial partner remains unaware of one's existence, or the fact that a unidirectional bond is being formed towards them.

Despite this fundamental difference between unidirectional PSRs and bidirectional traditional relationships, parasocial partners still have an affective, behavioural, and cognitive impact on those forming them (Derrick et al., 2009; Gabriel, Paravati, Green, & Flomsbee, 2018; Hermes, 1999). If a favoured television show can replicate company in the same way an in-person friend can, despite the one-sided nature of television (Derrick et al., 2009), and if an online creator can help regulate emotion in similar ways to bidirectional ties (Chapter 2 of this thesis), perhaps a parasocial partner self-disclosing unidirectionally can induce relationship formation in the same way as reciprocal self-disclosure with an in-person partner.

The current research aims to fill this gap by understanding whether unidirectional self-disclosure can lead to the creation of PSRs, similar to the process of creating traditional bidirectional relationships. Specifically, drawing inspiration from the FFP and RCIT, we propose a new methodological tool and put it to the test, one that aims to create entirely new parasocial connections from viewers towards parasocial targets (i.e., online creators) who unidirectionally self-disclose. Whilst reciprocal self-disclosure generates greater liking, closeness, and similarity, in individual situations, receiving self-disclosure only predicts higher liking than being the one to self-disclose only (Sprecher et al., 2013). Thus, strong relationship formation may result from participants who only receive self-disclosure from a parasocial target.

Furthermore, as relationship quality can be indicated by both perceived closeness and responsiveness (Chapter 2 of thesis), this research goes beyond past research with the FFP and the RCIT by understanding whether unidirectional self-disclosure can generate perceived responsiveness, as well as closeness. The current study will compare freshly created unidirectional and bidirectional relationships across these dimensions.

The current research

The present research proposes a novel methodology, the Parasocial Fast Friends Paradigm, or PFFP, to assess whether unidirectional self-disclosure (from a parasocial target) is sufficient for relationship formation, or if bidirectional self-disclosure (as seen in traditional relationship formation) is an integral part of relationship creation. Specifically for Study 5, we tested whether our alternative Parasocial Fast Friends Paradigm, utilising unidirectional self-disclosure, would induce people to form relationships with parasocial targets, though we expected that these relationships would not be as strong as the ones formed through bidirectional self-disclosure (H1). We also examined whether self-disclosure, be it unidirectional or bidirectional, would result in stronger perceived closeness and PSR formation compared to a unidirectional non-disclosure control condition (H2). Finally, we examined whether self-disclosure, be it unidirectional or bidirectional, would produce higher levels of perceived responsiveness than a unidirectional non-disclosure control condition (H3).

Study 5

This study was pre-registered on the Open Science Framework, details of which can be found in the supplementary materials. The University of Essex provided ethical approval, participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection. Item presentation was randomised where possible for good practice.

Method

Participants. Data collection took place using the paid online subject pool, Prolific. During this process, I was permitted to use additional funding, and so we decided to recruit as

many participants as the budget would accommodate. Resultingly, a total of 308 participants were recruited. To ensure participants could conduct communication tasks effectively and to ensure procedural consistency, only those with English as a first language, and with computer and webcam facilities, were invited to undertake the experiment. Of the recruited participants, 13 were excluded for not completing the study, 11 for failing attention checks, and 10 for knowing the confederate (who is a publicly known YouTube creator) before the experiment, resulting in a final sample of 274 participants (167 identified as female, 105 as male, 2 as non-binary) between the ages of 18 and 66 years (M_{age} = 28 years, SD = 5.45).

Procedure. Participants were randomly assigned into one of three conditions: a traditional fast friends condition (i.e., 'bidirectional disclosure') (n = 91), a parasocial fast friends disclosure condition (i.e., 'unidirectional disclosure') (n = 89), and a parasocial non-disclosure control condition (i.e., 'unidirectional non-disclosure') (n = 95). The same confederate featured as the target across all conditions, and video stimuli were shot in a way that minimised variance in staging, editing, and stimuli duration.

Participants in the bidirectional disclosure condition took part in a 9-minute video-call task with a confederate posing as a second participant. A research assistant presented the three sets of traditional Fast Friends questions from the RCIT (Sedikides et al., 1999), so that the participant and confederate answered alternating and increasingly intimate questions for three minutes per set. To ensure consistency, participants were instructed to calibrate their video display so that the confederate was prominent, and task questions were displayed in the same order for each trial. Participants in the unidirectional disclosure condition watched a pre-recorded video of the same confederate answering the same sets of self-disclosing questions for nine minutes. In this Parasocial Fast Friends Paradigm, however, participants were unable

to reciprocally self-disclose to the parasocial target. Meanwhile, participants in the control unidirectional non-disclosure condition watched a video of the same parasocial target, this time answering general trivia questions. The trivia answers were displayed on the back of question cards where participants could see them, to avoid any distraction caused by not knowing trivia answers. Following exposure to the confederate, all participants reported on parasocial relationship strength, and how close and responsive they perceived the confederate target to be.

Measures

Parasocial relationship. A 12-item version of the Celebrity Personal Parasocial Interaction Scale (Bocarnea, 2007) was used on a 7-point scale (1 = strongly disagree, 7 = strongly agree). Of the original 20 items, eight were removed because they did not fit the context of a first-time interaction (please refer to the appendix for a list of all items used). Items were averaged to create an overall measure (α = 0.918). As parasocial relationship strength items measure closeness, participants in the bidirectional disclosure condition also completed this scale.

Perceived closeness. As per the FFP (Aron et al., 1997), the 1-item visual measure of Inclusion of the Other in the Self (Aron, Aron, & Smollan, 1992) was used to measure closeness (featuring two circles, where 1 = least inclusion of the other in the self, with no overlap between the circles; 7 = most inclusion of the other in the self, where the circles were most overlapped). Additionally, a 7-item version of the Unidimensional Relationship Closeness Scale (Dibble, Levine, & Park, 2012) was used on a 7-point scale (1 = not true at all; 7 = completely true; α = 0.921). Of the original 12 items, five were removed because they did not fit the context of a first-time interaction, and the remaining items were minorly modified to fit the context of just

meeting the confederate. Both measures were combined to form an overall measure of closeness (α = 0.926).

Perceived responsiveness. A 12-item Perceived Partner Responsiveness Scale was used (Reis, Crasta, Rogge et al., 2017). The original measure used a 9-point scale (1 = not at all true; 9 = completely true), which was adapted to a 7-point scale for consistency across measures in this study. Items were averaged to create an overall measure (α = .964).

Results

An analysis of variance (ANOVA) was used to assess whether the Parasocial Fast Friends Paradigm successfully induced participants to form a relationship with the confederate, and found PSR strength significantly differed across conditions, $F(2, 271) = 47.525$, $p < .001$ (see Fig 5). Follow up tests with Bonferroni corrections found that, as expected, bidirectional disclosure where the participant and confederate equally disclosed to each other led to the highest reports of relationship strength (M = 5.65, SD = .74) when compared to unidirectional disclosure where only the confederate disclosed to the participant (M = 4.70, SD = 1.16), $p < .001$, and unidirectional non-disclosure where the confederate only answered trivia questions to the participant (M = 4.22, SD = 1.10), $p < .001$ (H1). It is important to note that bidirectional disclosure can still be compared using parasocial strength measures, as such measures incorporate the strength of relationships generally, reflecting the same constructs traditionally used to assess bidirectional relationships. Also as predicted, participants in the unidirectional disclosure condition created significantly stronger PSRs with the confederate than participants in the unidirectional non-disclosure control, $p = .008$ (H2). These results support the PFFP's ability to create relationships and suggest the importance of self-disclosure; unidirectional self-disclosure yielded greater relationship strength than non-disclosure.

Figure 6 Comparison of PSR and perceived closeness and responsiveness between conditions in Study 5
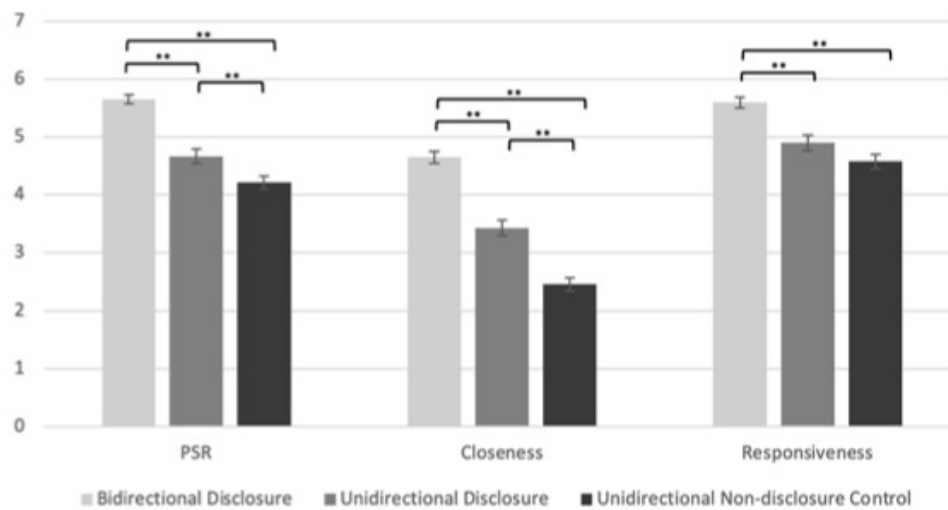
Comparison of PSR, and perceived closeness and responsiveness between conditions in Study 5

An additional ANOVA found perceived closeness significantly differed between conditions, $F(2, 271) = 84.707$, $p < .001$. Participants in the unidirectional disclosure condition experienced greater feelings of closeness to the confederate (M = 3.43, SD = 1.28) than those in the unidirectional non-disclosure control (M = 2.46, SD = 1.12), $p < .001$, but again, bidirectional disclosure incited the highest perceived closeness (M = 4.65, SD = 1.02; p's < .001) (H2).

Finally, perceived responsiveness also significantly differed between conditions, $F(2,271) = 19.86$, $p < .001$ (H3). The confederate was viewed as significantly more responsive by participants in the bidirectional disclosure condition (M = 5.60, SD = 0.86) than by participants in both the unidirectional disclosure (M = 4.90, SD = 1.25), $p < .001$, and unidirectional non-disclosure condition (M = 4.58, SD = 1.20), $p < .001$. Whilst unidirectional disclosure produced somewhat greater responsiveness than unidirectional non-disclosure, these conditions did not significantly differ, $p = .154$.

In summary, this study found that people developed greater relationship strength and felt closer to parasocial targets that self-disclosed than parasocial targets who did not self-disclose. Bidirectional self-disclosure resulted in the strongest relationship strength, perceived closeness, and perceived responsiveness, but as this is a high standard for one-sided parasocial targets to match, finding significantly stronger results in the unidirectional disclosure condition than in the unidirectional non-disclosure control condition is insightful in itself. It would be out of the ordinary to assume relationship formation could occur without disclosing information about the self, and so finding a difference in the unidirectional disclosure condition encouragingly indicates PSR formation.

Study 6

As PSRs are formed through many mediums, we often find ourselves exposed to the self-disclosure of parasocial partners. Fictional book characters may share their vulnerable thoughts that only we as the reader know, and media presenters we feel we know may share personal updates, such as coming out or getting married. Even on social media, content creators who amass millions of viewers self-disclose about all aspects of life, from fashion and beauty expression to intense personal accounts of life as a minority.

Study 5 found that unidirectional self-disclosure using the Parasocial Fast Friends Paradigm was successful at helping people form relationships with parasocial targets, producing a greater sense of closeness than non-disclosure. Building on unidirectional disclosure as a mechanism for relationship formation, in Study 6 we explored whether the means of self-disclosure mattered, exposing participants to a more ecologically valid form.

Take, for example, a creator talking about their journey with mental health. The context of this very specific self-disclosure varies from the broad disclosure of many general topics found in the PFFP. Self-disclosure about mental health involves revealing a concealable stigmatised identity, which could result in disclosers experiencing negative outcomes as well as positive ones, and even becoming targets of prejudice (Quinn, 2006; Quinn & Chaudoir, 2009). For example, disclosing about sexual orientation can result in experiences of hate crime, harassment, and housing and employment discrimination (Herek, 2009).

Further, self-disclosure of a concealed identity may even affect PSR formation for the receiver in the first place. Chaudoir and Fisher (2010) presented the Disclosure Processes Model (DPM), a tool aimed to answer when and why disclosing about a concealable and stigmatised identity could be beneficial. They illustrated two scenarios: in one, Jason self-discloses to his father about being HIV-positive, as he does not want the burden of carrying a heavy secret but worries about a negative reaction. In another, Susan self-discloses to her partner about being H.I.V. positive, to protect their health and strengthen their relationship. The DPM suggests that approach-focused goals, such as Susan wishing to attain positive outcomes like greater relationship intimacy, will likely benefit more from disclosure than avoidance-focused goals, such as Jason's wish to avoid social rejection. This is because approach-focused disclosers may be better able to communicate information and accept consequential reactions. Whilst the DPM provides valuable insight into disclosure events in already-established relationships, the present study explored how self-disclosure of a concealed identity may affect PSR formation in the first place, and from the point of the receiver.

As exposure to parasocial targets typically happens incrementally, this study further aimed to examine whether different dosage levels of parasocial exposure could also affect PSR formation.

Specifically in Study 6, we tested a directionally agnostic hypothesis that a single, intense unidirectional self-disclosure about a concealed stigmatised experience may be just as effective as broad unidirectional disclosure (about a wide and general range of topics) via the PFFP, in creating comparable PSR strength, perceived closeness, and perceived responsiveness (H4a), or may be more effective than broad unidirectional disclosure (H4b). We further predicted that a dosage effect will exist, and exposure to both intense and broad self-disclosure will lead to greater PSR strength, perceived closeness, and perceived responsiveness compared to exposure to either type of self-disclosure individually (H5). Finally, we examined an exploratory and directionally agnostic hypothesis that differing types of self-disclosure may or may not affect perceived similarity to parasocial targets (H6).

Method

This study operated under the same ethical approval provided by the University of Essex in October 2020, participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection. Item presentation was randomised where possible for good practice.

Participants. It should be noted that the data collection process for the following chapter, Harnessing, was used to simultaneously collect data for this present study. This means that both this study, and the following study concerning prejudice (Study 7) use the same sample, and therefore the same allocation of conditions, but different outcomes were explored

in each study. A total of 320 participants were recruited via a paid online subject pool, Prolific. Of these, 10 responses were removed because participants did not complete the survey, resulting in a final sample of 310 people (181 identified as women, 126 as men, and 3 as non-binary), between the ages of 18 and 35 (M_{age} = 26 years, SD = 4.86).

Procedure. Participants were randomly assigned into one of three conditions: broad disclosure of general information (using the Parasocial Fast Friends Paradigm, n = 82), intense disclosure, concerning a concealed stigmatised identity of a mental health disorder (using organic stimuli explained below, n = 117), and multiple disclosure (using the broad and intense self-disclosure, n = 111). To ensure generalisability, a different confederate was used to Study 5, who featured consistently across the three conditions.

Participants in the broad disclosure condition watched a video of the confederate answering the three stages of questions from the PFFP, where each stage increased in question intimacy, exactly the same as in Study 5. Participants in the intense disclosure condition watched a video of the confederate talking about her experiences with borderline personality disorder (BPD), an intense topic that the confederate specifically did not mention in the broad disclosure video. The topic of mental health was used as this confederate is a content creator on YouTube, where she discloses her experiences with mental health. The stimulus for this condition was taken directly from her YouTube channel to replicate parasocial relationship building in an organic setting, and included her discussing how BPD affects her life, answering frequently asked questions about it, and addressing common assumptions, and how they make her feel. Finally, participants in the multiple disclosure condition watched both stimuli, first the broad disclosure, followed by the intense disclosure, to provide multiple doses of exposure.

After watching the video stimuli, participants were asked to report on how close, responsive, and similar to them they perceived the confederate to be and completed a parasocial relationship measure.

Measures

Measures consisted of the mean score on reported items, and all used a 7-point scale.

Parasocial relationship. The same measure of PSR was used from Study 5 except this time one additional item from the original scale was included, 'I sometimes made remarks to her when watching that video' (this item was omitted from Study 5 for not fitting the context of the bidirectional condition). Participants in the multiple disclosure condition completed this scale twice, once after watching the broad disclosure (PFFP) video, and again after watching the intense disclosure (BPD) video (α_{PSR1} =.908 and α_{PSR2} = .896).

Perceived closeness. The Unidimensional Relationship Closeness Scale used in Study 5 was also used in this study (α =.914), but not the Inclusion of the Other in the Self item.

Perceived responsiveness. The same twelve-item Perceived Partner Responsiveness scale was used, as in Study 5 (α =.967).

Perceived similarity. The two-item Perceived Similarity measure was used (Sprecher et al., 2013); α =.913).

Results

Analyses of variance (ANOVAs) were again used to determine whether PSR, perceived closeness, responsiveness, and similarity differed between conditions. Firstly, there was no

significant difference in parasocial relationship strength formed between the broad (M = 3.71, SD = 1.20), intense (M = 3.66, SD = 1.07), and multiple disclosure conditions (M = 3.87, SD = 1.15), F(2, 307) = 1.217, p = .297. There was also no significant difference of perceived closeness between the broad (M = 2.96, SD = 1.23), intense (M = 3.20, SD = 1.32), and multiple disclosure conditions (M = 3.29, SD = 1.44), F(2,307) = 1.449, p = .236.

However, there was a significant difference in perceived responsiveness, F(2, 307) = 3.65, p = .027. In follow-up tests with Bonferroni corrections, the broad disclosure (M = 4.28, SD = 1.26) yielded significantly less perceived responsiveness than multiple disclosure (M = 4.73, SD = 1.22), p = .048, though there was no significant difference between multiple disclosure and intense disclosure (M = 4.36, SD = 1.33), p = .999, or the intense disclosure compared to the broad disclosure, p = .083. Thus, people who viewed both the broad disclosure and the more intense disclosure concerning BPD, perceived greater responsiveness from the target than those who did not watch the disclosure concerning BPD, signalling a dosage effect (H5), but besides this, both methods of exposure yielded similar levels of perceived closeness and responsiveness (H4a).

Figure 7
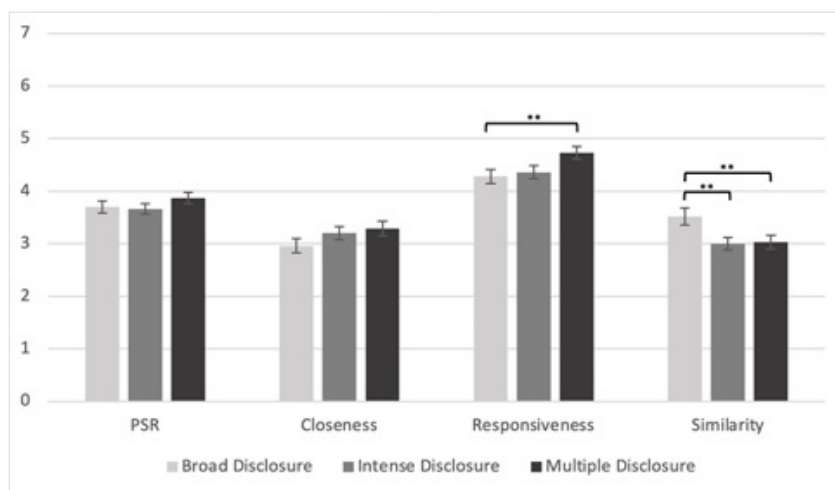
Comparison of PSR, and perceived closeness and responsiveness between conditions in Study 6

Finally, perceived similarity also significantly differed between conditions, $F(2, 306) = 4.363$, $p = .014$ (H6). Follow up tests found that intense disclosure (M = 2.98, SD = 1.32) and multiple disclosure (M = 3.03, SD = 1.36) did not significantly different from each other, $p = .999$. Though participants in the broad disclosure condition (M = 3.52, SD = 1.44) reported significantly higher perceived similarity to the confederate than participants in both the intense disclosure condition, $p = .019$, and the multiple disclosure condition, $p = .042$. Thus, perceived similarity was significantly higher in the condition where the confederate did not disclose their experiences with borderline personality disorder.

Discussion

Whilst it would seem sensible to think that two mutually contributing parties would be an important ingredient for creating relationships, the present research suggests that this may not necessarily be the case. We drew on traditional relationship research and tested the procedure of relationship formation in a unidirectional, parasocial context. The present research proposed a parasocial fast friends paradigm inspired by existing closeness-generating tools (Aron et al., 1997; Sedikides et al., 1999). Results of the PFFP found that exposure to self-disclosing parasocial targets, without an opportunity to reciprocate disclosure, is sufficient for PSR formation; further, this unidirectional self-disclosure leads to greater perceived closeness to the discloser, when compared to unidirectional exposure without self-disclosure.

Whilst caution should be taken when drawing conclusions from null effects, Study 6 suggests that different forms of unidirectional self-disclosure can be effective as a mechanism for creating relationships. Broad self-disclosure with general 'get to know me' information, and intense self-disclosure about a concealed stigmatised identity (specifically one's journey with mental health), both led to PSR formation between viewers and parasocial targets (with

average PSR values for all conditions exceeding the scale midpoint). A dosage effect also seemed to exist, where participants exposed to both broad and intense self-disclosure experienced higher perceived responsiveness from the parasocial target, but not higher levels of perceived closeness towards them compared to participants who were only exposed to one self-disclosure.

Theoretical and practical implications

The implications of these findings are multifaceted. In a field that readily and understandably assumes bidirectional self-disclosure to foster closeness, the PFFP provides new possibilities for practising experimental research, and for exploring self-disclosure theory.

Firstly, this novel contribution to parasocial research not only expands our understanding of one-sided relationships and how to develop them, but relationship formation theory overall. The present studies both draw upon and challenge academic theories of self-disclosure, such as social penetration and social exchange (Altman & Taylor, 1973; Emerson, 1976). These theories depict self-disclosure as a form of social currency that can lead to feeling emotional equity. In other words, if someone self-discloses to you, this is typically interpreted as being liked by the discloser, consequently perceiving them as closer. Such sequential thoughts become an interesting concept in the context of PSRs, as the lack of acknowledgement from parasocial targets makes it impossible for them to possess any form of liking towards who they disclose to. A viewer exposed to this disclosure is aware that the parasocial target cannot like them, and that the parasocial target is not even aware of the viewer's existence, and yet participants exposed to disclosing parasocial targets still felt close to them. Thus, this parasocial process highlights the limitations of these theories that suggest disclosure can be exchanged for closeness.

These findings also provide further insight into the theory of disclosure surrounding concealed stigmatised identities (Chaudoir & Fisher, 2010). The Disclosure Processes Model found that disclosing about identities that are hidden, such as mental health and sexual orientation, can result in harmful consequences alongside the benefits typically associated with disclosure. Building upon this model, the current findings suggest that stifled relationship formation is not one of these harms, as similar levels of closeness and PSR strength were generated from the self-disclosure of mental health, as with the self-disclosure of general broad topics, albeit with lower reported similarity.

Additionally, these findings highlight an opportunity to utilise PSRs within laboratory methodology. The FFP (Aron et al., 1997) and RCIT (Sedikides et al., 1999) were developed to address two primary issues of studying relationship research. Examining the effects of relationship closeness on dependent measures, without confounding and covarying influences of naturally occurring relationships, is difficult without a process that attempts to generate closeness from scratch. Additionally, dyadic participant recruitment of existing friends leads to disproportionate sampling of particularly sociable people. Both of these bidirectional procedures provide speedier and more convenient strategies to research relationships without naturally occurring variance and can be used as valuable research tools in this way. The presented PFFP in this study provides an additional laboratory tool to overcome the same issues, both in the general study of closeness, and specifically when studying PSRs. Distinguished from its predecessors, the PFFP requires fewer resources to develop perceived closeness with participants, as the video stimuli exposure negates the need for a self-disclosing partner's presence at each trial. As with the previous methodologies, the intention of this research is not to replace the richness of real-world experience, but to provide an alternate

laboratory experimental method that can successfully generate relationship experiences, which in this case, does not even require bidirectional self-disclosure.

We hope this tool will be particularly useful to advance the field of PSR research. Even the most notable research and theories to date that surround parasocial impact and influence rely on participants thinking about PSRs that already exist (Britton, 2017; Derrick et al., 2009; Melchiori & Mallett, 2015; Schiappa, Gregg, & Hewes, 2006). Similarly, to the bidirectional relationship research problems, this may also lead to confounding and covarying influences of the PSRs being studied, including the medium in which they were developed, how long ago this occurred, and how strong the PSR may be. Using the PFFP to overcome these issues by developing PSRs from scratch will help reduce unnecessary variance, which is of importance as different types of PSRs (for example, strong PSRs vs. weak PSRs) have been found to function and be utilised in different ways (Chapter 2 of this thesis). Further, study designs that rely on existing PSRs present a limited recruitment source. For example, a study of the influence of PSRs with characters in a television show, requires participants who have watched said television show, and may again lead to disproportionate sampling of certain personality differences that may be drawn towards the show in question (e.g., people high in neuroticism express stronger preferences for informative shows and tend to avoid comedy and action fares (Weaver III, 1991)). Having the PFFP as a tool to generate PSRs from scratch within completely random samples overcomes all of these problems.

As a last implication, the PSRs built in this study were created using social media content, suggesting implications for social media platforms. The stimuli used in the second half of this research included organic content taken directly from YouTube. Even after one round of exposure, viewers exposed to this content formed a PSR with the disclosing target,

suggesting that similar bonds are being created passively between millions of viewers and creators on social media worldwide. The impact of these connections, and whether they are being used responsibly and to their full capacity for prosocial change, are all exciting and valuable avenues that social media platforms can use to educate themselves, and their creators, on the power of their platforms. For example, can a creator talking about their actions be used to increase recruitment for social programmes, such as voting, or taking part in health checks? Or does a creator acting recklessly and in an anti-social manner for shocking entertainment value encourage viewers to do the same?

Limitations and future research

Future research would benefit from addressing the limitations and constraints associated with the methodology of present studies. Further insight into types of self-disclosure would be of benefit. This is because valence of disclosure has been found to differentiate relationship outcomes: people tend to feel closer to people who make positive disclosures (Gilbert & Horenstein, 1975). Not only does positive disclosure topic seem to matter, a positive perception of the discloser themselves may also be of importance, as bidirectional interactions with inimical interaction partners (as opposed to amicable ones) result in more negative affect, negative behaviours such as agitation and anxiety, and physiological threat responses (Gordils & Jamieson, 2021). It would be fair to assume therefore that negative topics and negative targets could both stifle PSR formation. A cross-factor design (positive vs. negative, and target vs. content) could provide greater insight into how types of disclosure, and disclosers, affect relationship formation.

Alternatively, it may also be informative for future research to explore potential different mechanisms associated with relationship formation. Self-disclosure is only one

mechanism that encourages relationships to form, but other research has suggested that liking and perceived similarity may also independently predict relationship formation (Collins & Miller, 1994; Kleinke & Kahn, 1980; Toosi, Babbitt, Ambady et al., 2012). Learning from the low similarity results from the present study, future participant recruitment could focus on particular social groups from the outset, such as LGBT+ people, exposing them to LGBT+ parasocial targets (considered similar), and non-LGBT+ targets (considered dissimilar), to assess whether similarity is associated with PSR formation. An alternative potential study design could recruit politically left- and right-wing participants and examine their PSR formation to a parasocial target that they have been told is a left-wing activist. The target could be carrying out a non-disclosure task (such as puzzle-solving) to assess whether political compatibility predicted stronger PSR formation. In reality, multiple different mechanisms could influence how we form relationships, and parasocial relationships in particular. Future research examining a wider range of these, and their potential interactions with each other, could provide an even deeper insight into the field of relationship formation.

Replicating the current study with alternative parasocial targets to online content creators could also help determine the generalisability of the current findings. Future research could for example examine whether unidirectional self-disclosure is similarly successful for fictional book characters presenting monologues to readers compared to unidirectional non-disclosure, or unidirectional disclosure through visual medium. It may be that the medium of text vs. video stimuli will yield greater or less immersion, resulting in different relationship formation outcomes. It may also be that the fictional nature of a book character will result in restricted relationship formation responses when compared to creators, who are real people.

Replicating the study with alternative types of disclosure to mental health would also be intriguing and test generalisability. This could include contexts of alternative concealed and stigmatised identity, such as HIV status and sexual orientation (Chaudoir & Fisher, 2010), or stigmatised identities that are incapable of being hidden, such as experiences as a person of colour. It may be that the surprising 'reveal' of concealable identities in particular cause greater affinity and stronger relation formation when compared to the disclosure of non-concealable identities. Further, if the disclosure of concealable identities can lead to greater relationship formation and PSR strength, such findings could encourage disclosers to feel more hopeful about the consequences of disclosing, easing a part of the stigma they may experience.

Alternative contexts could also compare the self-disclosure of intense personal experiences that are not related to stigma or political issues, such as a personal account of giving birth, or an experience of sky diving, to further assess the generalisability of PSR formation. Doing so would also help inform what topics of disclosure result in the strongest of PSRs.

A further limitation of the current studies is that individual differences of participants and the two confederates used in the stimuli were unaccounted for. Qualities of extraversion were found to marginally predict higher levels of closeness in the original FFP when the goal of achieving closeness was communicated to participants (Aron et al., 1997). Study designs could confirm whether such differences affect closeness achieved in PSRs specifically. Chapter 2 of this thesis found that PSRs seem to fulfil a unique role for people with low self-esteem, potentially because PSRs are less likely to result in social atrophy. Thus, self-esteem may also affect formation of PSRs as well as how they are leant upon.

Finally, this research only sheds light on one element of PSRs: how they are created. Complementing the plethora of research that establishes whether PSRs exist in various mediums, using the PFFP as a tool to create these unidirectional bonds from scratch can support further experimental exploration on the impact of PSR's. For example, a more demanding gap than understanding relationship formation in the parasocial field, is understanding the potential power of these unique connections, and how such power could be harnessed for prosocial change (see Chapters 4 & 5).

Conclusion

In a time where social technology is rife and people are building new kinds of parasocial relationships faster than research can understand them, it is useful to determine not only the contexts in which they exist, but also the processes involved in their creation. The Parasocial Fast Friends Paradigm successfully fosters unidirectional feelings of closeness with beings that may not even know we exist. We hope this methodology proves useful, not only as a theory-testing tool for interpersonal relationships, but also as a methodological springboard for understanding and harnessing the true potential that parasocial relationships are able to provide.

CHAPTER 5 | HARNESSING

Throughout this thesis so far, we have explored how parasocial relationships provide benefits such as emotion regulation, despite their one-sided nature. These seem to act in a unique way for people with different levels of self-esteem, and encourage wellbeing and prosocial behaviour during particularly stressful and turbulent contexts, such as a global pandemic. We also hypothesised that away from the context of extremities of such a global event, the core act of creators talking about their personal journeys to express and help others online, may also be harnessed for prosocial change. Specifically, that the unidirectional self-disclosure of creators may reduce societal prejudice, and whether any lowered levels of prejudice following a parasocial intervention would be sustained over time.

Introduction

We constantly form connections with people who are unaware of our own existence. In these parasocial relationships (Horton & Wohl, 1956), we get to know targets who unidirectionally disclose information to masses of viewers, in ways that can never meaningfully be returned. For fictional targets (e.g., book characters), it would be impossible. For non-fictional targets (e.g., newscasters and celebrities), online technology provides unprecedented insights that make them feel like friends, but they will never experience our self-disclosure, as we experience theirs. In other words, they can never listen to us rant after a particularly hard day, so what are they good for? The podcast presenters from our daily commute, the protagonists of every show we binge on Netflix, the creators we follow on YouTube, how do these ties enhance our lives if we cannot interact back? For decades, parasocial ties have satisfied affective, behavioural, and cognitive needs, similar to traditional bidirectional friendships. They make us feel less lonely (Derrick et al., 2009), they influence our purchasing

decisions (Chung & Cho, 2017), and we even assimilate their body traits to the self (Young, Gabriel, & Sechrist, 2012). But challenging the boundaries of what parasocial ties are known to contribute, can the unidirectional disclosure from parasocial relationships be harnessed for more substantial change, such as reducing societal prejudice?

Prejudice interventions

Prejudice is a negative evaluation based on an individual's group membership (Crandall & Eshleman, 2003). Based on this intergroup attitude (Fiske, 1998), ingroups are positively identified and outgroups are relatively devalued (Tajfel, 1981) whenever degrees of differences exist (Turner, 1989). Mutual interpersonal contact is well known to effectively reduce prejudice (Allport et al., 1954). This mutual contact can even occur in unique contexts. For example, cooperative playing of video games with intergroup members significantly improved outgroup attitudes and pro-outgroup participant behaviour when compared with solo play (Adachi, Hodson, Willoughby et al., 2016). Whilst providing an engaging opportunity to set up for successful intergroup cooperation, activities like this are resource intensive.

In mutual contact scenarios, disclosure increases familiarity and perceived similarity to generate reciprocal trust, encouraging cross-group friendship (Turner et al., 2007). For this reason, it seems less fathomable that unidirectional disclosure from a parasocial target could contribute to prejudice reduction. On the other hand, media has long played a role in shaping societal beliefs, from propaganda in world wars (Lewin, 1952), to children's shows like Sesame Street (Browne Graves, 1999). Despite beliefs being extremely resistant to change (Bem, 1970), media influence can broadcast norms (Kallgren et al., 2000), inspire an empathy that is generalisable to one's real-world society (Andersen, Downey, & Tyler, 2005; Zillmann, 2006),

and reduce social distance and avoidance of outgroups, by highlighting intergroup similarities and differences (Wong et al., 2017). In a non-randomised correlational study, increased parasocial interaction with gay sitcom characters predicted lower homosexual prejudice and an extended parasocial contact hypothesis was proposed, purporting that parasocial interaction may reduce prejudice in similar ways to contact theory (Schiappa et al., 2006). The present research aims to build on this hypothesis, with an experimental design that not only assesses whether a parasocial intervention affects prejudice, but whether parasocial relationship strength specifically is the mechanism operating this influence. This will contribute unique insights to the field of parasocial intervention, as most past research relies on correlations with pre-existing parasocial relationships or compares prejudice reduction capabilities from different media vehicles (e.g., videos vs. magazines (Wong et al., 2017), or music videos vs. imagined contact (Murrar & Brauer, 2018)). Whilst insightful, this chapter will expand on the 'what' of prejudice reduction theory, and into the 'why'.

This is pertinent, as despite prejudice being one of the most active areas of inquiry in social psychology (Jost & Burgess, 2000), academic understanding of successful prejudice intervention remains limited. This is particularly true with its understanding of media contributions (Paluck, 2009), and parasocial prejudice interventions have demonstrated inconsistent success. *Harry Potter* excerpts improved child attitudes to homosexuality and immigration (Vezzali et al., 2015), and *Shrek* promoted a higher understanding of stigma (Melchiori & Mallett, 2015), but *The Walking Dead* assimilation failed to change behaviour (Britton, 2017), and a Rwandan radio show had no effect on prejudicial beliefs (Paluck, 2009). Such inconsistencies may be a result of study limitations, as systemic reviews of prejudice studies found that, from 1958 to 2008, only 12 studies evaluated prejudice reduction in a randomised field with non-student samples (Murrar & Brauer, 2018); very few used implicit

and explicit measures, and even less pre-registered or examined effects over time (FitzGerald et al., 2019). Furthermore, of hundreds of intervention studies, only 11% tested causal prejudice effects in the real world and among adults (Paluck, 2016), limiting academic knowledge outside the laboratory.

Another notable literary gap is the context of parasocial interaction. Most prejudice intervention studies observe parasocial interactions with fictional targets, such as television characters. Whilst important, no studies to date have explored prejudice interventions with online creators as parasocial targets. As an increasingly prevalent medium, particularly among young adults, millions of people watch creators share their lives and opinions on social media, for example, via YouTube videos. Unlike fictional characters or unrelatable celebrities, this medium presents a preeminent resource for nuanced outgroup representation, as the accounts of real people counteract the often-sensationalised portrayal of outgroups in traditional media (McInroy & Craig, 2015). LGBT+ people, for example, are mostly absent or portrayed as deviant on television (Gould & Davenport, 1973), but a gay creator talking about their experiences online may better reflect real-world outgroup lens. In lieu of in-person contact, increasingly accessible outgroup portrayal in this way could reduce prejudice more effectively through de-stigmatising identities (Miller, 2017).

The current research

The present study aims to overcome the above recognised limitations. Using real creators as parasocial targets, and real stimuli from social media, this study examines an intervention that functions in laboratory settings and the real world alike. It aims to measure prejudice across time across implicit, explicit, and behavioural dimensions, in a randomised

adult sample, towards a highly stigmatised issue, namely mental health (Corrigan, Edwards, Green et al., 2001), features that past prejudice studies often lack (Murrar & Brauer, 2018). Using an alternatively-proposed parasocial 'fast friends' paradigm, we explore for the very first time whether newly created parasocial strength can reduce prejudice towards mental health. Chapter 3 of this thesis focused on creating PSRs; we are now assessing whether the power of these newly formed relationships can be harnessed to reduce prejudice for prosocial good.

More specifically, we made six predictions. Firstly, that any participant exposed to mental health disclosure will experience lower levels of implicit prejudice than those not exposed to said disclosure (H1A). Secondly, that participants exposed to mental health disclosure by someone they have already formed a PSR with, will experience less prejudice and intergroup anxiety than participants who have not previously been exposed to the parasocial target disclosing about mental health (H1B). We also predicted that participants who experience a general disclosure and mental health disclosure from the same target will experience greater parasocial strength to the target than those who experience general disclosure from one target, and mental health disclosure from a different target (H2A). Further, we predicted that greater parasocial strength would lead to greater prejudice reduction (H2B). We also predicted that an interaction would exist, where intensity of initial implicit prejudice will predict level of change in implicit prejudice post-intervention (H3). Finally, we predicted that lower prejudice levels will be maintained over time, and participants exposed to the mental health disclosure will report lower prejudice after one week than participants who were not.

Method

Participants. A total of 557 participants were recruited using the online participant pool, Prolific, of which 333 completed the experiment. To prime optimal understanding and effectiveness of the experiment stimuli, only those who satisfied the following four criteria were invited to take part:

1) not knowing the two targets featured in the stimuli (to ensure the parasocial relationships we intended to create within this study were entirely new),

2) being a similar audience age of the featured targets, specifically 18-35 years of age,

3) having English as a first language, and

4) not having experienced significant mental health issues such as borderline personality disorder (BPD), and not having close contacts who have such experience.

Of the participants that completed the experiment, 13 responses were removed due to non-compliance with IAT instructions or failing more than one attention check, resulting in 320 usable responses (191 identified as female, 126 as male, and 3 as non-binary; M_{age} = 26 years, SD = 4.856). As explained in the previous chapter, the same sample and condition allocation was used both here and in Study 6. An additional 10 participants were included in the analysis of the present study and not in Study 6, as these 10 participants (2 from the aforementioned multiple disclosure condition, 3 from the intense disclosure condition, and 5 from the broad disclosure condition) did not fully complete the Study 6 survey.

All participants who completed the experiment were financially compensated. In addition, those who completed an optional follow up survey one week after the initial task were

entered into a prize draw for retail vouchers. Of the final 320 responses, 147 participants voluntarily took part in the follow up survey.

This study was pre-registered on the Open Science Framework. The University of Essex provided ethical approval in January 2020, participants were given ample opportunity to ask questions, and informed consent was obtained prior to data collection.

Procedure. This is a mixed design with one between-subject factor (disclosure: same-creator vs. different-creator vs. control) and one within-subjects factor (time). Scale and item presentation were randomised where possible to follow good practice.

The order and components of the experiment are shown in Figure 7. Participants were randomly assigned to one of three conditions (explained further below), the same-creator condition (n = 113), different-creator condition (n = 120), or control condition (n = 87). After reporting demographics, participants completed an Implicit Association Test (IAT). The IAT was built specifically for this experiment using *iatgen* (Carpenter, Pogacar, Pullig et al., 2019) to measure implicit attitudes towards mental health. The control condition ensured differences in implicit prejudice levels were due to altered prejudice levels, as opposed to task familiarity. All participants then watched a version of the pre-recorded relationship-building stimuli that featured a creator answering increasingly intimate 'get to know me' questions, as per the parasocial Fast Friends Paradigm (Aron et al, 1997; Chapter 3 of thesis). The same-creator and control condition watched Target A answering these questions, and the different-creator condition watched Target B.

Following attention checks, participants completed a self-report survey of PSR strength with the featured target before proceeding. For the same-creator and different-creator

condition, participants then watched the disclosure stimulus featuring Target A self-disclosing about their experiences with BPD. Participants in the control condition did not watch this video. Following further attention checks and PSR measures, all participants completed the IAT once more before reporting on explicit and behavioural measures of mental health prejudice, and intergroup anxiety. (Participants in the same-creator condition also repeated the PSR measure towards the same creator so that we could determine if the BPD disclosure affected PSR strength, whilst participants in the control condition did not repeat the PSR measure). Finally, participants completed feeling thermometers towards people with mental health issues, and alternative control outgroups. Other outgroups were measured to understand whether lower prejudice towards one characteristic would transfer to lower prejudice in general. One week later, participants were invited to a second optional survey, reporting on explicit and behavioural prejudice measures and activities, and repeating feeling thermometers once more (not shown in Figure 7).

Figure 8
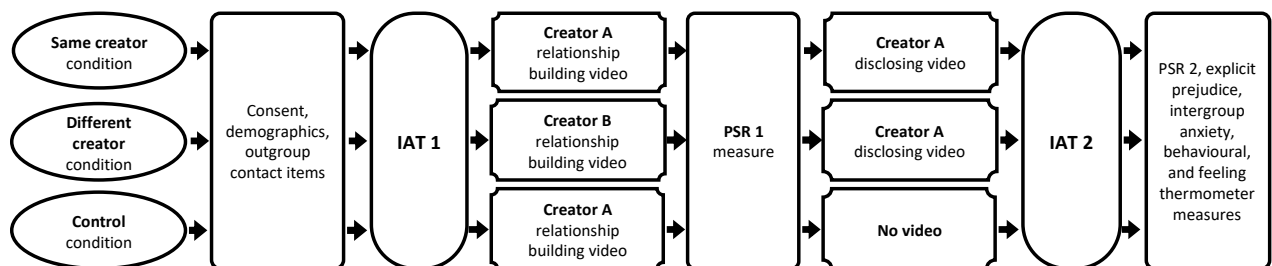
An illustration of procedural steps taken during the first stage of the experiment

Video stimuli

The video stimuli created for this study was also used in the aforementioned Study 6 (featured in the previous chapter), as the sample for both of these studies were shared.

Relationship-building stimuli. Two versions of this recorded video were created, one featuring Target A, and one featuring Target B. Both parasocial targets were YouTube creators with similar filming experience and physical features, as depicted in Figure 7 In a previous study, we proposed a parasocial version of the Fast Friends Paradigm (Aron et al, 1997, Chapter 3 of the thesis). The original paradigm successfully creates a new relationship between two strangers meeting in person in as short as nine minutes. The pairs answered three sets of personal questions in this time, each increasing in intimacy, that prompt self-disclosure about general topics, such as upbringing, memories, and values. In the amended parasocial paradigm study in Chapter 4, we found that unidirectional self-disclosure via a nine-minute video where the parasocial target answered the same set of questions on their own, was also successful at forming parasocial relationships with viewers who had never seen said target before. In both versions of the relationship building stimuli, each target answered the same set of questions in the same order, and with the same filming and editing set ups to avoid undue variance.

BPD self-disclosure stimuli. Only one version of this stimulus was created, in which Target A discusses their personal journey with BPD, how the public perceives the disorder, and answers most searched for questions about BPD from their point of view. As a creator, Target A has spoken about their experiences with BPD in detail on their online YouTube channel, and this stimulus included organic video content from this online source. This video was seventeen minutes in length, and featured similar filming set up and minimal editing, in line with the relationship-building stimuli. Due to the length of the stimuli, attention checks were designed to cover across the content to ensure participants watched the whole video.

Figure 9

| Creator A relationship building video | Creator B relationship building video | Creator A disclosing video |

Screenshots of stimuli. Note: participants in the same-creator condition were reminded that the target was the same person across videos, and those in the different-creator condition were reminded that the target was not the same, with the targets' names presented for clarification.

Measures

Parasocial relationship. A sixteen-item version of the Celebrity Personal Parasocial Interaction Scale (Bocarnea & Brown, 2007) was used on a 7-point scale (1 = strongly disagree, 7 = strongly agree). Four items were removed due to their reliance on a pre-existing PSR with the featured target. All items were averaged to create an overall measure for each time point (α_{PSR1} = 0.907, α_{PSR2} = 0.895).

Prejudice. Four types of prejudice measures were used throughout this experiment: implicit measures, explicit measures, behavioural measures, and feeling thermometers.

Implicit prejudice. An IAT was built to measure this (based on Greenwald, McGhee, & Schwartz, 1998). This computer-based response latency measure gauges participant automaticity in associating safe or unsafe evaluative concepts (e.g., 'safe' vs. 'unsafe', 'harmless' vs. 'dangerous') with social group categories of 'people with mental health issues' (e.g., borderline personality disorder and schizophrenia) and 'people with physical health issues' (e.g., diabetes and multiple sclerosis). Created using *iatgen* (Carpenter et al, 2015), participants were given blocks of practice trials to familiarise themselves with the task before test trials began (blocks 1-2 in Table 4). Participants were shown a word from the mental health,

physical health, safe, or unsafe categories, and asked to swiftly categorise these in each trial. Differences were calculated in how quickly participants associated individual words to grouped categories and were converted into a D-score (with values ranging between -1 and 1), where negative D-scores represented more bias to mental health issues (with respect to physical health issues), and therefore BPD, and positive D-scores represent more implicit bias to physical health issues instead. More specifically, when calculating D-scores, individual responses over 10s were deleted as well as data from participants that had more than 10% of their responses faster than 300ms. No error penalties were applied to these values, as the IAT forced participants to correct mistakes as they occurred. The D-scores for each participant were specifically calculated by dividing the within-subject difference between the compatible (mental health with safe concepts) and incompatible (mental health with unsafe concepts) block means, by a pooled standard deviation, and averaging the resulting scores. This was done for each participant twice, one for the IAT task before exposure to intervention stimuli, and one post-exposure (shown as IAT1 and IAT2 in Figure 7, respectively).

Table 4 Sequence of trial blocks in study's IAT

Block	No. of trials	Function	Items assigned to left-key response	Items assigned to right-key response
1	20	Practice	Mental health disorders	Physical health disorders
2	20	Practice	Safe words	Unsafe words
3	20	Practice	Safe + mental health disorders	Unsafe + physical health disorders
4	40	Test	Safe + mental health disorders	Unsafe + physical health disorders
5	20	Practice	Physical health disorders	Mental health disorders
6	20	Practice	Safe + physical health disorders	Unsafe + mental health disorders
7	40	Test	Safe + physical health disorders	Unsafe + mental health disorders

Note: for half of the subjects, the positions of blocks 1, 3, and 4 were switched with those of blocks 5, 6, and 7 respectively. The procedure in blocks 3, 4, 6, and 7, is to alternate trials that present either a safe or unsafe word with trials that presented either mental health or physical health disorders.

Explicit prejudice. The Prejudice towards People with Mental illness (PPMI) scale (Kenny, Bizumic & Griffiths, 2018) was used on a 7-point scale (1 = strongly disagree, 7 = strongly agree). For this study, only two of four subscales were used: fear and avoidance, and malevolence. Item wording was amended to refer to 'people with BPD'. All items were averaged for an overall measure, and within each subscale respectively ($\alpha_{combined}$ =0.82, α_{fear} = 0.69, $\alpha_{malevolence}$ = 0.81).

Behavioural measures. After watching the disclosure video, participants were asked two behavioural questions (Murrar and Brauer, 2018) on whether they would be willing to volunteer with an organisation to help those with BPD, and if they would like to receive information about BPD campaigns. Both items were examined separately in analyses. Additionally, in the optional 1-week follow-up survey, participants were asked three further questions: if they had thought about people with BPD, and if they had actively contributed towards causes that support, or go against BPD (e.g., having positive conversations and donating, or having negative/non-politically correct conversations). The final two items were combined into a single scale measure and coded on a scale of 1-5 (1 = actively contributing towards anti-support measures, 2 = discussing anti-support, 3 = no action, 4 = discussing support, 5 = actively contributing towards support measures).

Feeling thermometers. Participants were presented with seven thermometers (0 = very cold, 100 = very warm) and were asked to rate their feelings towards different social groups.

Six of these were control groups (namely: people with tattoos, people who are vegan, women, people of retirement age, black people, and transgender people), and one was for the target group, people with mental health issues. All feeling thermometers were analysed separately.

Intergroup anxiety. An eleven-item Intergroup Anxiety Toward Muslim scale (Hopkins and Shook, 2017) was used on a 7-point scale (1 = strongly disagree, 7 = strongly agree) was used. Item wording was adapted to refer to people with BPD instead of Muslims, and the items were averaged to create the overall measure ($\alpha = 0.92$).

Results

Implicit measures. To test for changes of implicit prejudice, D-scores were created from each participant IAT responses both pre- and post-intervention. Due to the non-Gaussian distribution of the data, non-parametric tests were used. A Wilcoxon signed-rank test compared the implicit prejudice D-scores from before and after the disclosure stimuli within each condition. As predicted, no significant difference was found in the control condition ($W = 1607$, $p = .194$), however no significance in IAT D-scores was found pre- and post-disclosure stimuli for the same-creator ($W = 2751$, $p = .179$) and different-creator ($W = 3361$, $p = .481$) conditions either, or across all conditions, ($W = 22549$, $p = .059$). As the implicit prejudice measures did not significantly differ after the stimuli intervention, this did not qualify exploring any interaction comparisons between participants with higher or lower initial prejudice.

Table 5 Matrix of dependent variables by condition

	Same creator		Different creator		Control	
	M n = 113	SD	M n = 120	SD	M n = 87	SD
Implicit measures						
IAT 1 D-scores	-.028	.471	-.001	.430	-.058	.495
IAT 2 D-scores	.020	.470	.041	.443	.010	.405
Explicit measures						
PSR 1	3.65	1.09	3.65	1.07	3.71	1.10
PSR 2	3.87	1.14	3.91	.940	NA	NA
Fear & avoidance	2.99	.725	3.05	.757	3.34	.791
Malevolence	2.07	.768	2.09	.797	2.17	.879
Explicit prejudice	2.53	.645	2.57	.675	2.76	.690
Intergroup anxiety	2.66	1.20	2.74	1.07	2.99	1.13
Behavioural measures						
Desire to volunteer	3.95	4.86	4.46	4.70	4.93	5.26
Desire to learn more	.330	.471	.300	.460	.360	.482

Explicit measures. To test for differences in explicit prejudice, analyses of variance with planned contrasts were used for each dependent measure. Using the combined explicit prejudice measure, a significant effect was found when comparing between conditions, $F(2, 318) = 3.158$, $p = .044$. Planned contrasts revealed that the same-creator condition had significantly lower explicit prejudice after watching the disclosing stimuli than the control condition, $t(318) = -2.361$, $p = .019$. The different-creator condition also had significantly lower explicit prejudice than the control condition, $t(318) = -2.06$, $p = .040$. However, the same- and different-creator conditions were not significantly different from each other, $t(318) = -.361$, $p = .718$.

The same pattern was found within the sub-scale of fear and avoidance, $F(2, 318) = 5.759$, $p = .003$, where the same-creator condition had significantly lower fear and avoidance after watching the disclosing stimuli than the control condition, $t(318) = -3.198$, $p = .002$, as did the different-creator condition, $t(318) = 2.764$, $p = .006$, but the same- and different-creator condition did not significantly differ for each other, $t(318) = -.517$, $p = .605$. No significant

differences were found within the sub-scale of malevolence or any of its planned contrasts, $F_{(2, 318)}$ = .487, p = .615, although the malevolence values were already low (a score of 2.17 out of 7 in the control condition, vs. the fear and avoidance value of 3.34) and so changes would not provide substantial prosocial value.

When comparing intergroup anxiety between conditions, $F_{(2, 318)}$ = 2.320, p = .10, the same-creator condition had significantly lower intergroup anxiety than the control condition, $t_{(318)}$ = -2.070, p = .039, as did the different-creator condition, $t_{(318)}$ = 2.113, p = .035. However, both the same- and different-creator conditions did not significantly differ from each other, $t_{(318)}$ = -.458, p = .647.

Figure 10
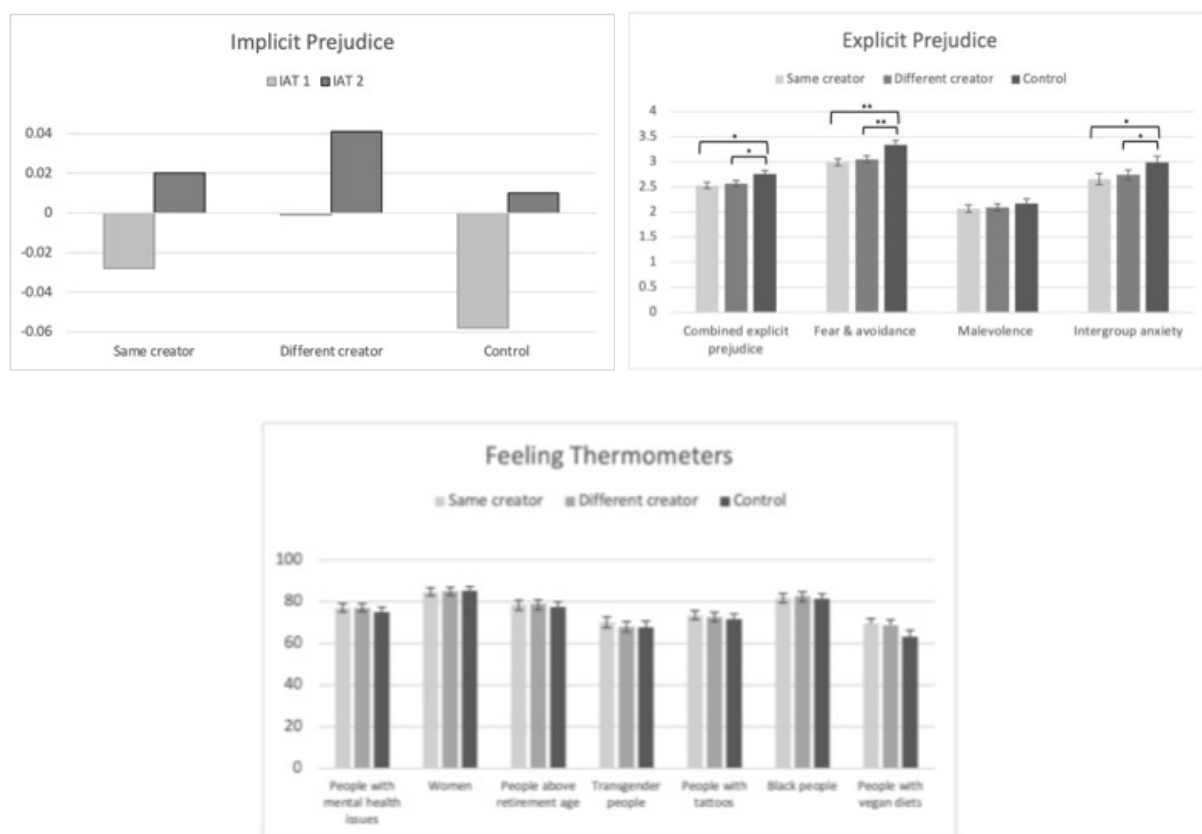
a) Implicit prejudice scores pre- and post- intervention stimuli between conditions, b) explicit prejudice and intergroup anxiety between conditions, and c) feeling thermometer scores between conditions at first stage of study, all with standard error bars

Causal analysis. Causal inference analyses were run to confirm that the significant changes in explicit prejudice measures were a result of experimental manipulation, and not extraneous confounding variables. The Average Treatment Effect (ATE) (measuring expected changes to outcome variables specifically based on condition) was assessed while controlling for all other variables (or confounders) through an inverse propensity score. The analysis was done with the machine learning tool *DoWhy* (Sharma & Kiciman, 2020), which is based on a 4-step process. Firstly, a causal graphical model was constructed based on our assumptions about the mechanisms for prejudice change in our experiment (as shown in Figure 10). Namely, PSR1 and PSR2 might be affected by each individual's characteristics, as well as the experimental group to which they were assigned, and we expect that parasocial relationship strength (as well as the individual's characteristics) will influence explicit prejudice.

Figure 11
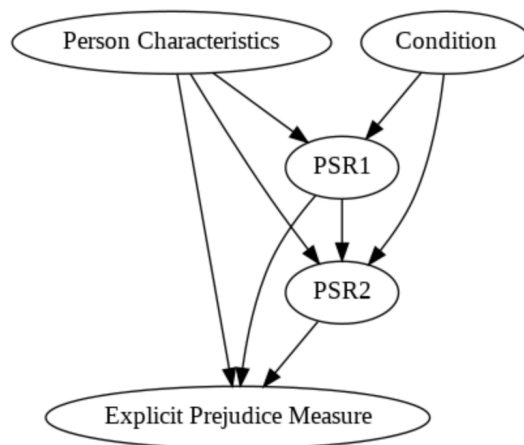
Causal inference model for explicit prejudice measure outcomes

Five targeted confounders were considered: age, gender, ethnicity, sexual orientation, and proximity to loved ones with mental illness (summarised as 'Person characteristics' in

Figure 10). Unobserved confounders were also considered for unrecorded individual differences. The treatment variable ('Condition' in Figure 10) compared the two experimental conditions (same-creator and different-creator) with the control condition, separately for each explicit prejudice measure. Secondly, in the identification step, *DoWhy* internally converts the causal graph into a formula that is used to estimate the causal effect.

Average treatment effect estimates were then generated using inverse propensity score weighting, to account for possible imbalances in the person characteristics in the control and treated groups. The value of the ATE represents the average expected change in explicit prejudice (with respect to the control group) as a result of the intervention. Confirming our results above, combined explicit prejudice values significantly decreased for those in the experimental conditions when compared to the control condition when controlling for confounding variables, ATE = -0.16, p = .021, CI=[-0.29, -0.03].

Finally, the fourth step of the causal analysis tries to refute the causal effect to establish how robust the effect is. Three refutation methods were utilised. The first refutation added a random common cause to the dataset which did not alter the estimation and thus supporting robustness, ATE = -0.15. The second data subset refuter used bootstrapping methods to replicate analyses using different subsets of data, which was not significantly different, again supporting robustness of results, ATE = -0.16, p = .450. Finally, the third refutation method, using a placebo treatment randomly permutated the variable that indicates whether an individual belonged to the control group or not (and thus, the ATE obtained with this refutation method should be close to zero), nullifying all results and again supporting robustness, ATE = -0.007, p = .440.

Table 6 below shows the results from the causal inference analysis for each of the explicit prejudice outcomes. The fear and avoidance subscale and intergroup anxiety were both significantly lower in the experimental conditions than in the control condition, and were not found to be a result of confounding variables following robustness tests that support validity.

Table 6 Causal inference values for explicit prejudice measures, including ATE scores robustness test values

Outcome	Average treatment effect (ATE)	Refutation 1: random common cause	Refutation 2: data subset refuter	Refutation 3: placebo treatment
Explicit prejudice (combined)	**-0.16, p.= .021 CI = [0.29, 0.03]**	-0.15 (supporting validity)	-0.16, p = .45 (supporting validity)	-0.0069, p = .44 (supporting validity)
Fear & avoidance	**-0.26, p = .002 CI = [-0.41, -0.06]**	-0.23 (supporting validity)	-0.27, p = .45 (supporting validity)	0.003, p = .48 (supporting validity)
Malevolence	-0.07, p = .22 CI = [-0.22, 0.11]	--	--	--
Intergroup anxiety	**-0.24, p = .039 CI = [-0.478, -0.036]**	-0.24 (supporting validity)	-0.25, p = .45 (supporting validity)	-0.018, p = .48 (supporting validity)

Note: the formula for the average treatment effect is $ATE = E[Y(T = 1) - Y(T = 0)]$, where T denotes the treatment of being in same-creator or different-creator condition, and Y(T=1) and Y(T=0) are the treated and control outcomes.

Behavioural measures and feeling thermometers. Planned contrast ANOVAs were used to assess the behavioural items and feeling thermometers. Nor the behavioural items for volunteering, $F(2, 318) = 1.011$, $p = .365$ or receiving information, $F(2, 318) = .291$, $p = .747$ were significantly different across the 3 conditions (see Table 5). Similarly, ANOVAs for the feeling thermometers for people with mental health issues, $F(2, 318) = .282$, $p = .754$ were not significant either, nor for any of the control feeling thermometer groups, $p > .050$.

To summarise prejudice comparisons overall, no significant results emanated from implicit prejudice measured using IAT, the two behavioural measures, nor the feeling thermometers towards specified outgroups, directly after the disclosing video was shown.

However, measures of explicit prejudice overall, and specifically intergroup anxiety and the subscale of fear and avoidance, found that those exposed to the disclosure video had less prejudice and intergroup anxiety than those who were not (as confirmed through the causal analysis). Whilst these explicit prejudice results support our initial hypotheses, prejudice levels between the same- and different-creator conditions did not differ from each other. Further exploration of parasocial relationship strength between these conditions was therefore conducted.

Influence of parasocial relationship strength. As a control to ensure the individual differences of different parasocial targets did not influence PSR strength, a Kruskal-Wallis H test was used to compare the PSR strength between all three conditions after relationship-building stimuli exposure. In line with predictions, no significant difference between PSR strength was found, $\chi2(2) = .13$, $p = .935$, between the same-creator condition featuring Target A, the different-creator condition featuring Target B, and the control condition, also featuring Target A.

It was predicted that parasocial relationship strength (PSR2) towards the disclosing target, Target A, would be greater in the same-creator condition where participants watched both the relationship-building stimuli and disclosing stimuli featuring Target A, and this greater PSR would mediate any significance between condition and prejudice reduction. Contrary to prediction, and as reported in Study 6 in Chapter 4, those that watched Target A's relationship-building stimuli in the same-creator condition did not create significantly greater PSR strength after disclosure when compared to the different-creator condition (which watched the relationship-building video from Target B and the disclosure video from Target A), $F(1, 232) = .092$, $p = .762$.

Despite not establishing a relationship between condition and PSR strength, a significant relationship was found between PSR_2 strength and explicit prejudice overall in correlation analyses, $r(232) = -.296$, $p < .001$, and the for the explicit subscales of fear, $r(232) = -.274$, $p < .001$, and malevolence, $r(232) = -.241$, $p < .001$. PSR strength also predicted warmer feelings towards people with mental health using the thermometer measure, $r(232) = .364$, $p < .001$, but it did not significantly predict any changes in implicit prejudice, $r_{IAT1}(232) = .021$, $p = .752$, $r_{IAT2}(232) = .012$, $p = .856$.

Figure 12
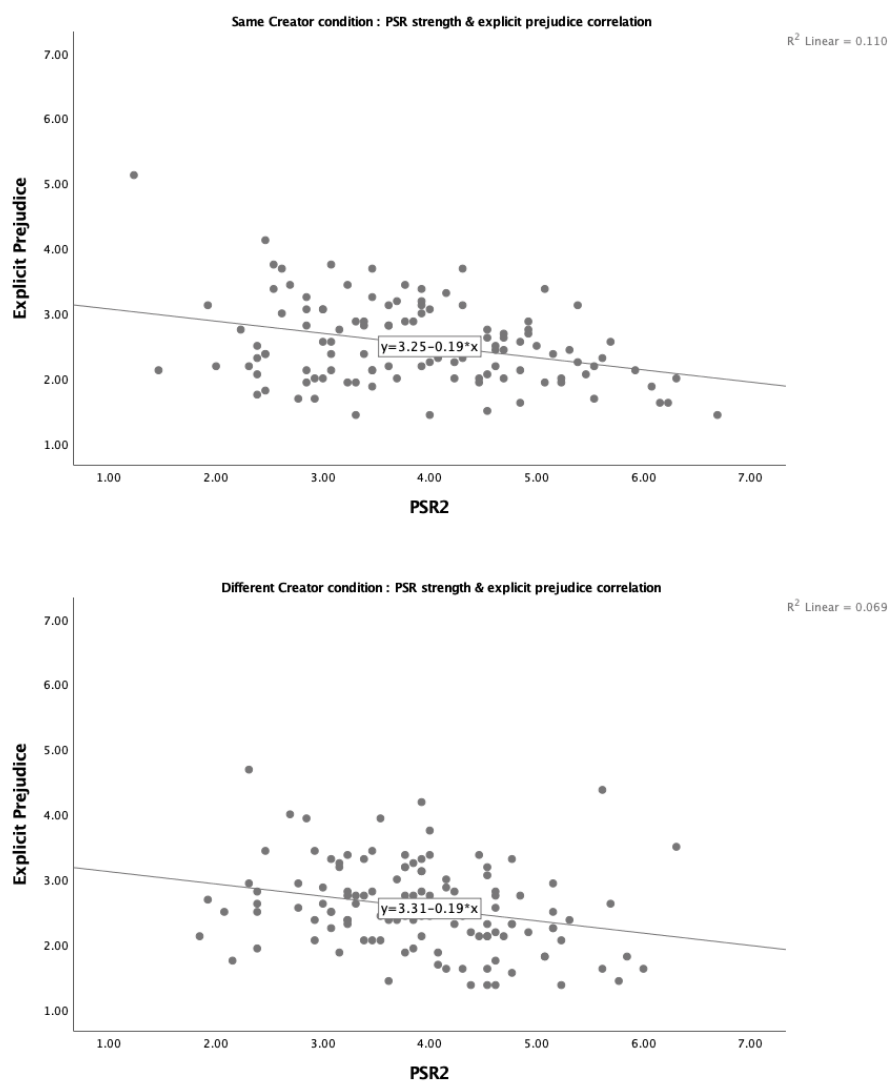
Correlations between PSR strength and explicit prejudice for same- and different-creator conditions

We were also interested in understanding whether the disclosure of BPD would make the parasocial relationship created between participants and Target A stronger, or weaker. A Wilcoxon test was used to compare the means between PSR_1 and PSR_2 for participants within the same-creator condition. Disclosure of Target A's BPD was found to increase parasocial relationship strength, $W = 1695$, $p<.001$.

Finally, a means comparison was run to compare whether the relationship-building stimuli alone (where either target spoke about themselves broadly using the Parasocial Fast Friends paradigm) or disclosing stimuli alone (where Target A spoke about their BPD experiences) were more effective at creating PSR strength. A Mann-Whitney U test revealed that PSR_2 from the different-creator condition (following the disclosure stimuli alone, $M = 3.69$) was significantly higher than PSR_1 from the same-creator and control conditions (following the relationship-building stimuli alone, $M = 3.38$), $U = 10472.5$, $p = .022$.

To summarise PSR analyses, priming participants with the relationship-building stimuli did not result in greater PSR strength than the disclosure stimuli alone. In other words, we attempted to develop a stronger PSR with the disclosing creator in the same-creator condition by exposing them to more 'get to know me' information about the creator, which is personal disclosure that participants in the different-creator condition did not get to see about the disclosing creator. We predicted that in exposing participants to this extra personal information, they would develop a stronger PSR with the disclosing creator, but this condition manipulation did not produce expected results. Instead, regardless of whether participants saw the additional 'get to know me' broad information about the creator with BPD, the strength of the PSRs created between participants and the disclosing creator did not differ between conditions. Despite this, PSR strength across both experimental conditions did predict explicit prejudice in

accordance with our initial hypothesis. In addition, disclosure of BPD did not seem to negatively affect the strength of the newly created PSR between participants and Target A in the same-creator condition, and instead this disclosure increased PSR strength. Further, the disclosure video on its own, where Target A spoke about their BPD experiences, produced greater PSR strength than when either target spoke broadly about themselves using the PFFP.

Lasting effects. Finally, we hypothesised that after one week, the two disclosure conditions (i.e., the same- and different-creator conditions) would maintain lower prejudice levels based on longitudinal measures of explicit prejudice, behavioural measures, and feeling thermometers. Directly after experiencing the disclosure stimuli, explicit prejudice overall, fear and avoidance specifically, and intergroup anxiety, were all significantly lower in the same- and different-creator conditions when compared to the control condition. Using power analysis tool G*Power (Erdfelder, Faul, & Buchner, 1996), a minimum of 246 participants across the three groups were required to conduct a mean comparison across the conditions to detect a small effect size. Whilst the longitudinal sample did not meet this requirement (only 147 participants completed the follow-up survey, $n_{same-creator} = 49$, $n_{different-creator} = 58$, $n_{control} = 40$), power analyses were satisfied for conducting Wilcoxon matched pairs tests within conditions, comparing prejudice levels directly after watching the stimuli, and one week later. Null effects were expected as we predicted that the lower prejudice brought about by the parasocial target's mental health disclosure would be sustained. Caution should always be taken when drawing conclusions from null effects, and as predicted, there were no significant differences between post-intervention and one week later for explicit prejudice, $W = 4696$, $p = .816$, the fear and avoidance subscale, $W = -4431$, $p = .685$, the malevolence subscale, $W = 4115$, $p = .901$, intergroup anxiety, $W = 5064$, $p = .229$, or the feeling thermometers towards people with mental health, $W = 2417$, $p = .310$.

Table 7 Matrix of dependent variables comparing first stage to 1-week follow-up

Week 0 / 1 (follow up)	**Same creator**		**Different creator**		**Control**		**Across conditions**	
	M_0	M_1 n = 49	M_0	M_1 n = 58	M_0	M_1 n = 40	M_0	M_1 n = 147
Explicit measures								
Explicit prejudice	2.53	2.53	2.57	2.56	2.76	2.59	2.61	2.56
Fear & avoidance	2.99	3.03	3.05	3.02	3.34	3.16	3.11	3.06
Malevolence	2.07	2.04	2.09	2.10	2.17	2.02	2.10	2.06
Intergroup anxiety	2.66	2.63	2.74	2.71	2.99	2.78	2.78	2.70
Feeling thermometers								
Women	84.81	84.57	85.03	88.53	85.22	85.13	85.00	86.27
People of retirement age	78.66	77.10	78.79	82.12	77.55	77.08	78.41	79.05
Transgender people	70.03	73.06	67.86	68.51	67.82	66.80	68.61	69.57
People with tattoos	73.42	72.06	72.56	79.35	71.55	74.22	72.59	75.70
Black people	82.06	82.84	82.52	85.98	81.39	80.43	82.05	83.40
People with mental health issues	77.06	78.90	77.09	77.56	75.07	73.12	76.53	76.79
People with vegan diets	69.42	71.71	68.77	74.81	63.20	67.35	67.48	71.73
Behavioural measures								
Thought about BPD	--	0.71	--	0.61	--	0.53	--	.062
Helped those with BPD	--	0.41	--	0.26	--	0.23	--	.030

Analysing additional behavioural items in the 1- week follow-up survey, participants were asked if they had thought about people with mental health issues such as BPD in the past week. Whilst recognising sample requirements were not met for analysis of variance, an exploratory ANOVA found those in the same-creator condition had thought about people with BPD more than those in the different-creator condition, which in turn had more thoughts than the control condition. Whilst none of these planned contrasts were significant, $F(2, 142) = 1.716$, $p = .183$, the comparison between the same-creator and control conditions was close to significance, $t(142) = 1.833$, $p = .069$, and may reach significance with an adequate sample size.

Similarly, when asking participants if in the last week they had thought specifically about helping those with mental health issues such as BPD, those in the same-creator condition had thought about taking prosocial action significantly more than those in the different-creator

and control conditions combined, t(143), = 2.038, p = .043, although this is only a suggestive

finding due to small sample size.

One final behaviour measure was coded, where participants were asked whether they

had actively contributed towards (e.g., by having positive and educational conversations or

donating time or money towards mental health initiatives), or against (e.g. having negative

conversations about mental health or donating time or money to initiatives that disregard

mental health), those with mental health issues. None of the participants that filled the follow-

up survey reported actively acting against people with mental health issues. 15 participants

(10.2%) contributed towards people with mental health issues (7 from the same-creator

condition, 5 from the different-creator condition, and 3 from the control condition). Actions

reported by participants in support of mental health issues included having positive and

educational conversations about BPD with loved ones, further educating themselves through

enrolling in courses and watching charity videos and sharing these on social media, signing

petitions, enrolling in mentoring schemes, and donating and hosting fundraisers for mental

health charities.

Discussion

In this study, we found that viewers exposed to a creator self-disclosing about their

borderline personality disorder, were less explicitly prejudiced and reported less intergroup

anxiety towards mental health issues than those who were placed in the control condition.

Specifically, PSR strength created during exposure predicted lower levels of explicit prejudice,

regardless of whether the PSR was formed prior to this disclosure, and whether this effect on

prejudice seems to last over time. As organic BPD disclosure stimuli were taken directly from

YouTube for this experiment, such prejudice reduction may already be happening in real world settings.

Target A's BPD disclosure was exposed to volunteers assigned to one of two experimental conditions (same-creator and different-creator). We intended to create stronger PSRs in the same-creator condition using an amended version of the Fast Friends Paradigm prior to BPD disclosure, whilst the different-creator condition would not have this prior exposure. Contrary to expectation, this prior exposure did not affect PSR strength levels post-disclosure. These findings support that one-way disclosure is indeed sufficient to induce relationship strength (Chapter 3 of this thesis), even with alternative contexts that centre around a single experience such as mental health, unlike the general self-disclosure of the Fast Friends Paradigm (Aron et al).

In a one-week follow-up, lower prejudice levels post-disclosure were maintained within experimental conditions, and participants from these groups had also thought about supporting mental health initiatives significantly more than participants from the control group. No participants reported anti-support behaviours, but longitudinal conclusions are made conservatively due to smaller follow-up sample numbers than anticipated and the relatively short time scale used for the follow-up survey. Future research should consider examining larger study samples over longer periods of time. Future studies may also wish to consider whether within samples, participants identify as ingroup or outgroup for measures, as this may also contribute to the lack of significant effects found in feeling thermometers within the present study.

As with Study 6, our failure to manipulate PSR strength across the same- and different-creator conditions also limited the present analyses, but suggests that an existing parasocial

relationship is not necessarily required in prejudice interventions, reflecting an even greater capacity for parasocial targets to create prosocial change with anyone who encounters them, even just once. With over 37 million creators on YouTube, and 500 hours of video content being uploaded every minute (YouTube, 2020), if the candid sharing of experiences from outgroup parasocial targets correlate with lower prejudice, these passively formed PSRs that viewers are already creating may be shaping a more accepting and cohesive society.

As PSRs already exist and influence society, it must be noted that parasocial targets may also have the capacity to communicate negative outgroup portrayal, intentionally or otherwise. Unfortunately, media is all too often harnessed by political and corporate elites to shape public agenda (Strandberg, Sivén, Hall et al., 2018), leading to unfavourable outgroup portrayal (Mutz et al., 2010). For example, disproportionate casting of ethnic minorities as villains (Dixon & Linz, 2000; Oliver, 1994) reinforces negative stereotypes and stigma, causing individuals to avoid personal contact with outgroups (Corrigan & Watson, 2002). As technology today reduces the gatekeeping of large audiences and allows anybody to develop audiences online, the potential for antisocial influence should not be dismissed. However, such gatekeeping absence has also allowed for more realistic and positive representation than ever before, providing a unique pathway to prosocial impact.

To better manipulate PSR strength in future studies, an extra condition providing BPD information without a parasocial target could be added. Whilst difficult to do, this could occur by having an automated neutral voice read out the exact same words as the creator does in the video to provide the information whilst conveying no image or personality. Such manipulation would enable exploration of interaction effects where varying degrees of initial prejudice may affect prejudice levels following the intervention. Future studies could also replicate this

experiment format with different minority experiences, such as disclosure stimuli on the personal experiences of transgender people, or people of ethnic minority, establishing whether this intervention is successful in alternative outgroup contexts also.

Despite the condition manipulation not operating as planned, PSR strength was found to predict lower prejudice based on explicit measures of fear and avoidance and intergroup anxiety. This established PSR strength as one possible mechanism that explains why media can predict lower prejudice, supporting the parasocial contact hypothesis (Schiappa et al., 2005). The application of this in the real world suggests that personal and unidirectional disclosure can influence those exposed regardless of a pre-existing relationship, thus still enacting prosocial change.

In this study, measures of malevolence were not significant, but as they were already low, reducing these would not provide mush prosocial impact. Whilst the explicit results seem promising, the same effectiveness was not found for implicit measures, which did not significantly differ within subject pre- and post-intervention. This may be because implicit prejudice values are harder to manipulate, after all, beliefs are extremely resistant to change (Bem, 1970). It could also be argued that affecting explicit prejudice is more valuable for societal improvement as internal motivation does not always translate into external action (Schmader, Croft, Scarnier et al., 2012). Alternatively, there is a distinct possibility that implicit association testing is not a suitable method to detect such change. Albeit a common component of implicit prejudice research, IAT methodology faces considerable criticism (Hefner, Rothmund, Klimmt et al., 2011), and alternative implicit measures such as electroencephalography, heart rate, and galvanic skin response, may be more successful at detecting implicit changes. Future studies could explore such alternatives to understand

whether affecting implicit prejudice is indeed possible, when in-person testing is able to resume safely[1].

Prejudice intervention studies have been criticised for producing small effects when bigger interventions are needed for an issue as invasive and pertinent as prejudice (Paluck et al., 2021). Whilst large-impact interventions should continue to be explored, there is value in recognising that millions of PSRs are passively created in everyday activities, and have the potential to consistently portray outgroup experiences in ways that reduce prejudice, albeit on a smaller level than interventions that address society as a whole, such as equality legislation. While parasocial targets may not be the 'stronger medicine' required for radical societal change, they can be spread over time and are easily accessible. Combined with the speed in which they can be formed, they present a more time-efficient, cost-efficient, and largely scalable remedy, compared to interventions that require face-to-face interaction.

Overall, this study aimed to show whether experiencing a parasocial target disclosing their personal experiences of being different, can induce prosocial change through lowering prejudice. By demonstrating that organic stimuli that already exists across social media can simultaneously create relationship strength through unidirectional self-disclosure, and correlate with lower prejudice that seems to be sustained over time (potentially even more so when a person has chosen the parasocial target and there is repeated exposure), this study further demonstrates that the value of PSRs may be greater than we think.

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[1] The initial plan for this study was to measure implicit prejudice levels using electroencephalography, galvanic skin response, and heart rate measures. Unfortunately, due to the coronavirus pandemic, in-person testing was disallowed for safety reasons two days before this data collection was due to commence.

CHAPTER 6 | GENERAL DISCUSSION

This final chapter summarises the overall contributions to research provided by the seven studies in this thesis. It also discusses the implications of findings in both laboratory settings and the real-world, the limitations of the research overall, and looks ahead to proposed potential avenues of future research.

Summary of findings

The studies presented throughout this thesis intend to provide novel contributions to the field of parasocial relationships, and to relationship research overall. Knowledge of the social ties we hold is important because the connections we make are the most important factors of wellbeing, more so than money or fame (Helliwell & Putnam, 2004). Whilst some past research has explored the social roles of PSRs, the majority of the field views PSRs as means of entertainment primarily, and opportunities for marketing, not fully exploring the more meaningful role they provide as social support. Past research has also explored how bidirectional relationships are formed between two strangers, resulting in intimacy and closeness, but has not explored this process in relation to one-sided PSRs. Finally, past research has examined how the influence of PSRs can be harnessed to increase commercial campaign performance and boost political agendas. Significantly less research has focused on challenging the boundaries of PSR impact to see whether the influence from these unique relationships can be used more meaningfully. The studies described in this thesis aimed to expand upon this knowledge, specifically in relation to how society can understand, create, and harnesses PSRs for prosocial change. To our knowledge, these studies are the first to explore PSRs in these specific and more substantial ways.

This thesis has tested the perceived involvement of PSRs in effective emotion regulation, in the same way as bidirectional relationships. It has established that PSRs have strong and weak counterparts that are viewed differently by those forming them, and established how effective both types are in terms of closeness, responsiveness, and perceived ability to regulate emotion, and to people with differing individual differences. Further, this research has examined the ability of PSRs to amplify the social support provided by exposure to kindness during the coronavirus pandemic, predicting wellbeing and prosocial behaviour. It has also expanded insights into parasocial relationship formation, proposing an adapted paradigm and exploring the mechanisms that drive why such relationships are formed between viewers and parasocial targets in the first place. Finally, this thesis found that PSRs also possess a capacity to encourage prosocial change within society, as greater PSR strength formed towards creators who disclose personal information about, for example, mental health, led to reductions in explicit prejudice and intergroup anxiety levels towards people with mental health overall. This demonstrates another avenue for media to benefit society, instead of negatively influencing users (Bushman & Anderson, 2002; Furedi, 2015; Preston, 1941). It also provides a refreshing contribution to the current understanding of PSR influence, which mostly focuses on PSR endorsement increasing purchasing intention and behaviour (Martin & Bush, 2000; Reinikainen, Munnukka, Maity et al., 2020).

Understanding. Can parasocial relationships fulfil emotion regulation needs?

The focus of Chapter 2 was to understand whether PSRs could regulate emotion in the same way bidirectional relationships can. In Study 1, participants found PSRs to be effective in helping emotion regulation, and more so than bidirectional weak ties. Study 2 also established that in the same way bidirectional ties can be distinguished into strong and weak

counterparts (Granovetter, 1973), PSRs could also be distinguished into strong and weak forms, with stronger PSRs being used within emotion regulation processes more effectively, and weak ties being perceived as less effective with emotion regulation than bidirectional weak ties. Study 2 also revealed that whilst strong bidirectional ties were perceived as the closest and most responsive relationship type overall, strong PSRs were also perceived as closer and more responsive than weak bidirectional ties, and weak PSRs. The final study in this chapter, Study 3, found that PSRs were perceived as more responsive in scenarios of social threat for people with high self-esteem, which is unusual (Lamarche & Murray, 2014), yet those with low self-esteem chronically perceived PSRs to be responsive, potentially providing a unique form of support for them that is not often seen from bidirectional relationships.

Chapter 3 furthered our understanding of how PSRs may be able to help people regulate emotion (Study 4). In the stressful and turbulent environment of the coronavirus pandemic, a PSR demonstrating the emotion regulation strategy of fixating on positivity predicted viewers' positive wellbeing, whilst a PSR demonstrating the strategy of seeking more general information reduced viewers' wellbeing. PSR strength moderated the effects of condition on wellbeing and prosocial behaviour, amplifying positive effects when participants were fixating on the positive, and amplifying the negative effects when participants were exposed to information generally, that was typically more negative in nature.

Creating and strengthening. What procedure and mechanisms aid parasocial relationship formation?

Seeing how many valuable capabilities PSRs had, we wanted to better understand how these unique bonds could be created in the first place. Chapter 4 focused on the procedures and mechanisms involved in PSR formation. Study 5 proposed a Parasocial Fast Friends Paradigm

(PFFP), inspired by its bidirectional relationship formation predecessors: Aron et al's Closeness-Inducing Task (1997), and Sedikides et al's (1999) Relationship Closeness Induction Task. Exposing participants to parasocial targets they had never seen before, who were self-disclosing for a period of nine minutes produced greater PSR strength and closeness than exposing participants to non-disclosing parasocial targets, though bidirectional self-disclosure still induced the strongest relations. As the mechanism of unidirectional self-disclosure did seem to create PSRs, Study 6 further explored its success when the disclosure topic was both broad across a variety of topics, and intense about one specific personal topic.

Harnessing. Can the strength of parasocial relationships be harnessed for prosocial change?

Having established how PSRs can be created, Chapter 5 of this thesis explored how the strength of unidirectional bonds may be harnessed for prosocial change. Study 7 found that PSRs with targets sharing their personal journey about mental health caused participants to experience lower levels of prejudice towards people with mental health issues. This was specifically the case for explicit prejudice and intergroup anxiety.

Implications, limitations, and future directions

Throughout this thesis, each study and its findings have been discussed in terms of their individual contributions to the literary field. Looking across studies however and considering the contributions of this research overall, further implications, limitations, and future directions come to mind. The first concerns the top-level definition of the field itself: what constitutes as a relationship?

Expanding the definition of what constitutes a 'relationship'

Expanding the relationship definition. As aforementioned, the term 'relationship' is typically taken to assume two or more parties exerting strong, frequent, and diverse effects on one another over an extended period of time (Thibaut & Kelley, 1959). Relationship research itself is often conducted through the lens of bidirectional strong ties, which is understandable as they are very prominent connections in our lives. Bidirectional weak ties are a relationship type that may not be front of mind, but still have a considerable impact on all who form them (Sandstrom & Dunn, 2014). Like their strong tie counterparts however, bidirectional weak ties still have two parties that mutually recognise each other and the relationship they are in. In contrast, parasocial relationships do not have such a mutual dynamic.

Unlike two best friends or two more distant colleagues who mutually recognise and equally acknowledge each other, the defining nature of PSRs being one-sided is what sets them apart. Take specifically the example of a viewer-creator PSR. Creators on social media platforms publish personal content to a large group of viewers, and whilst they may interact with a viewer occasionally with a comment or a virtual 'like', this is never on the same level of personal acknowledgement and recognition that viewers themselves provide to the creator. It seems that because of this, PSRs are not considered as part of our social networks, and are rarely considered in relationship research that examines social support, such as with emotionships research (Cheung et al., 2015).

The findings across this thesis, however, suggest that PSRs function in many of the same ways as bidirectional relationships. They are seen as equally capable of regulating emotion, are perceived to be just as close and responsive, and are even classifiable into strong and weak counterparts (Chapter 2). Similarly, the same mechanism of self-disclosure

contributes towards the formation of PSRs as it does towards the formation of bidirectional relationships, albeit unidirectional disclosure in the context of PSRs (Chapter 4). Finally, Chapters 3 and 5 found that, like bidirectional relationships, PSRs also influence the way in which we feel, perceive others, and behave, serving similar affective, behavioural, and cognitive roles as bidirectional relationships. Going forward, the field of relationship research may benefit from expanding the typically appointed parameters of the relationships researched. In many ways, PSRs seem to contribute to our social networks as just another type of relationship and should therefore be perceived as additions to our networks, instead of pseudo-relationships that do not provide meaningful value.

Social exchange theory. Whilst this research highlights many similarities between PSRs and bidirectional relationships, there are certain relationship theories that don't work with PSRs in mind, theories that the one-sided nature of PSRs are merely incompatible with. Social exchange theory, for example, suggests that relationships are cost-reward calculations that use disclosure almost as a form of currency, where reciprocal self-disclosure acts as emotional equity (Altman & Taylor, 1973). Jane discloses to John, and in return, John feels able to disclose back, creating a sense of intimacy for them both. These interactions instigate a mutuality of dependence that feels stable and secure (Rusbult & Van Lange, 2008). However, this concept of social exchange does not work for PSRs, because the disclosure provided by parasocial targets to those exposed, is unidirectional. Further, this unidirectionality does not lead to instability, as reciprocation is not expected from a parasocial target. Viewers are often subjected to self-disclosure with no opportunity to disclose back. Whilst this may seem like a limitation to PSRs, their one-sided nature may be of unique value too, as PSRs still provide some of the benefits of bidirectional relationships (e.g., emotion regulation, Chapters 2 & 3), and can avoid the costs that come from bidirectional relationships, such as social atrophy.

Further still, assumptions of social exchange suggest that intense disclosure that occurs too quickly, often fails to achieve intimacy (Collins & Miller, 1994). Yet the present research found that a parasocial target disclosing about a very intense and personal struggle with borderline personality disorder did not result in the same negative consequences one would expect in-person. Why might this too-close-too-soon assumption not apply for PSRs, when it does for bidirectional relationships? Perhaps other environmental factors involved in the unidirectional disclosure from PSRs present a key difference. If John met Jane for the first time in person and began sharing a life story about borderline personality disorder, it is understandable how this may seem intimidating for Jane, who may then hesitate to feel closeness. Contrastingly, if Jane was to watch a video of John talking about his same journey, this suddenly seems a lot less intimidating.

This could be because when we typically think of an environment where Jane would watch such a video, it would be in the comfort of her own surroundings, where she would not need to be worried about her reactions being seen by John. It could also be because typically, Jane would most likely come across such exposure online after actively searching for it and would therefore potentially be more prepared and willing to experience such intense disclosure, as doing so involves actively clicking on, for example, a YouTube video with a title that likely infers the topic of disclosure contained within. It is less likely that anybody would be as well positioned and prepared for such disclosure in general bidirectional environments. This is all speculation of course, but it could provide useful to investigate such differences further, to better understand the features that distinguish bidirectional social exchange assumptions, and parasocial ones.

It could also be that interdependence structure may account for this environmental difference. In two-way relationships, a large disclosure alters the relative power of the recipient, who has a responsibility to meet the other person's needs, and also has an expectation to share an equally vulnerable disclosure, to help recalibrate the power, back to mutual dependence (Rusbult & Van Lange, 2008). This could make Jane in the above example feel bad, as the trust hasn't been earned by John, and expecting vulnerability with uncertain trust creates an uncertainly about a partner's motives. In a unidirectional PSR however, a large disclosure from a parasocial target does not affect the mutuality of dependence, because the disclosure (the parasocial target) cannot expect reciprocity. Jane therefore benefits in this context by learning something intimate about the parasocial target, without any risks that are associated with self-disclosure. Further exploration of interdependence and PSRs could develop this idea.

Information exchange theory. Contrastingly, there are theoretical concepts that were created with bidirectional relationships in mind, that work for PSRs too. The theory of information exchange (Ajzen, 1985) suggests that the act of self-disclosing fosters liking in a process mediated by positive thoughts, generated by being exposed to self-disclosure, and this positive cognition leads to increased liking even when the content of the self-disclosure may be negative information. To illustrate, information exchange suggests that even in a parasocial context, John disclosing about his negative experiences with borderline personality disorder would lead to Jane feeling a sense of liking towards John because he disclosed to her, although the information was not the most cheerful (similar to our findings in Chapter 5, Study 7). The way that PSRs are accommodated by theories of relationship research in this way further support that they should indeed be considered more seriously as a relationship type, whilst still recognising their unique one-sided nature.

Correcting the misconceptions surrounding PSRs

Addressing or suppressing. The lack of accommodating PSRs within greater relationship research is not only due to the assumption of bidirectionality by the wider field, it also seems to come from within the smaller field of PSR research itself. Notable PSR scholars have questioned the capability of these unidirectional relationships (Derrick et al., 2009). Can they address our needs like bidirectional relationships can, or do they merely suppress those needs temporarily instead? If physical hunger was a metaphor for one's psychological need to belong, do PSRs present an alternative 'meal' to bidirectional relationships, or do they instead act as hunger suppression medication until one is able to locate their next 'bidirectional meal'? The findings from the present research suggest it's the former. Indicating that PSRs are thought of, and actively used to address complex psychological functions such as emotion regulation, this research suggests that PSRs do indeed fulfil needs rather than merely suppressing them.

Our new and more developed understanding of how PSRs address and not just suppress, could help encourage this shift in mindset within PSR research. Subtle and outdated connotations can and should be disregarded, such as the term 'social surrogacy' (Derrick et al., 2009), which implies that PSRs are a means to temporarily fill in for bidirectional relationships, instead of being a source of support in their own right. In fact, one of the authors from the original social surrogacy hypothesis paper, Dr Shira Gabriel, recognises that 'surrogacy' is not the most accurate term and should be refrained from (Gabriel, 2021) and more recently has worked on research that presents PSRs as equally recognisable forms of support to fill our social 'fuel tanks', alongside traditional bidirectional relationships (Paravati et al., 2021). Similarly inaccurate terms to surrogates, such as 'non-interpersonal' and 'unidimensional' relationships should be refrained from also, as none of these seem to truly encapsulate the

nature of PSRs. These connections are still interpersonal and include multiple dimensions, as both the discloser and recipient are involved, just not simultaneously or in mutually contributing ways. Considering the above and the present research, I suggest 'unidirectional' PSRs may be a more accurate and less-loaded way to refer to PSRs when comparing them to bidirectional counterparts.

People who form PSRs. A further misconception of PSRs concerns the people who form and maintain them. Specifically, people who develop these one-sided relationships with a parasocial target are subjected to a certain stigma, often being labelled as 'maladjusted' and needing to use 'social surrogacy' specifically if they demonstrate anxious-ambivalent attachment styles, lower levels of trust, or a greater need to belong (Cohen, 2003; Cole & Leets, 1999; Green & Brock, 1998). Older theoretical models of PSR formation also suggest a level of stigma around having PSRs. For example, the Absorption-Addiction Model (McCutcheon, Lange, & Houran, 2002) suggests that people engage in 'celebrity worship' to compensate for life deficiencies such as poor psychological adjustment, and difficulty in forming relationships, and that forming PSRs with celebrities provides a sense of purpose, which can lead to addictive behaviours such as stalking. Similarly, Giles and Maltby (2006) also pathologise PSRs by identifying three levels of parasocial relationship and suggesting that only at the third 'borderline pathological' level can people believe that their positive feelings to a favoured celebrity may be reciprocated. Further research attempted to support that only people with insecure-resistant attachment develop PSRs with TV personalities (Cole & Leets, 1999), though these studies have since been refuted by others that find no association between attachment type and PSR strength (McCutcheon et al., 2002). Such implications that only stalker-like behaviour or maladjusted people experience perceived responsiveness and develop

PSR strength contradict findings across this thesis, and again purport that PSRs are reserved for less-stable people, a notion that is simply untrue.

Instead, the present findings support that PSRs are not limited only to insecure or maladjusted people, as samples across genders, ages, and individual differences have been used. People with varying sizes of social networks found PSRs to regulate emotion in Chapters 2 and 3, suggesting that regardless of bidirectional network size, the benefits of PSRs can be experienced by all. Further, evidence for the existence of both strong and weak parasocial ties in Study 2 does not support the notion that only those with stalker-like behaviour create PSRs, as they also exist in less intense and more distant forms, just like bidirectional weak ties. Study 3 highlights an occasion where individual differences does seem to affect the benefits PSRs provide, but instead of demonstrating that only those with lower self-esteem benefit from these one-sided bonds, we found that high and low self-esteem people both benefit from PSRs, but in different ways. Whilst those with high self-esteem lean on PSRs to compensate for social threat, those with low self-esteem chronically rely on PSRs in ways they do not of bidirectional relationships. Not only do these findings therefore further disclaim the stigma around people who form PSRs by demonstrating that everybody does this; they also show that PSRs can provide a unique support role for those with low self-esteem that bidirectional relationships cannot.

A limitation of the present research is that whilst it explored the impact of PSRs on a wide range of people, it did not explore in detail why so many people create these PSRs in the first place. Affiliation motivation results provide a preliminary insight that the reasons may not be too dissimilar from bidirectional relationships (Chapter 2, Study 1), but this should be further explored. One reason may be that it has been evolutionary beneficial for us to affiliate. Whilst

humans are an ultra-social species with a biological drive to form connections and an innate need to belong (Baumeister & Leary, 1995), this process is not necessarily fine-tuned. This automatic and biological desire for connection may explain why we form PSRs and lean on them despite their unidirectional nature, as social baseline theory suggests that socialising is expected to lower risk and effort (Coan & Sharra, 2015), and functionality improves when experiencing togetherness (Hari et al, 2015). Future parasocial research may wish to address this limitation by investigating any potential motives behind PSR formation.

Where PSRs are formed. Having explored the misconceptions surrounding the nature of PSRs and those who form them, there is one final misconception to be addressed, and that is concerning the environment in which PSRs operate. As the present research uses social media as a tool to investigate PSRs, it feels important to note the misconceptions of PSRs specifically on social media. It is often assumed that the use of online technologies will lead to young people completely replacing their traditional practices of socialising. Using technology to exclude true social interaction would most certainly be maladaptive and self-defeating, leaving anybody who may choose to turn their back on loved ones for online technologies with fewer social resources over time, not greater resources (Derrick et al., 2009). However, users of social media are not completely replacing traditional socialising with the online world. This is also a perception that requires reform, and this thesis supports the idea that PSRs provide an additional social support, with no intention of replacing existing social networks, but adding to them instead. Whilst recognising the positive impact that PSRs can have, it is also important to address that across understanding their role, creation, and how they can be harnessed, strong bidirectional relationships were able to produce stronger results. As PSRs regulate emotion, bidirectional strong ties did this more effectively. As participants created PSRs towards parasocial targets with unidirectional self-disclosure, mutual self-disclosure in a bidirectional

setting led to greater relationship strength. This is not to undermine the impact of PSRs, but to note that PSRs would not be very good complete replacements either. Instead, society can use PSRs as an additional resource that expands social networks, something that is suggested to provide even greater benefit by diversifying the social ties we rely upon, which predicts greater wellbeing (Cheung et al., 2015).

PSRs supporting wellbeing through emotion regulation across Chapters 2 and 3, in both general contexts and the context of a global pandemic, further combats the misconception that social media is primarily detrimental. The present findings support the plethora of research that suggests that the relationship between social media and wellbeing is more nuanced than simply 'social media harms users' (Bailey et al., 2020; Cramer & Inkster, 2017; Orben & Przybylski, 2019; Vuorre et al., 2021). Actively participating on social media and expressing authentically for example has a positive impact on satisfaction with life and wellbeing (Bailey et al., 2020). Further, the Royal Society for Public Health found that the main five social media platforms all had various influences on aspects of wellbeing, with YouTube having a net positive impact, and Instagram having net negative impacts (Cramer & Inkster, 2017). One limitation to note about the present research is that when using social media as a tool, only viewer-creator relationships on the YouTube platform were assessed. Similarly, only a certain genre of creators was recruited from, including vlog and lifestyle creators who talk about their own experiences, often centring around diverse and minority narratives. It could be that if the present studies were to be replicated using creators or content from alternative platforms, or alternative genres of content, the same results would not occur. For example, the more photo-based emphasis of Instagram and politically heavy environment on Twitter that is also mostly text, create less of an opportunity to create and develop PSRs than multimedia and long-form video content that is most likely to be found on the YouTube platform. Similarly, the vulnerable

disclosure that comes from vlogging and lifestyle content is less apparent in content such as prank videos, or cooking videos for example, and therefore these genres of content may also stifle the creation and impact of PSRs. Exploring these different platforms and content environments on social media would help with these insights.

Pathways to impact

Stigmatised identities. If we can expand our understand of relationships to include parasocial ones, we may also open a wide avenue of how this can provide value in the real world. When first approaching this research, my intention was to understand whether sharing one's own story online (as creators often do, specifically ones with platforms that discuss minority characteristics, such as race and LGBT+ identity) would be beneficial to those exposed to such content. Social learning theory depicts our ability to learn through others (Bandura & Walters, 1977). This is apparent through PSRs in current findings, as throughout the pandemic, witnessing the kindness of others encouraged people to act more kind themselves, an affect that was moderated by PSR strength. Still considering social learning theory, the present research further highlights a unique pathway to impact that PSRs can provide by broadcasting the stories, journeys, and characteristics of a global community online. The online community is a space significantly vaster than the insular social networks we tend to form with those around us in-person, who tend to share similar characteristics to us (Allport et al., 1954). Imagine, for example, a young teenager living in a conversative town in a rural, southern American state. If that teenager is experiencing difficulties with their sexual orientation or gender identity, there may not be somebody in the community on their doorstep that they can lean on for such support. There are, however, hundreds of creators from all around the world who have spoken about their LGBT+ journeys, providing assurance, advice, and

companionship on demand and at the click of a button to anybody with an internet connection. Being able to learn from others who would typically not grace one's social circles can help develop us as people.

Similar to social learning theory, contact theory claims interaction with an outgroup member reduces prejudice (Allport et al., 1954), and the parasocial contact hypothesis proposes that PSRs are also capable of such prejudice reduction through the unidirectional exposure of a parasocial outgroup member (Schiappa et al., 2005). Findings from the present research support this too, as content from social media was able to reduce explicit prejudice levels and intergroup anxiety towards people with mental health disorders. Whilst these are promising indications of how PSRs can be harnessed, there are limitations to this research. Firstly, only prejudice towards mental health was considered, and it would be useful to understand if parasocial interventions for prejudice reduction are generalisable to other protected characteristics, such as race and LGBT+ identity. This should be the case, as correlational findings have found that, for example, those with stronger PSRs towards Muslim Instagram creators held more positive perceptions of hijabi culture (Tengku & Manaf, 2019). Further, gender variant communities have been found to use media technology like social media to explore and validate their identities (Hirshfield, 2019), and transgender creators on YouTube are reported to have major repercussions towards improving the condition of transgender society (Miller, 2018). To support this, additional experimental designs could better confirm how PSRs can be harnessed for prosocial change.

Non-concealable stigmatised identities. It would also be useful to determine whether PSR prejudice interventions work with non-concealable stigmatised identities as well as concealable ones (Chaudoir & Fisher, 2010). PSR strength was shown to help reduce prejudice

in the present research (Chapter 5), but in this case where somebody with a mental health disorder shared their story, the stigmatised issue is not apparent straight away. This allows viewers the opportunity to (regardless of their levels of prejudice towards the stigmatised issue) develop a parasocial relationship until the time of disclosure. For people who may be prejudiced, developing that existing PSR towards the disclosing target may encourage them to experience the disclosure about the concealable and stigmatised identity in due course, providing an opportunity for parasocial contact to reduce prejudice. If, however, somebody has a racial prejudice against people of colour, it seems unlikely that a person of colour sharing their experiences as a minority will work as a prejudice intervention in real life, particularly because those with prejudice may not be willing to develop a PSR in the first place. As the colour of one's skin is not concealable in the same way a mental health disorder may be, it seems unlikely that PSR strength will develop by chance in such a scenario. An interesting future direction could therefore be to consider an experimental design that explores whether PSR prejudice interventions are successful for non-concealable stigmatised identities also.

The impact on regulation. Beyond reducing prejudice and fulfilling emotion regulation needs both generally and during highly stressful environments, PSR research has further pathways to impact in the real-world. With thanks to the Royal Society for Public Health who have officially supported this doctoral project, government audiences have the opportunity to understand the values that technologies can provide through PSRs. This could be particularly beneficial with the upcoming formation of social media regulation, such as through the All-Party Parliamentary Group on Social Media and Young People. Through encouraging wellbeing and prosocial behaviour, regulating emotion, and reducing prejudice, there are clear benefits that PSRs demonstrate throughout these findings. Thus, government regulation that controls time spent on social media (particularly by young people) should be set with these

benefits in mind, so harmful and excessive social media use can be protected against, whilst simultaneously encouraging the social support that can derive from PSRs.

Non-corporate gain. It is not only governmental organisations who are interested in PSRs on social media, large corporations have been too. The value of creator influence over viewers has long been recognised and harnessed for profitable advertising ventures (Martin & Bush, 2000; Reinikainen et al., 2020). Creators are often paid to dedicate a portion of their content to advertising a product or service provided by brands, leveraging the trust generated by their audience to boost traffic or sales for the company paying them for advertising. As commercial organisations make use of viewer-creator PSRs and their influence, non-commercial organisations should also consider how they too can harness how social media can be used for social good. As PSR strength encouraged acts of kindness throughout the pandemic (Buchanan. K et al., 2021), charities and not-for-profit bodies may also be able to dramatically increase awareness and engagement to prosocial campaigns by utilising PSR influence. For example, a charity could work with creators to fundraise for worthy causes, the NHS could work with creators to share their experience of important self-care to encourage their audiences to also get important vaccinations or regular tests (such as smear tests and prostate checks), and local government bodies could ask creators to share their own voting experience in an attempt to increase voter turnout at elections.

The good and the bad. The above all sound like great potential pathways to impact to explore, with good promise as the present research has used real-life creators and real-life stimuli that already exist and found significant results. However, all actions have equal and opposite reactions, and considering this, if PSRs demonstrate capacity to influence for prosocial change, the potential to encourage antisocial change should not be ignored. A

limitation of the existing research is that negative influence from PSRs were not thoroughly examined. In the one instance where this did take place, PSR strength was seen to amplify negative affect experienced when people were exposed to negative content online (Chapter 3, Study 4), and so future research could examine and compare the effectiveness of prosocial and antisocial encouragement further.

Beyond research, the organisations that provide social media platforms should also take heed. Almost anybody can go online and broadcast their thoughts to the world, providing unprecedented access to huge levels of publicity that is not behind the gatekeepers of traditional media. Creators may therefore find themselves with the ability to influence countless young minds in very short spaces of time and are currently provided with little to no training on the awareness and responsibilities that come with such a large virtual stage. The present findings further support that this needs to change. Social media companies should be investing more time and resource on safeguarding not only the creators that use their platform (beyond the existing light touch guidance articles available for creators to voluntarily access), but the viewers that are exposed to their unfettered disclosure.

Further limitations and future directions

Alternatives to social media. Whilst the present research furthers understanding of PSR capabilities, how they are created, and how they can be harnessed for prosocial change, these aspects have only been examined in the context of viewer-creator relationships on social media. However, PSRs are formed via many more mediums, and not always with real and relatable people. One may, for example, develop a parasocial relationship with a fictional book character or an animated movie heroine that may not even be human (Melchiori & Mallett, 2015). It seems less plausible that somebody would consider Winnie the Pooh as capable of

regulating their emotional needs by reducing guilt when experiencing embarrassment. Similarly, it may be that the medium of PSR affects their formation also. Particularly immersive forms of parasocial targets, such as video game characters that you are able to control or interact with, may rely on alternative mechanisms to develop PSR strength (such as similarity, or being further immersed into fictional narratives due to interactive elements, (Seo, Li, Choi et al., 2018) as opposed to, or in addition to, unidirectional self-disclosure.

Further, perhaps PSRs developed away from social media creators may not be able to be harnessed for prosocial change in the same way. Creators are real and relatable people with genuine stories and experiences that are not scripted or fabricated, and so PSRs formed by viewers towards fictitious movie characters, even if played by a real actor, may not carry the same level of influence. Having said this, the fictional characters from Will & Grace seemed to be effective at reducing prejudice (Schiappa et al., 2006), but further research assessing whether non-fictional targets are more effective would be informative. Alternatively, it may be that logistical elements such as visuals or appearance could vary how PSRs are harnessed. Would a PSR with a parasocial target who you have only ever listened to but not seen, such as a podcast presenter for example, or a radio musician who communicates and advocates for social change through song, be able to reduce prejudice or influence prosocial behaviour in the same way?

Social media PSRs in particular are distinguished from those that may be formed via television for example, as social media creators typically come across as more familiar, using home environments and on-trend topics in real time (Reichert, 2012). As social media PSR's also provide opportunities for interaction, such as with comments and messages, giving a sense of approachability. Interactivity seems connected to PSR strength (Rihl & Wegener, 2019), and

so exploring whether the proposed PFFP also works in the context of PSRs where no interaction is possible, would be intriguing. Future research that compares types of PSRs along the dimensions of understanding, creating, and harnessing, would help to address this.

From the creator's point of view. A further limitation of the existing research is that it focuses on the viewer perspective; nothing has been explored from the point of view of the creator. On one hand this seems reasonable, as the relationship being formed is unidirectionally lead by the viewer. On the other hand, the parasocial targets in this context still experience something, even if it is very different. Unlike entirely fabricated fictional characters, creators on social media do have a level of awareness of the relationships being created. Through viewer engagement on their content, creators are often able to see usernames and potentially recognise ones that commonly engage with them across different social media platforms. The ability to acknowledge numbers of viewers in a community and interact back, albeit in smaller ways than how viewers can interact with creators, is still quite special, and it would be interesting to explore the creators' perspective further. Do creators feel that disclosing in the way they do, helps them to regulate their emotions in any way? Whilst they do not form individual relationships with every single viewer, is there a sense of obligation to, liking of, closeness to, and perceived responsiveness from their viewership as a whole? And just as creators often influence their audiences, does viewer feedback and engagement on content ever encourage creators to disclose in more or less authentic ways? These are all avenues of future research.

Manipulating PSR strength. An additional avenue of future research would be to address how to successfully manipulate PSR strength in experimental designs. In exploring both the formation and harnessing of PSRs, creating different experimental conditions where one successfully formed parasocial relationships and one did not, proved difficult, as any

exposure to parasocial targets resulted in some form of parasocial relationship being experienced (Chapters 4 & 5). Whilst this shows that (rather beneficially) in order to reduce prejudice, no previous PSR-building is required before a parasocial target discloses about their marginalised experience, it would be beneficial to incorporate a condition that would absolutely not lead to PSR formation, as the initial studies designs intended. Until this occurs, our understanding of how PSRs can be harnessed is limited as there is no true control group. It would also be reasonable to assume that PSR strength would affect how successfully these relationships could be harnessed, as we know from previous studies in the present research that strong and weak PSRs regulate emotion to different extents (Chapter 2).

This manipulation does prove very difficult to do however and may be something that cannot practically be manipulated. If any level of exposure allows for PSRs to be formed, it could be that only way to create a 'no-PSR' condition would be to have information communicated without any personality behind it, such as with a block of text. In order to control for the variance of different mediums of communications however, this may mean that experimental designs may be limited to only text stimuli, where in PSR conditions, parasocial targets are presented only through text also. Future research on PSR formation may wish to explore this process via different mediums, acknowledging the difficulties in manipulating where such connections are created in the first place.

When a PSR lets you down. One of the features of unidirectional parasocial relationships that seem particularly advantageous over bidirectional relationships, is that they are less likely to break down. Unlike with best friends or colleagues, disclosure and consumption of disclosure is more controlled, and this less-risky approach to relationships has not gone unnoticed. In present findings for example, we found that people with low self-esteem

chronically perceived parasocial targets to be responsive regardless of social threat (Study 3), which is not something typically seen by people with low self-esteem. The risk of diminishing one's social network (social atrophy) would normally seem so great to people with lower self-esteem, they would often perceive bidirectional ties as more responsive when their social networks feel supported, compared to when their social networks feel threatened (Lamarche & Murray, 2014).

Whilst unlikely, social atrophy with PSRs is not entirely impossible (Lather & Moyer-Guse, 2011). An aspect this thesis did not uncover was a scenario where a parasocial target may unexpectedly hold conflicting opinions to one's own. Take JK Rowling as an example, an author who created the world of *Harry Potter* which to many, particularly in the LGBT+ community, was a story of celebrating difference and not letting bigotry and bullying succeed. Villains who felt superior to 'mud bloods' were likened to bigots in society, and the author went as far as to retrospectively label characters and their experiences as homosexual metaphors in allyship (Gendler, 2011). However, in early 2021, JK Rowling revealed less accommodating views about transgender identities (Rosenblatt, 2020), causing many readers who had developed strong PSRs not only with the fictional world she created, but with Rowling herself, to feel conflicted about this relationship. Further research examining these parasocial dynamics, their effects on PSR influence, and even on PSR creation in the first place if conflicting views are made known, would further inform shared reality theory (Echterhoff, 2012) and parasocial research overall. We did find prejudice reduction to still be affected even when people felt less similarity to the parasocial target with a mental health disorder (Chapter 5), but I suspect that feeling dissimilar due to not sharing a characteristic will have a different effect to feeling dissimilar due to not sharing important societal values that seem more controllable, and therefore more conflicting in nature.

How it feels to be seen. Considering marginalised communities affected by JK Rowling in this way shines a light on a further future direction that could help society. The present research did not explore the effect of PSRs for viewers with specific identities, research that I enthusiastically encourage, to understand whether certain communities may benefit from PSRs in unique ways. Thinking back to the young teenager from a conservative town, by turning to parasocial targets rather than risking negative reactions from conservative family or friends, viewers can actively connect with people whose experiences resonate with their own. The very nature of virtually accessing creators worldwide means viewers can seek direct relatability, which often cannot be found on one's doorstep.

The ability for creators from underrepresented groups to share their content online supports a new scale of global citizenship, empowerment, and voice (King, 2009), and can provide additional benefits to traditional coverage of stigmatised communities for multiple reasons. Firstly, it provides a more authentic alternative to television coverage. Creators vlogging about their experience often delve into painful and personal topics, such as dating, bullying, and family tension, providing more of a cultural context and meaningful narrative than sensationalised television (Ryan, 2009). This could be due to the fact that traditional media creators are under pressure to meet performance demands of view quotas, where not achieving this may threaten the continuation of the media, but social media creators do not have such targets that threaten their online presence, and are fully in control of what they broadcast. Secondly, the connection between viewers and creators happens in a more organic and efficient way on social media than it does through traditional mediums. For example, a viewer could search specifically for content on their community, be presented with suggested videos of that content, and watch them immediately, which is less active and requires less planning and time commitment than finding a television show and waiting for its published scheduling (Miller,

2017), though this benefit is less relevant since the availability of modern on-demand streaming services such as Netflix.

Additionally, online social media provides an important safe haven for marginalised communities (Miller, 2017). Continuing with the example of the transgender community, they are often not featured in traditional media, and when they are, representations and depictions are overwhelmingly negative and stereotypical. For example, transgender women in particular are heavily fetishised and sexualised, even in other areas of the internet such as pornography (Abbott, 2013). Thus, social media creators can serve as role models to the wider community. Future research could examine whether marginalised community members gain different levels and types of emotional need fulfilment from ingroup parasocial targets when compared to outgroup parasocial targets, and whether it is easier to develop greater parasocial strength with a target who shares race, disability, or identity. This seems likely as identification with social groups supported greater perceived need fulfilment in prior bidirectional research (Crawford & Salaman, 2012). It would also be very interesting to understand whether the influence of parasocial targets can be harnessed more effectively if the target is also an ingroup member. For example, black communities are known for having greater hesitancies towards medical interventions due to an unjust mistreatment of people of colour (Prather, Fuller, Jeffries IV et al., 2018). It could therefore be valuable to investigate whether PSRs developed with black creators are more likely to encourage black people to receive essential medical care such as coronavirus vaccinations, than creators who are not black.

Generalisability. One final limitation to note, is the generalisability of findings across this thesis. As with any research, it is important to reflect on whether findings can generalise the value of PSRs, or whether they are restricted to certain kinds of people. Whilst this thesis aimed

to not only use university samples, its reliance on existing PSRs throughout multiple studies does mean that overall samples may be over-represented by those who use the internet, and social media in particular, in English speaking countries. Social media users tend to be younger than average television users, and the culture of YouTube discussions surrounding the creators that helped recruit samples for this study may have attracted people with specific liberal values and ideologies. Despite these differences, samples do demonstrate effects across a range of genders, ages, and ethnicities. Future studies may wish to replicate existing study designs across samples in alternative countries, and with different creators who broadcast content around a range of topics and values, as opposed to only liberal content surrounding race, LGBT+ identity, and mental health. Differences in results may occur as non-Western countries are known for being more conservative when it comes to issues of race and identity (Forum, 2018), and so implicit and explicit prejudice as well as intergroup anxiety levels may be more engrained, and therefore harder to adjust with parasocial interventions alone.

Whether the effects of specifically viewer-creator PSRs from social media are also generalisable to other parasocial contexts, such as traditional celebrities and fictional parasocial partners, should also be further explored. It may be seen as a limitation of this research that only one type of parasocial partner context was analysed. This occurred as the resources available from this research all centred around social media. In one sense, this may not matter, as the aforementioned differences across non-fictional parasocial partners do not change the fact that they are all still *primarily* one-sided. However, there may certainly be worth in replicating present study designs in the context of fictional parasocial partners, as the distinction between fiction and non-fiction has produced varied effects in alternate contexts such as reading (Mar et al., 2009).

The consequences of PSRs may also be less generalisable when taking into account individual differences. It should be noted that many of the studies presented in this thesis recruited participants who were already on social media, and who already had formed PSRs with creators online. Whilst practical and logistical (as these existing PSRs were exactly what were being examined in Studies 1-3 for example), generalisability must also be considered as such samples may not widely reflect the general population.

Whilst efforts were taken to confirm that participants maintained average levels of social networks and friendships away from the internet through specific custom items, it should not be ignored that certain individual differences have been found to affect the way PSRs may affect us. For example, attachment styles impact our engagement with fictional PSRs, where those high in anxious attachment have a greater tendency to form them, and those high in avoidant attachment tend to identify with parasocial targets more, even when controlling for variance in personality traits (Rain, Cilento, MacDonald et al., 2017; Rain & Mar, 2021). As these reports are from a correlational study, and the present studies in this thesis did not measure attachment styles, future experiments may wish to examine the effects of attachment on PSR outcomes.

Away from attachment styles, other characteristics such as mental health have also been found to affect the capability of PSRs. Adults with autism spectrum disorder are happier when using social media in moderation, with social media being suggested as a protective factor against secondary mental health concerns such as depression in these instances (Ward et al., 2018). This also provides intriguing future avenues of research, highlighting pockets of society that PSRs may serve an even more useful role for, similar to the findings from Study 3 that suggest PSR benefits could particularly help those low in self-esteem.

A further aspect of generalisability that should be considered is not just in the findings, but in the methods used throughout this thesis. The value of PSRs to regulate emotion was inspired by the emotionships model using bidirectional relationships (Cheung et al., 2015). Distinguishing between strong and weak PSRs for the very first time was inspired by strong and weak bidirectional relationships (Granovetter, 1973), and the paradigm created for PSR formation was inspired by bidirectional models (Aron et al., 1997; Sedikides et al., 1999). As this thesis drew upon bidirectional models of relationship research to understand the values of PSRs, future research could continue adopting this approach. This is a promising avenue to further understand the value of PSRs, as theories and measures of bidirectional relationships have been successfully applied to PSRs in the past (Branch et al., 2013). For example, standing at the bottom of a hill with a friend can lead to less-steep perceptions of the terrain, suggesting that the world looks less challenging with the support of our friends (Schnall, Harber, Stefanucci et al., 2008). Imagined social support from a PSR could be explored using a model inspired by this research.

The final aspect of generalisability draws attention specifically to the samples used throughout this thesis. An integral part of conducting this research was using social media as a tool to understand PSRs further. Doing so provided multiple benefits, such as increased sample numbers through relying on existing resources, and by reducing the variance of multiple contexts as a confounding factor within research design. However, it must be noted that restricting the present research to the context of social media, and consequently needing to recruit participants with pre-existing PSRs to either specific creators, or creators in general (verified through attending events like VidCon), does limit how generalisable findings could be to the population. For example, it may be that using a sample with pre-existing PSR development towards an LGBT+ creator (as in Chapter 3), means that the sample overall

heavily identifies as LGBT+ themselves, and conclusions from it may not apply in the same way to the non-LGBT+ population. Minority groups do navigate online spaces differently (King, 2009), and so it would not be unreasonable to assume that online PSR behaviour would demonstrate differences too. It may also be, for example, that recruiting from conventions like VidCon (that typically market and attract younger audiences) means that conclusions drawn from Study 1 might not be generalisable to older audiences that still form PSRs. As aforementioned, demographics and individual differences have been noted to affect how we navigate parasocial relationships, general relationships, and the world in general (Rain & Mar, 2021), and so replicating present studies with more varied and generalisable samples would be sensible.

It could be, however, that such sample considerations would not affect the generalisability of PSR conclusions in any meaningful way. Regardless of who is forming the relationship and who they are forming them with, research has consistently demonstrated that factors such as age, gender identity, personality differences, and even political affiliation does not affect our relationship formation abilities when personal self-disclosure is conducted (Aron et al, 1997). Considering this, does it really seem reasonable to assume that samples which still ranged in age from 16 – 75 years old, and still spanned a range of interests, ethnicities, and education levels, would ultimately feel restrictive simply because they were recruited from an event that attracted audiences of social media creators? Other present studies from this thesis may also suggest that the results can still be generalisable. For example, the average PSR strength found in Study 1 (where the sample was recruited directly from VidCon) and Study 5 (where the sample was much less restricted, taken from the online participant recruitment platform *Prolific*), were both between 4.54 and 4.70, suggesting that more restricted samples and less

restricted samples still produce similar results. Again, it would be wise to replicate such study designs with a wide range of samples to fully assess the generalisability of findings.

Conclusion

Due to their unidirectional quality, most past research has underestimated and overlooked the ability of PSRs to do anything more than reduce loneliness, entertain us, or advertise products, but the present research suggests that there is a lot more to be gained. By presenting a complementary and additional resource within our social networks, PSRs can help regulate emotion, amplify impacts on wellbeing and behaviour, and reduce prejudice, despite their one-sided nature. Whether listening to the radio on your daily commute, reading books, or following the updates of your favoured personalities as you scroll through social media, PSRs should be understood as extensions to our friendship groups, providing unique benefits, aiding the management of our psychological experiences, and helping us to develop as more kind and less prejudiced people.

So, if you too feel like David Rose could be your best friend, or have ever imagined yourself in Central Perk, or felt a desire to visit Hogwarts, you need not be embarrassed. Not only is the formation and maintenance of PSRs normal, it also seems to be beneficial. If society can learn to lean into the PSRs formed in the real and fictional worlds around us, the benefits that these unique bonds can provide may be greater than we think.

SECTION 7 | REFERENCES & APPENDECES

REFERENCE LIST

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APPENDIX A | Pre-registrations

Studies 1 was not pre-registered.

Study 2 was pre-registered on the Open Science Framework, details of which can be found using the following link: https://osf.io/uqnts.

Study 3 was pre-registered on the Open Science Framework, details of which can be found using the following link: https://osf.io/x93p6.

Study 4 was pre-registered on the Open Science Framework. Stimuli materials have also been stored there. Details can be found using the following link: https://osf.io/a584s.

Study 5 was pre-registered on the Open Science Framework, details of which can be found using the following link: https://osf.io/py6c5.

Studies 6 & 7 was pre-registered on the Open Science Framework, details of which can be found using the following link: https://osf.io/qkda8.

The three intervention stimuli for Study 7 are also stored on the Open Science Framework and can be accessed using the link above.

APPENDIX B | Understanding

Relationship nomination definitions used

Strong tie: A strong tie is someone you are very close to, someone who you know really well (and knows you really well), and someone who you confide in or talk to about yourself, or your problems e.g. a good friend, close family member, romantic partner Please write an identifying label for a strong tie that you feel like you 'know' the most e.g. 'mum', or 'brother', or 'best friend', or 'uni friend'

Weak tie: A weak tie is: someone you are not very close to, who you don't know very well, but someone who you consider a friend, but would be unlikely to confide in. e.g. a distant friend, or co-worker/classmate, or a neighbour that you talk with.

Please write an identifying label for a weak tie that you feel like you 'know' the most e.g. 'distant friend', or 'co-worker', or 'classmate', or 'neighbour'

PSR: For this study, YouTube creators are the people you choose to regularly watch on YouTube, but you don't actually know off of the YouTube platform. Please write an identifying label for a YouTube creator that you watch and feel like you 'know' the most e.g. their name, their nickname, or their channel name

Study 1 & 2 main measure items

Parasocial relationship items:

1. YouTube shows me what YouTubers are like

2. When YouTubers joke with one another, it makes YouTube better to watch

3. When my favourite YouTubers show me how they feel about something, it helps me make my own mind up about it

4. I feel sorry for my favourite YouTubers when they make a mistake

5. When I watch YouTubers, I feel as if I'm part of their group

6. I like to compare my ideas with what my favourite YouTubers say

7. My favourite YouTubers make me feel comfortable, as if I'm with friends

8. I see my favourite YouTubers as natural, down-to-earth people

9. I like hearing the voice of my favourite YouTubers in my home (13PSR_9)

10. My favourite YouTubers keep me company when I watch them

11. I look forward to watching my favourite YouTubers when they upload

12. If my favourite YouTuber appeared on another media form, such as TV, I'd watch it

13. When my favourite YouTubers talk, they seem to understand the kinds of things I want to know

14. I sometimes make remarks to my favourite YouTubers whilst I watch them

15. If there was a story about my favourite YouTubers in a newspaper/magazine, I would read it

16. I miss seeing my favourite YouTuber when they take a break

17. I would like to meet my favourite YouTuber in person

18. I think my favourite YouTuber is like an old friend

19. I find my favourite YouTuber to be attractive

20. I am not as satisfied when I watch content from creators that are different to my favourite YouTuber

Retrospective emotionship items:

1. I'm anxious and want to calm down e.g. before an interview

2. I'm sad and want cheering up e.g. after a break up.

3. I'm angry and want calming down e.g. after being in a fight.

4. I'm angry and want this anger amplified e.g. before a competition.

5. I've received good news and want to savour this happiness e.g. after getting a promotion.

6. I'm feeling guilty and want to reduce this feeling e.g. after hurting someone's feelings.

7. I'm embarrassed and want to reduce this e.g. after tripping over.

8. I'm feeling lonely and want to feel less lonely and more supported.

9. I want to feel better about myself e.g. helping me with my identity.

10. I'm bored and want to feel entertained.

Affiliation motivation items, Hill (1987)

1. If I feel unhappy or kind of depressed, I usually try to be around X to make me feel better

2. I usually have the greatest need to have X around me when I feel upset about something.

3. I often have a strong need to be around X who is impressed with what I am like, and what I do.

4. I mainly like to be around X who thinks I am an important, exciting person.

5. I think being close to X, listening to them, and relating to them, on a one-to-one level is one of my favourite and most satisfying pastimes

6. Just being around X and finding out about them is one of the most interesting things I can think of doing.

7. When I'm not certain about how well I'm doing on something, I usually like to be around

    X so I can compare myself to them.

8. I find that I often look to X to see how I compare to others.

Study 3 Reliving Task:

Task A:

We are interested in the types of experiences you have with the person that you feel closest to (this could be a partner, parent, best friend etc.)

In order to get an idea of how this person relates to you, we would like you to think of the most recent time when you felt seriously hurt, disappointed, let down, or upset by them.

Describe what happened in as much detail as possible. Specify what they said and did.

Try to immerse yourself in the details of the event and imagine exactly what happened.

Task B:

We are interested in the types of experiences you have with the person that you feel closest to (this could be a partner, parent, best friend etc.)

In order to get an idea of how this person relates to you, we would like you to think of the most recent time when you felt strongly supported and encouraged by them.

Describe what happened in as much detail as possible. Specify what they said and did.

Try to immerse yourself in the details of the event and imagine exactly what happened.

APPENDIX C | Creating & Strengthening

Measure items

Parasocial relationship strength items (adapted from Bocarnea & Brown, 2007)

1. X makes me feel as if I am with someone I know well.

2. If X appeared on a TV program, I would watch that program.

3. I see X as a natural down-to-earth person.

4. If I saw a newspaper of magazine story about X, I would read it.

5. I would like to meet X in person.

6. I feel that I understand the emotions X experiences.

7. I do not have any feelings about X * [reverse]

8. Learning about X is important to me

9. I feel like calling or writing to X.

10. X understands the kinds of things I want to know.

11. I feel like I have very little understanding of X as a person * [reverse]

12. I am not really interested in X * [reverse]

13. I sometimes made remarks to her when watching that video [for Study 2 only]

Perceived closeness items (adapted from Aron, 1997, and Dibble, Levine, & Park, 2012

1. I feel close to X

2. I will miss X

3. X discloses important personal things to me

4. I have a strong connection with X

5. I want to spend time with X

6. I would choose to spend my free time with X

7. I will think about X going forward

8. Please select the picture that best describes your current relationship with X:
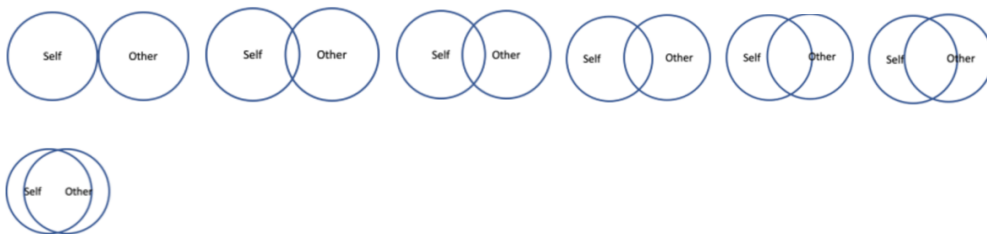
Perceived responsiveness items (adapted from Reis et al, 2017)

1. X would really listen to me

2. X would be responsive to my needs

3. X would see the 'real' me

4. X would 'get the facts right' about me

5. X would understand me

6. X would be on 'the same wavelength' with me

7. X would know me well

8. X would esteem, admire, and respect me, shortcomigns and all

9. X would value and respect the whole package that is the 'real' me

10. X would express liking and encouragement for me

11. X would be interested in what I'm thinking and feeling

12. X would value my abilities and opinions

Perceived similarity items (taken from Sprecher, Treger, & Wondra, 2013)

1. How much do you think you have in common with X?

2. How similar do you think you and X are likely to be?

An example of visual set up instructions provided to participants
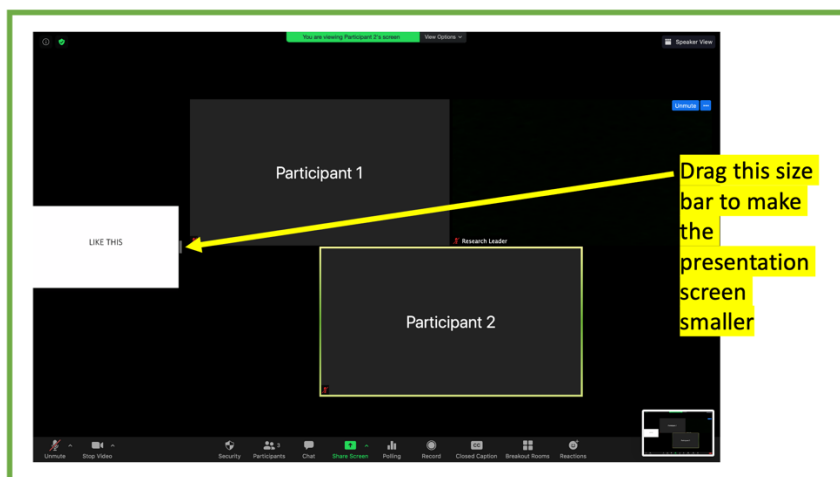
Question sets used in the Parasocial Fast Friends Paradigm (PFFP)

Participants were instructed to take turns asking and answering each prompt to each other and were given three minutes for each set. If three minutes had passed during an answer, the person currently disclosing were given the opportunity to finish their answer before moving on to the next stage.

Set 1

- Given the choice of anyone in the world, whom would you want as a dinner guest?

- Would you like to be famous? In what way?

- Before making a telephone call, do you ever rehearse what you are going to say? Why?

- What would constitute a 'perfect' day for you?

- When did you last sing to yourself? And to someone else?

- If you were able to live to the age of 90 and retain either the mind or body of a 30 year old for the last 60 years of your life, which would you want?

- Do you have a secret hunch about how you will die?

- For what in your life do you feel most grateful?

- If you could change anything about the way you were raised, what would it be?

- If you could wake up tomorrow having gained any one quality or ability, what would it be?

- Name three things that you have in common with the task partner in front of you

Set 2

- If a crystal ball could tell you the truth about yourself, your life, the future, or anything else, what would you want to know?

- Is there something that you've dreamed of doing for a long time? Why haven't you done it? What is the greatest accomplishment of your life?

- What do you value most in a friendship?

- What is your most treasured memory?

- What is your most terrible memory?

- If you knew that in one year you would die suddenly, would you change anything about the way you are now living? Why?

- What does friendship mean to you?

Set 3

- Complete this sentence: 'I wish I had someone with whom I could share…'

- If you were going to become a close friend with the task partner in front of you, please share what would be important for them to know.

- Share with your partner an embarrassing moment in your life.

- When did you last cry in front of another person? And by yourself?

- What, if anything, is too serious to be joked about?

- If you were to die this evening with no opportunity to communicate with anyone, what would you regret not having told someone? Why haven't you told them yet?

- Your house, containing everything you own, catches fire? After saving your loved ones and pets, you have time to safely make a final dash to save any one item. What would it be and why?

- Tell your task partner what you like about them; be very honest, saying things you might not say to someone you've just met.

APPENDIX D | Harnessing

Participant demographics

Table 8 Matrix of participant demographics

	Same creator		Different creator		Control		Across conditions	
	n	%	n	%	n	%	n	%
	113		120		87		320	
Age								
18-21	28	24.7	23	19.2	22		73	22.8
22-25	20	17.6	28	23.3	23		71	22.2
26-29	31	27.4	28	23.3	19		78	24.4
30+	34	30.1	41	34.2	23		98	30.6
Gender								
Woman	66	58.4	72	60.0	53		191	60.0
Man	47	41.6	46	38.3	33		126	39.1
Non-binary	0	0	2	1.7	1		3	0.9
Prefer not to say	0	0	0	0	0		0	0
Ethnicity								
White	82	72.6	79	65.8	56	64,4	217	67.8
Mixed/multiple	10	8.8	4	3.3	5	5.7	19	5.9
Asian/Asian British	7	6.2	20	16.7	15	17.2	42	13.3
Black/Black British	13	11.5	13	10.8	9	10.3	35	10.9
Arab	1	0.9	2	1.7	0	0	3	0.9
Other	0	0	1	0.8	2	2.3	3	0.9
Prefer not to say	0	0	1	0.8	0	0	1	0.3
Sexual orientation								
Heterosexual	94	83.2	104	86.7	79	90.8	277	86.6
Homosexual	10	8.8	6	5.0	2	2.3	18	5.7
Bisexual	7	6.2	7	5.8	5	5.7	19	5.9
In another way	1	0.9	1	0.8	0	0	2	0.6
Prefer not to say	1	0.9	2	1.7	1	1.1	4	1.2

Measure items

Parasocial relationship strength items (taken from Bocarnea & Brown, 2007)

1. X makes me feel as if I am with someone I know well.

2. If X appeared on a TV program, I would watch that program.

3. I see X as a natural down-to-earth person.

4. If I saw a newspaper of magazine story about X, I would read it.

5. I would like to meet X in person.

6. I feel that I understand the emotions X experiences.

7. I find myself thinking about X on a regular basis.

8. I do not have any feelings about X * [reverse]

9. I like to watch X on television. [Consider removing]

10. Whenever I am unable to get news about X I really miss it. [Consider removing]

11. Learning about X is important to me

12. I have been seeking out information in the media to learn more about X. [Consider removing]

13. I sometimes go to the internet to obtain more information about X [Consider removing].

14. I feel like calling or writing to X.

15. X understands the kinds of things I want to know.

16. I sometimes make remarks to X whilst watching them.

17. I am very much aware of the details of X's life [Consider removing]

18. I feel like I have very little understanding of X as a person * [reverse]

19. I look forward to seeing X on television or in the print media [Consider removing]

20. I am not really interested in X * [reverse]

Fear and avoidance items (adapted from Kenny, Bizumic, Griffiths, 2018)

- I would find it hard to talk to someone who has a mental illness

- I would be less likely to become romantically involved with someone if I knew they were mentally ill

- It is best to avoid people who have mental illness

- I would feel unsafe being around someone who is mentally ill

- I would be just as happy to invite a person with mental illness into my home as I would anyone else (reversed)

- I would feel relaxed if I had to talk to someone who was mentally ill (reversed)

- I am not scared of people with mental illness (reversed)

- In general, it is easy to interact with someone who has mental illness (reversed)

Malevolence items

- People who are mentally ill are avoiding the difficulties of everyday life

- People with mental illness should support themselves and not expect handouts

- People who develop mental illness are genetically inferior to other people

- People with mental illness do not deserve our sympathy

- We, as a society, should be spending much more money on helping people with mental illness (reversed)

- People who become mentally ill are not failures in life (reversed)

- We need to support and care for people who become mentally ill (reversed)

- Under certain circumstances, anyone can experience mental illness (reversed)

Intergroup anxiety items (adapted from Hopkins & Shook, 2017)

- I would feel nervous if I were the only person on a bus and someone with BPD came on

- I worry about my safety when interacting with people with BPD

- When interacting with people with BPD, I am nervous that they will want to fight me

- I would feel anxious alone in a doctor's waiting room with someone with BPD

- I would feel nervous if I was walking on the street alone and someone with BPD was walking towards me

- I feel uncomfortable because I think [Muslims] want me to [convert to their faith] [consider removing this item].

- I feel uncomfortable when interacting with people with BPD, because I fear they will think I am prejudiced against them

- I don't know much about BPD, and that makes me feel uncomfortable being around people who have it

- I wouldn't consider myself [prejudiced] but because I don't know how to act around people with BPD, I fear they may think I am

- I have little experience interacting with people with BPD, and that makes me feel nervous

- I would feel awkward at a social gathering where I was the only person without BPD

Behavioural measures at Week 0 (taken from Murrar and Brauer 2018)

- How much time would you be willing to volunteer for an organization that [works with] people who have mental health issues, like BPD?

- Would you like to receive information about campaigns that [work with] people with mental health issues such as BPD?

Behaviour measures at Week 1

- Have you thought about those with mental health issues this past week and ways you may be able to help them?

- Have you actively done anything to contribute towards raising awareness or protecting the rights of people with mental health issues like BPD? (e.g. having positive or educational conversations with others about it, donating time or money towards initiatives dedicated to the cause? If so please provide details).

- Have you actively done anything to contribute towards things against raising awareness or protecting the rights of people with mental health issues like BPD? (e.g. having negative/non-PC conversations with others about it, donating time or money towards initiatives dedicated to the cause? If so please provide details).