

**Can You Become ‘Friends’ With a Vlogger? How Multiple Exposures, Addressing Style and Individual Belongingness Needs Affect the Parasocial Relationship**

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### **Abstract**

A parasocial relationship is a long-term and one-sided relationship that a viewer can develop towards a media character, such as a vlogger. Although the concept has found favor with researchers, not many studies have yet focused on parasocial relationships with unknown vloggers. Therefore, the present study aimed to identify the role of two key aspects in parasocial relationship strength: repeated exposures to the vlogger and the extent to which the vlogger bodily addresses the viewer, conceptualized as both seeing and hearing the vlogger speak. Moreover, individuals with a high need to belong were expected to develop stronger parasocial relationships. In a 2 (exposure to the vlogger: after first vlog and after second vlog) x 2 (bodily address: yes or no) experiment, participants ( $N = 122$ ) watched two vlogs with one week in between. A mixed ANOVA indicated no effects of bodily address on parasocial relationship strength. However, regardless of addressing style, the parasocial relationship weakened after two exposures to the vlogger, indicating that parasocial relationships are not limited to positive experiences. Lastly, a MEMORE moderation analysis indicated no moderating role of the need to belong on the development of the parasocial relationship. This study is the first to combine the parasocial relationship with belongingness needs in a vlog context and used a successful manipulation of bodily address in an experiment with two exposures. Limitations are the manipulation of only bodily address, the high number of participants that did not watch vlogs and the limited number of exposures. Future work should use more exposures and samples with vlog watchers only, and consider possible negative parasocial relationships as well.

*Keywords:* parasocial relationship, vloggers, influencers, social media, YouTube, bodily address, addressing style, need to belong, longitudinal experiment

## **Can You Become ‘Friends’ With a Vlogger? How Multiple Exposures, Addressing Style and Individual Belongingness Needs Affect the Parasocial Relationship**

Currently, YouTube is the third most used social network in the Netherlands, right after WhatsApp and Facebook (Newcom, 2020). There are 31 million active channels on YouTube (Funk, 2020) and more than one billion hours of videos are watched each day (YouTube, n.d.). More specifically, in the Netherlands, 2.8 million users watch YouTube videos on a daily basis (Newcom, 2020). The popularity of this video-sharing website is grounded in the possibilities for users to upload and share their own content, as well as the platform it provides to interact with like-minded audiences (Burgess et al., 2009). A specific way of video-sharing on YouTube is vlogging, or videoblogging (“Vlog”, n.d.). In these videos, the person who makes the video is referred to as a vlogger, and vloggers typically film their everyday life in a natural manner, sometimes around specific topics such as lifestyle, gaming or beauty (Himma-Kadakas et al., 2018).

In a 2018 survey, 48% of young adults between 14 and 21 years indicated that they watch these vlogs on YouTube (De Best, 2020), suggesting that vloggers can acquire serious amounts of viewers. Many vloggers have found ways to use the viewers they have gathered for commercial purposes, for instance by promoting a product in their vlogs (Abidin, 2016). As a result, most academic studies have focused on commercial outcomes of vlogs, for instance on how vloggers can encourage viewers’ trust in the promoted brand (Lee & Watkins, 2016) or increase buying intentions of the product (Djafarova & Rushworth, 2017).

But how can such positive effects arise? Focusing on antecedents rather than outcomes is necessary to answer this question. For instance, viewers will sometimes engage in a parasocial relationship with a vlogger: an enduring, long-term and usually positive one-sided relationship, developed after repeated encounters (Dibble et al., 2016). In this parasocial relationship, the vlogger often does not know the viewer, but the viewer still has the experience of a reciprocal relationship (Labrecque, 2014). Central to the parasocial relationship is the media character: this can be any character, performer or celebrity that is observed in the media, such as a television character (Moyer-Gusé & Nabi, 2010), a comedian (Auter, 1992) or a cartoon (Hoffner, 1996), but also a vlogger (De Bérail et al., 2019).

In identifying the antecedents of such a parasocial relationship, several characteristics of the media content have been considered. One of these is addressing style, and bodily address in particular, which is conceptualized as instances where the viewer both sees and hears the media character speak (Cummins & Cui, 2014). Bodily address is expressed by the media character by directly facing the audience and looking straight into the camera while

talking (Hartman & Goldhoorn, 2011), which has been shown to enhance the strength of parasocial feelings in some studies (e.g., Cummins & Cui, 2014; Hartman & Goldhoorn, 2011). Although these studies provide interesting directions for the effect of bodily address, both were conducted in a television context, which differs fundamentally from watching videos on YouTube (Cunningham & Craig, 2017). One study that did use YouTube as the medium, only focused on the effect of gaze direction on parasocial attributes such as authenticity and realism, without assessing the actual experience of a parasocial relationship (Ferchaud et al., 2018). Therefore, the effect of the vlogger's addressing style on the parasocial relationship strength still lacks a solid understanding.

Moreover, although the audience of YouTube is very diverse (Burgess et al., 2009), it remains unclear how viewers' individual characteristics can influence the development of a parasocial relationship. Some researchers brought parasocial relationships in connection with well-being, suggesting that they can serve as a compensation for a lack of interpersonal relationships such as with friends or family (e.g., De Bérail et al., 2019; Hwang & Zhang, 2018). Others find that parasocial relationships should be perceived as an extension of 'offline' social interaction (Tukachinsky et al., 2020). To clarify these contradicting viewpoints, other individual viewer characteristics must be identified that have the potential to influence the parasocial relationship strength. For instance, although humans are naturally driven towards establishing and sustaining belongingness, there are individual differences in the strength and intensity of this need to belong (Baumeister & Leary, 1995). In fact, individuals with higher belongingness needs experience stronger parasocial relationships compared to individuals with lower belongingness needs (Greenwood & Long, 2009).

The present study will contribute to existing literature by applying aspects of the classical parasocial relationship theory by Horton and Wohl (1956) to a modern context and investigating the moderating role of the need to belong. Furthermore, by testing this parasocial relationship in an experiment, the current study distinguishes itself from the non-experimental research in this field (e.g., De Bérail et al., 2019; Hu et al., 2020; Ye et al., 2020), in which participants are often asked to complete a survey or an interview with their favorite media character (e.g., a vlogger) in mind. In contrast, in this study, vlog watchers will be exposed to vlogs from a fictional vlogger in an experimental setting. Since this particular vlogger will be unknown to the viewer, the factors that play a role in the developing stages of the parasocial relationship with a new vlogger can be closely examined.

In terms of practical relevance, the results of this study will provide relevant insights for vloggers and the firms they collaborate with. In sponsored vlogs, a parasocial relationship

between the vlogger and viewer can cause the viewer to identify with the advertised brand (e.g., Yuan et al., 2019; Yuan & Lou, 2020; Ye et al., 2020), which in turn can increase the purchase intention of the advertised product (Sokolova & Kefi, 2019). Thus, the results of the study will provide practical advice to companies with collaboration intentions, for example on how they can select vloggers that bring about strong parasocial relationships among their audiences, because this strong relationship can eventually increase purchase intentions. Moreover, vloggers themselves also benefit from large audiences that feel strong connections with them, as a vlogger's number of subscribers is correlated with their successfulness and popularity (Hoiles et al., 2017). Therefore, knowing if their own addressing style or characteristics of the audience (i.e., number of vlogs watched or individual belongingness needs) can facilitate a parasocial relationship, will improve vloggers' understanding of the audience they reach and, perhaps, contribute to reaching them better.

Lastly, it is important that parents and healthcare institutions are aware of the parasocial relationships that young adults engage in, because parasocial relationships are related to social anxiety (De Bérail et al., 2019) and low self-esteem (Hwang & Zhang, 2018). Especially in the case of young adults that are known to learn from observing others online (Miller & Morris, 2016), a solid understanding of the psychological processes that underlie media behavior provides insights when, for instance, vlog watching becomes excessive.

In sum, the aim of the current study is to investigate antecedents of the parasocial relationship between the viewer and the vlogger with the following research question:

*RQ: How do multiple exposures and bodily addressing the audience influence the development of a parasocial relationship between a viewer and vlogger, and how is this development moderated by the need to belong?*

In the next chapter, a literature overview will be presented, from which the hypotheses will be drawn. In the Method section, a detailed description of the study design, materials and procedure will be provided. The Results section will contain the statistical analyses used and an overview of the outcomes. In the Discussion, the hypotheses and research question will be answered and reviewed in light of existing literature. Implications for research and practice will be discussed, as well as strengths, limitations and recommendations for further research.

## **Theoretical Framework**

### **YouTube, Vloggers and Influencers**

Around 2005, the launch of social networks such as MySpace and Facebook paved the way for a new revolution in the digital world: User Generated Content. User Generated

Content (UGC) refers to the various forms of media content that are publicly available and created by end-users themselves (Kaplan & Haenlein, 2010): pictures, blogs, reviews, comments, videos and more. The emphasis of UGC is on sharing: something that humans have a natural tendency for, and we have therefore practiced offline for many years (Belk, 2014). However, the Internet provides the perfect platform for sharing personal experiences across wide audiences (Belk, 2014). Vlogs on YouTube are a clear example of this sharing component of UGC, as they contain daily experiences of a vlogger's life (Kaplan & Haenlein, 2010). By self-disclosing information about their private life in this way, vloggers tend to create an atmosphere of authenticity and realism (Ferchaud et al., 2018), a feeling that is often enhanced by the use of handheld video cameras (Munnukka et al., 2019). As a result, vloggers are considered relatable (Marôpo et al., 2020), resulting in greater levels of credibility and trust in vloggers compared to traditional celebrities (Rasmussen, 2018).

Viewers themselves are also encouraged to share on YouTube, for instance by liking or commenting on the vlogs (Lin et al., 2019). This enables the audience to express opinions about the vlog, and to interact with other viewers as well as the vlogger him- or herself (Djafarova & Rushworth, 2017). Through these interactions, Zeng et al. (2017) argue, an online community is established in which the need for attachment and belongingness can be fulfilled. Moreover, many viewers watch vlogs for entertainment purposes (Lou & Kim, 2019). In fact, young adults tend to replace traditional television viewing with watching vlogs, because of the interactive possibilities that YouTube enables (Cunningham & Craig, 2017). Generation Z, the generation that was born between approximately 1997 and 2012 (Dimock, 2019), is most active in watching vlogs: in a Dutch survey, more than 90% of participants between 20 and 24 years old indicated they watched YouTube (Newcom, 2020).

Recently, however, the popularity of watching vlogs among young adults has led to concerns about covert advertising in the Netherlands (Spaaij, 2020). Because liked vloggers are often perceived as credible sources of information (Djafarova & Rushworth, 2017; Rasmussen, 2018), brands or firms have become increasingly interested in collaborations with vloggers to promote their products. Vloggers who use their following on social media for commercial purposes in this way are referred to as influencers (Abidin, 2016). As this term suggests, influencers have some sort of social influence over their audience that is comparable with the influence that opinion leaders have according to the Two Step Flow Hypothesis (Gretzel, 2018). In this classical theory by Katz (1957), opinion leaders are influential at certain times and on certain topics, because other members of their group think they are (Katz, 1957). In modern social networks such as YouTube, groups and communities around

specific topics are also likely to exist and discussing opinions within them is common practice (Sun & Bin, 2018). In such communities, influencers and vloggers can preprocess information and distribute it further among the audience (Gretzel, 2018).

Combining the Two Step Flow Hypothesis with the trust and credibility that vloggers tend to evoke (e.g., Djafarova & Rushworth, 2017; Rasmussen, 2018), content created by vloggers may be powerful not only for advertising purposes, but also in spreading thoughts and attitudes among the audience.

### **Parasocial Interaction or Relationship: The Role of Multiple Exposures**

Besides spreading thoughts and attitudes, the influence of media characters such as vloggers can also reach further. As it turns out, it is not unlikely for viewers to experience an illusion of a face-to-face interaction when they are being exposed to media characters (Horton & Wohl, 1956). After this first discovery in the 1950s, further investigation even mentioned a parasocial relationship: feelings of friendship or intimacy that a television viewer has with a remote media character (Rubin et al., 1985). The essence of this parasocial relationship lies in the viewer's experience of reciprocity, while there is none: the viewer feels as if they are friends with the media character, while the media character often does not know the viewer at all (Labrecque, 2014). Since it was first mentioned, such parasocial experiences have been studied with many types of media characters, such as actors, comedians and cartoons, all executed in the context of traditional media available at that time (e.g., television, radio).

According to the classical Hypodermic Needle Theory, communication via such traditional media was essentially a one-way process: a sender used mass media to communicate a message that the passive audience would receive, and most importantly, accept without questioning whether it was true (Croteau & Hoynes, 2013). However, the Internet changed the media landscape significantly as social networking sites emerged (Kaplan & Haenlein, 2010). These new social media platforms such as Facebook and YouTube are inherently about social interaction (Tuten & Salomon, 2017). Interactivity on these platforms has made communication far from one-sided and has allowed users or viewers to be an active participator in media (Chen, 2014). The shift from passive to active media behavior on the viewer's side thus likely intensifies parasocial relationships, now that viewers are not merely exposed to a media character but are also able to interact with them through comments or likes. Indeed, there is some evidence that parasocial feelings occurred more in social media than in traditional media such as radio or television (e.g., Frederick et al., 2012; Frederick et al., 2014).

As the media landscape changed rapidly and the parasocial phenomenon was unraveled further, different ways of conceptualizing this experience also emerged. Some studies started focusing on the illusion of a real-life interaction only during the moment of exposure (e.g., Hartmann & Goldhoorn, 2011). Meanwhile, other research compared the viewer's feelings of friendship and intimacy towards the media character with other interpersonal relationships, such as with friends or family (see Giles, 2002). As a result, Dibble et al. (2016) call for a distinction between parasocial *interactions* and parasocial *relationships*. They argue that although the terms are often used interchangeably, scholars must distinguish between short- and long-term experiences. Firstly, a parasocial interaction is restricted to the event: it illustrates how during a certain exposure to a media character, the illusion of an intimate and reciprocal social interaction takes place, even though the viewer knows this is not the case (Dibble et al., 2016).

On the other hand, a parasocial relationship extends beyond this sole momentary event and develops after multiple encounters (Dibble et al., 2016). Indeed, results from a YouTube study by Kurtin et al. (2018) suggested that there was a sequence of encounters necessary before viewers experienced an actual relationship with the vlogger. Such repeated or ongoing exposure over a period of time is very common on social media, for example when viewers watch vlogs from a particular vlogger on YouTube, but also follow this vlogger on Instagram (Dibble et al., 2016; Kurtin et al., 2018). Therefore, the development of a parasocial relationship has been compared with the development of traditional interpersonal relationships, which also strengthen over time and after multiple encounters (e.g., seeing each other multiple times). Conclusions of such comparisons often show that the attributes of a parasocial relationship are generally similar to those of other social interactions (Giles, 2002) and that viewers behave similarly to liked media characters compared to people they have 'offline' interpersonal relationships with (e.g., friends or family; Kanazawa, 2002).

Thus, interpersonal relationship development theories such as the Uncertainty Reduction Theory (Berger & Calabrese, 1975) can be helpful in explaining the development of parasocial relationships over time. According to this theory, the reduction of uncertainties about a person can lead to the development of a relationship, because relationships grow stronger and liking increases when you can predict another's behavior (Cole & Leets, 1999). As such, viewing content of a vlogger for an extended period of time may reduce any uncertainties a viewer has about this vlogger, resulting in the strengthening of a relationship that is parasocial in nature (Lockie, 2019). The reduction of uncertainty might be especially enhanced in vlogs because vloggers tend to share many personal aspects of their lives,

resulting in greater feelings of authenticity and realism (Ferchaud et al., 2018), and allowing a viewer to get deeply involved in the vlogger content.

Combining these insights, a parasocial relationship is defined as a long-term and usually positive one-sided relationship that a viewer can develop towards a media character and that strengthens after multiple encounters (Dibble et al., 2016). Therefore, when a viewer is repeatedly exposed to a vlogger, the long-term social investment towards the vlogger is likely to become stronger. The first hypothesis is as follows:

*H1: The strength of the parasocial relationship between the viewer and the vlogger increases after multiple exposures.*

### **Addressing Style and the Parasocial Relationship**

It is important to note that parasocial relationships can be activated through certain cues in the media character and the content. This was already established in the very first investigations into the phenomenon: Horton and Wohl (1956) noted that a parasocial experience can be triggered by cues in the behavior of the character, for instance when they acknowledge the presence of the audience. By doing this, the interaction with the media character will resemble the informal, face-to-face interactions the audience usually engages in (Horton & Wohl, 1956). Besides television, acknowledging the presence of the audience has also been shown to enhance parasocial engagement in an online setting, for instance on branded websites (Labrecque, 2014).

In television or video content, the presence of the viewers can be acknowledged through the addressing style of the media character (Cummins & Cui, 2014; Hartmann & Goldhoorn, 2011). For instance, when a media character bodily addresses the audience, he or she directs their physical orientation towards the viewer. This is often enacted by adjusting the head and eyes toward the viewer (Malandro et al., 1989), thus looking straight into the camera (Hartmann & Goldhoorn, 2011). More specifically, Cummins and Cui (2014) argue that viewers feel bodily addressed by the media character when they both see and hear the character speak to them at the same time. For instance, in the YouTube context, this means that vloggers can bodily address their viewers by looking into the camera while vlogging.

According to Horton and Wohl (1956), bodily address is a key factor in activating parasocial feelings, because the sense of having an actual conversation is strongest when the media character bodily addresses the viewer. An explanation for this lies in the importance of gaze in interpersonal relationships: eye-contact is an essential factor, for instance in first impressions (Scherer, 1974) and friendship formation (e.g., Coutts & Schneider, 1976; Russo,

1975). Bodily address and gaze have thus received some interest in the field of parasocial phenomena research, mainly in the television context. In a study on TV clips in which the performer either looked straight into the camera or was portrayed from the side, Hartmann and Goldhoorn (2011) found that a viewer's parasocial experience was significantly more intense if bodily addressed by the media character. The same pattern of results emerged in a different experiment, using reality television programs with different addressing styles. Being bodily addressed by the TV character led to stronger parasocial experiences than being only verbally addressed or not addressed at all (Cummins & Cui, 2014).

However, these studies are strongly focused on the experience of a parasocial interaction at a given moment and do not consider the parasocial relationship. In fact, it would be valuable to know if addressing style not only influences the parasocial interaction at a given moment, but also the more long-term oriented parasocial relationship. For instance, in a study that did not focus specifically on measuring parasocial relationships but rather on parasocial attributes, it was found that when YouTubers looked straight into the camera, this was positively associated with feelings of authenticity (Ferchaud et al., 2018). It is precisely these feelings of authenticity that might specifically enhance the parasocial relationship as a long-term phenomenon as well. Authenticity plays an important role in considering how accessible the media character is: the more authentic, the more relatable (Lockie, 2019; Marôpo et al., 2020) and thus, as Chen (2014) suggests, the more likely to be the subject of a parasocial relationship for their viewers.

Although the general idea of vlogs is to make personal video content, there are different ways to do so, resulting in different addressing styles in vlogs as well. For instance, in the genre of gaming vlogs, the vlogger is often not visible: he or she is sharing the screen on which the game is taking place, while commenting on how the game is played in a voice-over (Mickles & Weare, 2020). Other vlogging styles do include the vlogger, for instance when they record what happens during their daily events, or are even fully in narrative style, for instance when vloggers review a product in front of a video camera (Aran et al., 2014). To summarize, different addressing styles (e.g., bodily or not) elicit different amounts of parasocial interaction in a television context (Cummins & Cui, 2014; Hartmann & Goldhoorn, 2011) and vloggers tend to generate feelings of authenticity when showing their face, a factor that is crucial in specifically the parasocial relationship (Ferchaud et al., 2018). Thus, regardless of the number of exposures, bodily address by a vlogger will most likely increase the parasocial relationship strength with that vlogger. This leads to the following hypothesis:

*H2: Watching a vlogger who bodily addresses the viewer will result in a stronger parasocial relationship compared to watching a vlogger who does not bodily address the viewer.*

### **Addressing Style and Multiple Exposures to a Vlogger**

The previous hypothesis states that being bodily addressed by the vlogger will result in a stronger parasocial relationship regardless of the numbers of exposures to this vlogger, simply because this addressing style will increase authenticity, accessibility and relatability which facilitate the relationship (Lockie, 2019). However, there might also be an interaction between being repeatedly exposed to a vlogger and the addressing style of this vlogger. Based on the literature presented above, it is plausible that although the parasocial relationship naturally strengthens after multiple exposures to a vlogger and bodily address by this vlogger will result in a stronger parasocial relationship, combining these separate effects might lead to an even stronger parasocial relationship. Following this reasoning, viewers who are repeatedly exposed to vlogs that facilitate the parasocial relationship (i.e., vlogs in which they are bodily addressed) will develop an even stronger parasocial relationship over time compared to viewers who are repeatedly exposed to vlogs that do not specifically facilitate this relationship (i.e., vlogs in which they are not bodily addressed). Indeed, Auter (1992) pointed out that a parasocial relationship is more likely to develop after experiencing multiple encounters that are parasocial in nature. Since being bodily addressed fosters the experience of such parasocial encounters (Cummins & Cui, 2014; Hartmann & Goldhoorn, 2011), this leads to the following interaction hypothesis:

*H3: Viewers who are bodily addressed by the vlogger will have a stronger parasocial relationship with that vlogger after multiple exposures, compared to viewers who are not bodily addressed by the vlogger.*

### **Individual Differences in the Need to Belong**

Besides vlog aspects that enhance the parasocial relationship strength, there might also be individual viewer characteristics at play. For instance, individuals who are socially anxious or have low self-esteem may be more likely to engage in a parasocial relationship (e.g., De Bérail et al., 2019; Hwang & Zhang, 2018). In fact, Horton and Wohl (1956) already described how individuals who are less equipped with social capacities are able to get a glimpse of what sociability is like through having a parasocial experience with their favorite media character. However, in a recent meta-analysis by Tukachinsky et al. (2020), no links between social deficiencies and the parasocial relationship were found, suggesting that those

who have issues with interpersonal relationships also struggle with developing parasocial relationships. If so, then it is not the individual who lacks social skills that will engage in stronger parasocial relationships, but precisely the one that is socially skilled, because this individual can extend his or her social capacities to online interaction (Hartmann, 2016).

Perhaps fulfilling a ‘need to belong’ is the missing link in explaining contradicting viewpoints on individual differences in parasocial relationship strength. According to the Belongingness Hypothesis (Baumeister & Leary, 1995), “humans have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive and significant interpersonal relationships.” (p. 497) To do so, people will try to satisfy two criteria: firstly, interactions must be frequent and affectively pleasant, and secondly, they must take place in a stable context of concern for each other’s welfare (Baumeister & Leary, 1995).

According to Baumeister and Leary (1995), the need to belong is universal: they argue that although individual differences are likely to exist, the need to belong can be observed, to some degree, in all humans and in all cultures. This stems from an evolutionary basis, as forming groups has advantages for surviving and reproducing: in a group, food can be shared and mating partners can be found (e.g., Moreland, 1987). In this sense, the need to belong is a characteristic that every human possesses, since all individuals long to be socially accepted to some degree (Baumeister & Leary, 1995). Moreover, according to Leary et al. (2013), experiencing a high need to belong is conceptually different from feeling unaccepted, unsupported or lonely. Thus, trait differences in the need to belong do not necessarily stem from having insufficient relationships (Leary et al., 2013), making the need to belong a concept that is neither good nor bad. That being said, people with high belongingness needs typically have more relationships and value the opinions of others more (Leary et al., 2013).

Combining these insights, this means that whether engaging in a parasocial relationship is a compensation for a lack of social connection in real life (e.g., De Bérail et al., 2019; Hwang & Zhang, 2018) or an extension of interpersonal relationships (Tukachinsky et al., 2020) is not the most important issue: both paradigms suggest that the higher belongingness needs are, the stronger a parasocial relationship can be – whether that is to compensate or to complement. As Greenwood and Long (2011) suggest, the need to belong does indeed determine the intensity of social connection a person pursues, and media characters are seen as a suitable source to satisfy these needs. In a study on favorite TV characters, Greenwood and Long (2009) also found that a high need to belong leads to a greater likeliness to engage in a parasocial relationship, a finding that was replicated in a more recent TV study by Rosaen and Dibble (2016).

Because individuals have been shown to fulfill belongingness needs through social media interaction (e.g., Aw & Labrecque, 2020; Gangadharbatla, 2008; Zeng et al., 2017), individual differences in the need to belong might also affect how strongly the parasocial relationship develops after multiple encounters with a vlogger. Indeed, Aw and Labrecque (2020) concluded that the amount of interaction on social media can play a crucial role in establishing parasocial relationships with celebrities, but that this effect is even larger for individuals with a high need to belong. However, the role of belongingness needs in parasocial relationships with vloggers have not been specifically examined yet. Still, similar to Aw and Labrecque (2020), it is expected that high belongingness needs will strengthen the parasocial relationship development with a vlogger, leading to the following hypothesis:

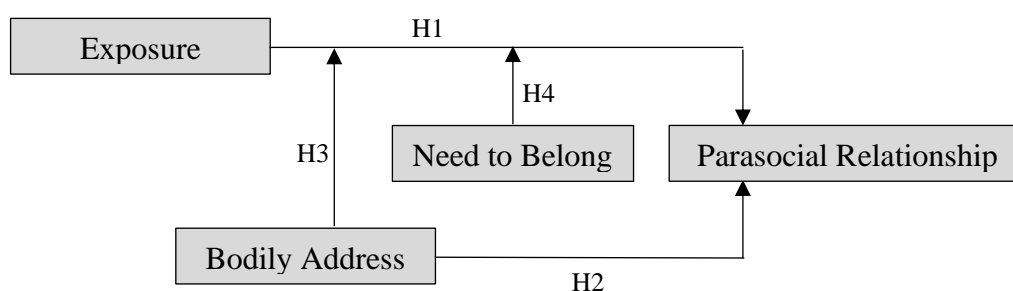
*H4: The parasocial relationship strength after multiple exposures is moderated by the need to belong, such that viewers with higher levels of the need to belong will have a stronger parasocial relationship with the vlogger after multiple exposures, compared to viewers with lower levels of the need to belong.*

### The Present Study

In this experiment, viewers will be exposed to an unknown vlogger at a certain time, and again after a week, to test the hypothesis that multiple exposures to a vlogger will result in a stronger parasocial relationship on the viewer's behalf. Additionally, half of the viewers will be bodily addressed by the vlogger and the other half will not, to assess if this addressing style strengthens the parasocial relationship. Lastly, the expectation that belongingness needs can strengthen the parasocial relationship development will be tested as well. Based on the literature reviewed in the previous section, the relevant concepts and the expected relationships between them are visualized in a conceptual framework (see Figure 1).

**Figure 1**

*Conceptual framework*



## Method

Via Qualtrics, an online experiment was executed that consisted of two timepoints with one week in between. This setup was chosen to resemble a natural setting as much as possible, since many vloggers publish their vlogs once a week (Himma-Kadakas et al., 2018). Moreover, watching the vlogs for this experiment on your own device resembles the situation in which an individual would normally watch a vlog. Lastly, adopting a longitudinal design was necessary to focus on a more long-term parasocial *relationship*, instead of a parasocial *interaction* experienced at a certain time.

The SONA environment was used to recruit participants from the participant pool of Tilburg University, because young adults in this age group are known for their frequent YouTube use (Newcom, 2020). Participants received credits for participation. Only Dutch speaking students could participate. Ethical approval was given by the Research Ethics and Data Management Committee of Tilburg School of Humanities and Digital Sciences, Tilburg University. All participants gave informed consent.

## Design

The longitudinal experiment had a 2 (exposure to the vlogger: after first vlog and after second vlog) x 2 (bodily address: yes or no) design. Exposure to the vlogger served as a within-factor and bodily address served as a between-factor.

## Participants

One hundred and thirty participants signed up for the study, but eight participants did not complete both surveys. In total, 28 men (23%) and 94 women (77%) participated in this study ( $N = 122$ ). The participants were between 17 and 29 years old ( $M_{age} = 21.51$ ,  $SD_{age} = 2.38$ ) and can roughly be categorized as Generation Z (Dimock, 2019). Indeed, the largest proportion of the sample used YouTube every day (34.4%) and many of them also indicated they watch vlogs regularly (see Table 1 for an overview of YouTube use and vlog watching among participants).

**Table 1**

*Percentage and number of participants that uses YouTube and watches vlogs*

	<b>Using YouTube</b>	<b>Watching vlogs</b>
Never	0.8% ( $n = 1$ )	26.2% ( $n = 32$ )
Less than once a month	4.1% ( $n = 5$ )	15.6% ( $n = 19$ )
Once a month	4.9% ( $n = 5$ )	13.1% ( $n = 16$ )
Once a week	12.3% ( $n = 15$ )	18% ( $n = 22$ )
2-6 times a week	27% ( $n = 33$ )	15.6% ( $n = 19$ )
Once a day	16.4% ( $n = 20$ )	4.1% ( $n = 5$ )
More than once a day	34.4% ( $n = 42$ )	7.4% ( $n = 9$ )

## **Materials**

### ***Stimuli***

Based on real-life examples of vloggers, four vlogs were created by the researcher: two for the first timepoint (bodily address: yes or no) and two for the second timepoint (bodily address: yes or no). The Dutch scripts in Appendix A were created to ensure that the vlogs are identical in audio and story line but only differing in addressing style (see Appendix B for English translations). Table 2 summarizes the characteristics of the four vlogs that were created.

**Table 2**

*Category, duration and theme of the four vlogs used in this experiment*

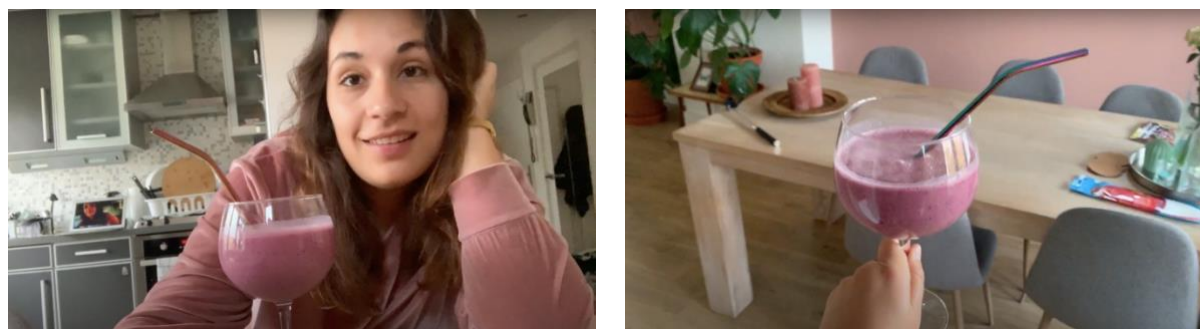
<b>Timepoint</b>	<b>Bodily address</b>	<b>Duration</b>	<b>Theme</b>
First	Yes	4:06 minutes	‘Introduction vlog’
First	No	4:03 minutes	‘Introduction vlog’
Second	Yes	4:42 minutes	‘Food diary vlog’
Second	No	4:38 minutes	‘Food diary vlog’

In the Introduction vlogs, shown at the first timepoint, the vlogger ‘Maxime’ was introduced to the viewer. She has just started vlogging about food and cooking. In the bodily address condition, Maxime held the camera in her hand and talked to the audience while showing her face. In the no bodily address condition, this same audio of Maxime talking was

used, but she was not shown talking to her viewers. Instead, while the viewers heard Maxime's voice speak, clips of what she was talking about were shown (e.g., how she is working on her laptop or showing her apartment). In the Food diary vlogs, shown at the second timepoint, Maxime showed her viewers what she eats during the day. In the bodily address condition, Maxime directed the camera at her face while she showed what she was eating or drinking. In the no bodily address condition, the same audio of Maxime talking was used, but her face did not appear talking in the vlog; she only showed what she was eating or drinking (e.g., her salad, her coffee) from her perspective. Figure 2 shows an example of both addressing styles in the two vlogs. The screenshots were taken at the same moment during the Food diary vlog.

### Figure 2

*Example of bodily address (left) and no bodily address (right) in the 'Food diary' vlog*



To assess whether these four vlogs differ in the perceived amount of bodily address, the vlogs were pretested ( $N = 23$ ). Participants from the Generation Z age group were acquired via convenience sampling in the network of the researcher. They were randomly assigned to watch one of the four vlogs (bodily address introduction:  $n = 6$ ; no bodily address introduction:  $n = 5$ ; bodily address food diary:  $n = 6$ ; no bodily address food diary:  $n = 6$ ). No measurement of bodily address was readily available, but this addressing style is characterized by being able to see and hear a media character speak (Cummins & Cui, 2014). Thus, based on this conceptualization, three statements were formulated by the researcher to measure bodily address (see Table 3). Participants indicated whether they agreed with the statements on a seven-point Likert scale (1 = strongly disagree, 7 = strongly agree).

**Table 3***Statements formulated to measure the experienced bodily address*

Statement
1. While vlogging, Maxime mostly looked in my direction.
2. While vlogging, Maxime directed herself to me.
3. I could see Maxime speak during the vlog.

Principal Component Analysis revealed that all three statements had high factor loadings on the same component. The eigenvalue was 2.65 and this factor explained 88% of the variance. The three statements together also provided a highly reliable ( $\alpha = .92$ ) measurement. A scale was created by averaging the scores for these three statements.

An ANOVA with type of vlog as independent variable and the created scale for bodily address as the dependent variable was conducted to assess if the experience of bodily address differed across the four vlogs. As shown by a non-significant Levene's Test, variances were equal among the four groups,  $F(3,19) = 1.43, p = .266$ . The ANOVA revealed significant differences in bodily address between the four vlogs,  $F(3,22) = 44.65, p < .001$ , partial  $\eta^2 = .876$ . Results of the Bonferroni post-hoc tests are summarized in Table 4. In conclusion, for both the introduction vlog and the food diary vlog, participants who watched a vlogger that bodily addressed them felt more bodily addressed than participants who watched a vlogger that did not bodily address them. Thus, the vlogs differ in bodily address as intended.

**Table 4***Pretest results for the difference in bodily address*

Vlog theme	Bodily address	<i>M (SD)</i>	<i>p</i>
Introduction vlog	Yes	6.63 (0.18)	
	No	2.60 (1.40)	
	Difference	4.23 (0.54)	<.001
Food diary vlog	Yes	6.78 (0.17)	
	No	2.44 (1.17)	
	Difference	4.33 (0.51)	<.001

### ***Parasocial Interaction-scale***

After watching a vlog, participants filled in the Parasocial Interaction-scale (Rubin & Perse, 1987) to assess parasocial relationship strength. Although the name of this scale refers to an *interaction* instead of a *relationship*, which might be confusing, this scale is nevertheless the most popular and accurate instrument to measure the parasocial relationship understood as a long-term social involvement (Dibble et al., 2016). The current study used a version adapted for YouTube and vloggers (De Bérail et al., 2019), translated in Dutch by the researcher. One question was altered to fit the current experimental situation better ('I miss this vlogger when she is ill or on vacation' changed into 'I would miss this vlogger when she is ill or on vacation'). The PSI-scale consisted of ten items (e.g., 'This vlogger seems to understand the things I want to know') on a seven-point Likert-scale (1 = strongly disagree, 7 = strongly agree). The participants filled in the PSI-scale twice. At the first timepoint, they answered the ten questions directly after watching the first vlog. This PSI-scale was found to be highly reliable ( $\alpha = .82$ ). At the second timepoint a week later, participants filled in the ten-item PSI-scale again after watching the second vlog. This PSI-scale was also found to be highly reliable ( $\alpha = .85$ ). Means and standard deviations of both PSI-scales are displayed in Table 5.

### ***Need to Belong-scale***

Only at the first timepoint, participants filled in the Need to Belong-scale (Leary et al., 2013), which was translated in Dutch by the researcher. The Need to Belong-scale consisted of ten items (e.g., 'I want other people to accept me') and the answers were provided on a seven-point Likert-scale (1 = strongly disagree, 7 = strongly agree). Three items were negatively formulated and were therefore reverse coded. The Need to Belong-scale was found to be reliable ( $\alpha = .75$ ) and could not be substantially improved by deleting items.

Means and standard deviations of the Need to Belong-scale are displayed in Table 5.

**Table 5**

*Means and Standard Deviations of the created scales*

<b>Scale</b>	<b><i>M</i></b>	<b><i>SD</i></b>
PSI-scale (after watching first vlog)	3.51	0.91
PSI-scale (after watching second vlog)	3.27	0.97
Need to Belong	4.39	0.80

### ***Demographic Questions***

Participants' age, gender and student numbers were asked after watching the first vlog. To check for familiarity with YouTube and vlog watching, participants were also asked how often they used YouTube and how often they watched vlogs. For both questions, they could answer one of the following: 'Never', 'Less than once a month', 'Once a month', 'Once a week', '2-6 times a week', 'Once a day' or 'More than once a day'.

### ***Codeword***

At the end of the first timepoint, all participants were provided with a codeword that represented the condition they were assigned to. This was done to ensure that participants who watched Maxime bodily address them during the first timepoint, also watched Maxime bodily address them during the second timepoint, and vice versa. The codeword was generated through Qualtrics Embedded Data. Participants were asked to write down the codeword they received (either 'vincent' or 'rembrandt' – two first names of famous Dutch painters, to hopefully make the codewords easier to remember). They were also informed that they needed this codeword to participate in the second part of the study. If they did not fill in a correct codeword at the second timepoint, they were allowed to try again once. If the second chance was also not a match, they were requested to contact the researcher.

### ***Manipulation Check***

At the second timepoint, the manipulation of bodily address was checked by asking the participants how they experienced the physical orientation of the vlogger. They were requested to think back to both vlogs of Maxime and asked whether they could see her face while she was talking. Answers could be 'Yes', 'No' or 'I do not remember'.

The complete questionnaire for the first timepoint can be found in Appendix C, and the complete questionnaire for the second timepoint can be found in Appendix D.

### ***Procedure***

At the first timepoint, participants accessed the first survey through the Qualtrics link in SONA. First, they read the information letter in which they were informed about the procedures. After that, they were asked to agree to the informed consent. Through Qualtrics, they were randomly assigned to one of two conditions (bodily addressed or not) and were asked to watch the corresponding introduction vlog by Maxime. They could not proceed to the questionnaire until they had watched the complete vlog. Then, they filled in the first

questionnaire and were provided with the codeword. Submitting the survey concluded the first part of the study.

Seven days later, the participants were invited via e-mail to access the second survey, which was available to them for 24 hours. First, they were asked to provide the codeword they were assigned in the first survey. After filling in the codeword, Qualtrics assigned the participants to the same addressing style condition again. Then, participants watched the corresponding food diary vlog, again only able to proceed to the questionnaire after watching the complete vlog. Then, the participants filled in the second questionnaire. Lastly, participants were debriefed with an explanation of the purpose of the study and the manipulations. The study was then completed, and participants were redirected to the SONA website, where they received their credit.

### **Analysis Plan**

To investigate H1, H2 and H3, a mixed ANOVA will be conducted with exposure to the vlogger (after first vlog and after second vlog) as within-factor and bodily address (yes or no) as between-factor. Moreover, to assess the moderating effect of the need to belong, the MEMORE macro for SPSS will be used to perform a moderation analysis in a Repeated Measures design and answer H4.

## **Results**

### **Preprocessing Data**

To combine data from both surveys, all raw data was pasted into one Excel-file. Using vertical search, data from the second survey were linked to data from the first survey based on the student numbers. After this procedure, the complete datafile was imported into SPSS and the student numbers were deleted. Responses with missing data were located and deleted.

Statement 1, 3 and 7 of the Need to Belong-scale were reverse coded, since these were negatively formulated. Three reliability analyses were conducted with the separate statements for the two Parasocial Interaction-scales and the separate statements for the Need to Belong-scale. Then, these three scales were created by averaging the scores for the separate items. Lastly, in this experiment, participants who were assigned the codeword 'rembrandt' were bodily addressed, and participants who were assigned the codeword 'vincent' were not. For analysis purposes, this information was used to compute a variable that represented addressing style (1 = bodily address, 2 = no bodily address).

## **Manipulation Check**

To assess whether the manipulation of bodily address was experienced as intended, a Pearson Chi-Square test of Association was conducted with bodily address (yes or no) and the manipulation check, which asked whether participants could see Maxime speak (yes, no, or do not remember). The Chi-square test showed a significant association between the addressing style in the vlog and whether the participant felt like they were bodily addressed,  $\chi^2(2) = 112.25, p < .001$ . This means that in the vlogs in which Maxime bodily addressed the viewer, participants also experienced this as such.

## **The Effects of Exposure and Bodily Address on Parasocial Relationship Strength**

### *Checking Assumptions*

With approximately 30 participants per group, the group sizes in this experiment follow the widely accepted sample size of 30 per group (Field, 2018, p. 235), which increases the likelihood of normal sampling distributions. Still, some additional checks were performed. Starting with exposure, a variable was created that represented the difference in parasocial relationship between the first exposure and the second exposure ('Difference'). A significant Kolmogorov-Smirnov test indicated that this difference score does not follow a normal distribution,  $D(122) = 0.09, p = 0.030$ . However, the histograms and QQ-plots indicated only a slight deviation from normality. Since bootstrapping is not available in SPSS for a Repeated Measures design, the researcher decided to continue with a mixed ANOVA and interpret the results with some caution.

With regard to bodily address, Kolmogorov-Smirnov tests failed to reach statistical significance for each condition ( $p > .082$ ), indicating a normal sampling distribution for this variable. The QQ-plots and histograms also showed that the scores resemble normality. Levene's test per condition was not significant (based on medians,  $p > .437$  for all conditions), meaning that for bodily address, homogeneity of variance can be assumed.

### *Performing the Mixed ANOVA*

To answer the first three hypotheses, a mixed ANOVA was performed with exposure to the vlogger (after first vlog and after second vlog) as within-subjects factor, bodily address (yes or no) as between-subjects factor and the parasocial relationship strength as dependent variable. Means and standard deviations are displayed in Table 6. The strongest parasocial relationship was found after the first exposure with bodily address ( $M = 3.60, SD = 0.93$ ),

while the weakest parasocial relationship was found after the second exposure without bodily address ( $M = 3.23$ ,  $SD = 0.96$ ).

**Table 6**

*Descriptive statistics of parasocial relationship strength per experimental condition*

<b>Exposure</b>	<b>Bodily address</b>	<b>Mean</b>	<b>Standard Deviation</b>
After watching first vlog	Yes	3.60	0.93
	No	3.42	0.88
	Total	3.51	0.91
After watching second vlog	Yes	3.31	0.99
	No	3.23	0.96
	Total	3.27	0.97

A significant main effect of exposure to the vlogger on the parasocial relationship strength was found,  $F(1, 120) = 10.38$ ,  $p = .002$ , partial  $\eta^2 = .080$ . Surprisingly, after the second exposure to the vlogger, the participants scored significantly lower on parasocial relationship strength ( $M = 3.27$ ,  $SD = 0.97$ ) than they did after the first exposure to the vlogger ( $M = 3.51$ ,  $SD = 0.91$ ). These results do not support H1, but rather indicate the exact opposite of the expectations.

Moreover, there was no significant main effect of bodily address on the parasocial relationship strength,  $F(1, 120) = 0.73$ ,  $p = .396$ . This indicates that regardless of the number of exposures, participants who were bodily addressed by the vlogger did not experience a stronger parasocial relationship ( $M = 3.46$ ,  $SE = 0.11$ ) than participants who were not bodily addressed ( $M = 3.33$ ,  $SE = 0.11$ ), rejecting H2. There was also no significant interaction effect of bodily address and exposure to the vlogger,  $F(1, 120) = 0.49$ ,  $p = .486$ . Thus, the weakening of the parasocial relationship after two exposures did not differ significantly for viewers who were bodily addressed and viewers who were not bodily addressed. These results do not support H3.

## **Moderation of the Need to Belong on Parasocial Relationship Development**

### *Checking Assumptions*

To test the moderation of the need to belong on the development of the parasocial relationship over two exposures to the vlogger, a moderation analysis was conducted using

the MEMORE SPSS macro developed by Amanda Montoya (Montoya, 2019). This macro allows to perform moderation analyses in Repeated Measures designs such as the current study. Since the moderation analysis is a regression-based analysis (Montoya, 2019), the same assumptions for regression were checked: normal distribution of the residuals, heteroscedasticity, independence of errors, multicollinearity, and the absence of outliers and influential cases. These were checked in a regression analysis with the need to belong as the independent variable and the difference in parasocial relationship between the first exposure and the second exposure ('Difference') as the dependent variable, because the MEMORE macro tests the moderation with these variables as well.

To check for normality of the residuals and heteroscedasticity, several plots of the residuals were visually inspected: the histogram and the P-P Plot. The histogram resembled a normal distribution of residuals and the dots in the P-P Plot were close enough to the diagonal to assume heteroscedasticity. The data also met the assumption of independence of errors (Durbin-Watson value = 2.20). Moreover, Casewise Diagnostics revealed 7 out of 122 cases with standard residuals greater than 2, indicating no concern for outliers. The critical value for Mahalanobis Distance for this analysis is 3.84 (see Field, 2018, p. 1005). There were only four possible influential cases that exceeded this critical value. However, for all four cases, Cook's Distance was below one, indicating no substantial concern for influential cases.

Since there was only one predictor, the assumption of multicollinearity was not applicable. The results for assumption checks are summarized in Table 7. From these results, it can be concluded that the assumptions for the moderation analysis were met.

**Table 7**

*Assumptions checked for moderation analysis*

<b>Assumption</b>	<b>How is it checked?</b>	<b>Guideline</b>	<b>Result</b>
Normality of residuals	Inspect histogram	Normal distribution	Yes
Heteroscedasticity	Inspect PP-plot	Dots close to diagonal	Yes
Independence of errors	Durbin-Watson	Close to two	2.20
Outliers	Check residuals	Inspect residuals > 2	7 out of 122
Influential cases	Mahalanobis Distance	Critical value = 3.84	4 out of 122
	Cook's Distance	< 1	0 out of 122

### ***Performing the MEMORE Moderation Analysis***

After checking assumptions, a Model 2 analysis (linear moderation) was conducted with MEMORE, using the parasocial relationship scores of the two different exposures as dependent variables and the need to belong as the moderator variable. The model was not significant,  $F(1, 120) = 0.40, p = .526$ .

There was no significant moderation effect of the need to belong on the development of a parasocial relationship after two exposures to the vlogger,  $b = 0.06, SE = 0.09, p = .526$ . In other words, this indicates that the difference in strength of the parasocial relationship between the two exposures to the vlogger was not dependent on the need to belong. The absence of a moderating effect of the need to belong is also reflected in the conditional effects: after the first exposure to the vlogger, the effect of the need to belong on the parasocial relationship strength is not significant,  $b = 0.04, SE = 0.10, p = .733$ . The same holds for the second exposure to the vlogger: there was no significant effect of the need to belong,  $b = -0.02, SE = 0.11, p = .833$ . In sum, these results indicate that in this experiment, the need to belong does not play a role in the development of a parasocial relationship after two exposures to the vlogger, rejecting H4.

## **Discussion**

The aim of the current study was to identify antecedents of a parasocial relationship between a viewer and a vlogger by applying classical theories on this relationship, mostly based on research on television performers, to the modern context of vlogging. Addressing style was manipulated in self-created vlogs, and participants were exposed to either a bodily addressing or a non-bodily addressing vlogger at two timepoints with one week in between. Through this longitudinal approach, the aim was to distinguish between parasocial *interactions* and parasocial *relationships*, as called for by Dibble et al. (2016). Lastly, the moderating role of an individual characteristic, namely the need to belong, was examined. One hundred and twenty-two participants took part in a 2 (exposure to the vlogger: after first vlog and after second vlog) x 2 (bodily address: yes or no) experiment. Participants were randomly assigned to one of the two addressing style conditions. Afterwards, a mixed ANOVA and a MEMORE moderation analysis were performed to answer the hypotheses.

The first hypothesis stated that the strength of the parasocial relationship between the viewer and the vlogger would increase after multiple exposures to this vlogger. Surprisingly, the results for the first hypothesis indicated that the parasocial relationship did not grow stronger after the second exposure to the vlogger but, in fact, grew weaker. This is

unexpected, since prior research indicated that the parasocial relationship strengthens after multiple encounters with a media character (e.g., Auter, 1992; Dibble et al., 2016; Kurtin et al., 2018). Perhaps, in this experiment, only two exposures to an unknown vlogger were not enough for the positive feelings of friendship or intimacy to grow stronger, thus explaining a decrease rather than an increase in parasocial relationship strength in this experiment. More specifically, many of the studies reviewed in the theoretical framework have used known or famous vloggers to study the parasocial relationships (e.g., Hu et al., 2020; Ferchaud et al., 2018), about whom participants already have knowledge, attitudes and opinions. These attitudes and opinions tend to be positive, as it is common practice in parasocial relationship research to instruct participants to think of their favorite YouTuber or influencer during participation (De Bérail et al., 2019; Ye et al., 2020). In contrast, when presented with a completely new vlogger as in this study, no such prior knowledge exists. This makes the experiment interesting on the one hand, because it allows to investigate closely how a possible new parasocial relationship develops, but challenging on the other hand, since the process of development is likely to stretch further than the two exposures used in this study.

Moreover, many other factors can play a role in these early stages of parasocial relationship development. One of these is, for instance, the perceived similarity between the viewer and the vlogger. Research has shown that the extent to which a viewer perceives the vlogger to be similar to him- or herself positively influences the likelihood of a parasocial relationship (Lou & Kim, 2019). This similarity can refer to demographic characteristics such as gender, age or name (Fu et al., 2018), but it can also reflect similar personalities (Ye et al., 2020), similar opinions (i.e., attitude homophily; Lee & Watkins, 2016) and corresponding values (i.e., value congruence; Ye et al., 2020). Since the vlog topic in this experiment was somewhat specific (i.e., food), it is possible that participants were not interested in this topic and therefore did not perceive a similarity of interests between themselves and the vlogger. As a result, seeing a second vlog of a topic they were not interested in might have caused irritation or disinterest, resulting in a parasocial relationship that is weaker rather than stronger after the second exposure to the vlogger. Unfortunately, perceived similarity was not taken into account in the current study, but future work should consider preventing a possible mismatch between interests of vloggers and viewers.

With regard to the second and third hypothesis, there were no direct or indirect effects of bodily address on the parasocial relationship found in this experiment. Being bodily addressed by the vlogger did not result in a stronger parasocial relationship, rejecting the second hypothesis. Moreover, the effect of multiple exposures to the vlogger did not differ

significantly for participants who were bodily addressed by the vlogger and participants who were not bodily addressed. Compared to prior research, these results regarding bodily address are unexpected, but might be explained by several considerations. Firstly, some studies that found effects of bodily address on the parasocial relationship used a somewhat exaggerated manipulation of bodily address (e.g., Hartman & Goldhoorn, 2011), in which the media character was portrayed either straight from the front (bodily address) or from the side, speaking to but not looking at the viewer (no bodily address). In this setting, a positive effect of bodily address on the parasocial relationship is more likely, because the non-bodily address condition can be experienced as rather unnatural. However, generalizing this effect to more realistic settings such as the vlogs in this experiment might have been challenging. Although the pretest indicated that being bodily addressed by a vlogger resulted in participants actually feeling more bodily addressed, it is still possible that the less obvious manipulation of bodily address in this experiment – compared to the one used by Hartman and Goldhoorn (2011) – was not enough to generate differences in the parasocial relationship strength.

Secondly, the effect of bodily address was previously only investigated in the context of parasocial *interactions* (e.g., Cummins & Cui, 2014; Hartmann & Goldhoorn, 2011) and not with regard to parasocial *relationships*, as was done in the current study. The lack of effect on parasocial relationship strength might thus indicate that the impact of addressing style is restricted to parasocial interactions at the specific moment of exposure to a media character, as shown in earlier work (see Cummins & Cui, 2014; Hartmann & Goldhoorn, 2011). This would also mean that being bodily addressed may be less important, or even negligible, when a parasocial relationship is concerned. If that is the case, this further emphasizes the importance of conceptually distinguishing between parasocial relationships and parasocial interactions (Dibble et al., 2016).

The fourth hypothesis stated that viewers with higher levels of the need to belong will have a stronger parasocial relationship with the vlogger after multiple exposures, compared to viewers with lower levels of the need to belong. The results of the experiment were not in line with this expectation: the need to belong did not affect how strongly the parasocial relationship developed after two exposures to the vlogger. Again, these results were unforeseen, since previous studies by Aw and Labreque (2020) and Rosaen and Dibble (2016) indicated the positive relation between the need to belong and the parasocial relationship.

However, as mentioned earlier, previous research into the parasocial relationship has mainly instructed participants to keep their favorite celebrity or media character in mind (e.g., De Bérail et al., 2019; Hu et al., 2020; Ye et al., 2020). Research on the role of the need to

belong in the parasocial relationship often follows a similar procedure (Greenwood & Long, 2009; Greenwood & Long, 2011). When researching such existing parasocial relationships with media characters, positive effects of a high need to belong on the parasocial relationship are more likely: viewers who have high belongingness needs have indicated that they are able to fulfill some of these through watching their favorite media character (Zeng et al., 2017). However, in the current study, viewers were unknown to the vlogger and perhaps not interested in the topic, as discussed before. This means that compared to prior research, this study concerned a different phase of the parasocial relationship between the viewer and the vlogger. Because the phase of the relationship matters for the expectations and gratifications that serve this relationship (Tukachinsky & Stever, 2019), fulfilling a certain need to belong may have been irrelevant in this phase. In other words, although it was expected that viewers with high belongingness needs would experience stronger parasocial relationships, the results of this experiment suggest that without a strong parasocial relationship (i.e., a decrease after the second exposure to the vlogger), having high belongingness needs may not be relevant. The essence is in the existence of a strong parasocial relationship first – if there is none (yet), perhaps it is also unlikely that belongingness needs matter for the strength of this relationship.

Finally, as mentioned in the theoretical framework, research had previously not focused on the role of the need to belong in parasocial relationships when the media character is a vlogger. Still, studies on television performers demonstrate how the need to belong strengthens the parasocial relationship (e.g., Greenwood & Long 2011; Rosaen & Dibble, 2016). This can provide relevant insights in the parasocial relationship with vloggers as well, because many young adults watch vlogs instead of watching television (Cunningham & Craig, 2017). However, an important difference between television and social media such as YouTube is the possibility for interaction (Tuten & Solomon, 2017) and studies have shown that motivations for watching television differ substantially from motivations for watching vlogs and using social media (Whiting & Williams, 2013). Thus, although individuals are able to fulfill belongingness needs through watching television, perhaps this is not the case for vlogs, because watching vlogs serves different gratifications. For instance, Aw and Labrecque (2020) investigated the fulfillment of belongingness needs through parasocial relationships on social media, and only found effects for Facebook, Instagram and Twitter – not for YouTube, suggesting other mechanism may be at play on this specific medium. Future work must clarify the exact role of the need to belong in parasocial relationships between viewers and vloggers.

In sum, it can be concluded from this experimental study that a viewer's first steps towards a parasocial relationship with a vlogger might be more complex than initially assumed. Apparently, multiple exposures to a vlogger do not only have the potential to strengthen parasocial relationships (Kurtin et al., 2018), but might also have a negative influence on them, as the current study has proven. Bodily address appeared to play no significant role when applied to vlogs and to a more long-term parasocial *relationship* instead of a parasocial *interaction*. Lastly, having high belongingness needs did not strengthen the developing parasocial relationship with the vlogger.

### **Implications for Research and Practice**

These results have some implications for research on the parasocial relationship. Firstly, the absence of an effect of bodily address confirms that a parasocial relationship differs conceptually from a parasocial interaction (Dibble et al., 2016). The fact that a key content characteristic in initiating parasocial *interaction* (Horton & Wohl, 1956), had no effect on the parasocial *relationship*, contributes to the literature by stressing the importance of distinguishing between these concepts in further research.

Moreover, the diminishing of the parasocial relationship after two exposures indicates that watching a particular vlogger more often does not guarantee that a positive relationship will develop. However, in line with its original definition, research into the parasocial relationship mainly focuses on possible positive feelings of friendship and intimacy towards a media character (Rubin et al., 1985), which is also reflected in the scales that are used to measure the parasocial relationship strength (e.g., 'I find this vlogger attractive', 'I would like to meet this vlogger in person'). But what if the opposite happens and friendly feelings towards the vlogger diminish, or even become negative? Only a handful of studies has yet considered negative parasocial relationships (Liebers & Schramm, 2019), all suggesting that parasocial relationships can be just as powerful in a negative way as they are in a positive way (Chory, 2013; Dibble & Rosaen, 2011; Jennings & Alper, 2016). This study opens doors to dive further into this topic, perhaps also incorporating the consequences of a mismatch in values, attitudes or interests between vloggers and viewers.

With regard to practice, this study also has some interesting implications. Firstly, the vloggers themselves should keep in mind the possibility of a weakening parasocial relationship as well. Even though studies applaud the creation of bonds between the viewer and the vlogger (e.g., Lee & Watkins, 2016) and some of them provide convincing evidence of how to do so (e.g., Tukachinsky et al., 2020), the mere possibility for viewers to establish

feelings of friendship for the vlogger does not imply that a positive parasocial relationship will develop. The YouTube audience is broad and diverse, and each individual has the potential to seek out content that complies with their interests, making conscious and motivated decisions in what to watch (Lou & Kim, 2019). Therefore, vloggers must realize that forming a parasocial relationship is not a matter of days, but rather a matter of weeks or months, and that the number of exposures can determine the strength of this relationship.

Another practical implication holds for brands or firms looking to collaborate with vloggers for commercial purposes. If the vlogger chosen to endorse a brand or product fails to establish the expected parasocial relationship or even evokes negative feelings in the viewer, these negative experiences may transfer to the brand or product as well. Given that positive endorser attitudes lead to positive brand attitudes and higher purchase intentions (Torres et al., 2019), a negative endorser attitude also has the potential to decrease purchase intentions. If unfavorable parasocial relationships with the vlogger can have such hazardous effects, firms should proactively choose suitable vloggers for endorsement of their products and be warned for the role that a negative parasocial relationship can possibly play.

### **Strengths, Limitations and Future Work**

To the best of my knowledge, this study was the first to combine aspects of the parasocial relationship with belongingness needs in a vlog context. Results from this novel approach indicated that classical theories about the parasocial relationship and its antecedents are still applicable in a modern YouTube environment: the imaginary friendship, originally researched in traditional media such as television and radio, still appears today, but can apparently also take different forms (e.g., become negative).

Furthermore, the vlogs for this experiment were self-created based on addressing style literature to ensure that there was full control over the planned experimental manipulation. As shown in the pretest and the manipulation check, this resulted in a successful manipulation of bodily address. Also, by using a fictional vlogger, pre-existing attitudes and knowledge about the vlogger were impossible, leading to a more neutral starting point of the parasocial relationship strength compared to when an existing vlogger would have been used. Combining this considerate approach for stimuli creation with the longitudinal experimental methodology, in which participants were actually exposed to an unknown vlogger two times with one week in between, this offered an interesting and realistic setting for researching the impact of multiple exposures to a vlogger and bodily address on the parasocial relationship with vloggers.

Although all efforts have been made to ensure the experimental situation was as realistic as possible, some deviations from a real-life vlog watching experience have to be mentioned. Firstly, participants in this experiment were not able to like or comment on the vlog, even though such interaction is characteristic on social media and may strengthen the parasocial relationship (Frederick et al., 2012; Frederick et al., 2014). Secondly, using bodily address in a vlog may not be a ‘yes or no’ situation in real life: during a vlog, vloggers might regularly switch between bodily addressing and not bodily addressing their viewers, either within or between vlogs. Thirdly, besides addressing the audience bodily, vloggers can opt to use verbal addressing tactics in their vlogs, for instance by engaging the viewer through using personal pronouns such as ‘you’ (e.g., ‘I’m pleased to see you’re watching my new vlog’; Cummins & Cui, 2014). However, since the effect of specifically bodily address in vlogs had previously not been researched, it was deemed more important to create stimuli in which only this specific manipulation was explicit, to be able to assess its precise effect.

Moreover, although the pretest and manipulation check indicated that the vlogs differed in the amount of bodily address experienced by the participants, the vlogs might have also differed in other aspects. For instance, in the introduction vlog for the non-bodily address condition, many clips picturing Maxime’s life, family and vacations were shown that were not visible in the bodily address condition, in which Maxime simply filmed herself talking to the audience. Considering self-disclosure can be a relevant predictor for parasocial relationship development (Chung & Cho, 2017), it is possible that illustrative clips of Maxime’s life in the non-bodily address condition might have influenced the results as well. All in all, further work should not only use more natural manipulations of bodily address within and between vlogs, but also consider other vlog aspects such as the amount of self-disclosure and engagement, for a more refined understanding of how addressing style influences the parasocial relationship.

Besides that, it is important to realize that the findings of the current study only apply to the first moments of parasocial relationships with unknown or newly discovered vloggers. Some researchers suggest that individuals have different expectations and criteria for such first exposures to a media character than for exposures that happen in a later stage of the relationship (Tukachinsky & Stever, 2019). Therefore, the results presented in this study with only two exposures strictly focuses on the beginning stages of the parasocial relationship and future work with more exposures to the vlogger should reveal how this parasocial relationship can develop further. Also, as this experiment has shown, the parasocial relationship is a very

complex phenomenon, so future work on existing parasocial relationships in their original form and with existing vloggers remains very useful.

Lastly, the sample only consisted of students from the participant pool of Tilburg University, and while this was a quick and cost-effective way to conduct online studies in challenging COVID-19 times, the use of student samples might harm external validity (Mullinix et al., 2015). Moreover, out of the 122 participants, 32 indicated that they did not watch vlogs, which is unfortunately quite a large proportion of the sample. This might be problematic for the validity of the study, because these individuals may not be representative for the target population. Lastly, almost 80% of participants was female. There are some indications that gender congruence between the viewer and the vlogger has a positive influence on parasocial relationship development (Tolbert & Drogos, 2019), so a better balance between men and women would have improved the generalizability of the results. With regard to these sampling limitations, future research should focus on samples that only include regular vlog watchers to improve validity and generalizability of the results. Also, samples of non-students and establishing a better balance between male and female vlog watchers can be beneficial.

To conclude, the importance of future research on the parasocial relationship between a viewer and a vlogger cannot be stressed enough. The current study might have touched upon some interesting aspects that possibly play a role, but many questions on the development of parasocial relationships with vloggers remain unanswered. As mentioned, the influence of factors such as perceived similarity between vlogger and viewer (Lou & Kim, 2019), value congruence with the vlogger (Ye et al., 2020) and self-disclosure of the vlogger (Chung & Cho, 2017) might provide interesting new research topics that have not yet been considered in the present study. The possibilities stretch further, however: perhaps different samples, different manipulations or different experimental designs will help to further explain some of the unexpected results presented here. In addition, negative parasocial relationships that have been mainly studied in television research (e.g., Chory, 2013), can be applied to different media as well, since this study has proven that this phenomenon can also be perceived with vloggers. Either way, in a society in which social media continues to play a large role in our lives, it remains crucial to find and understand the effects that new forms of media use (e.g., vlog watching) have on relationship formation and belongingness needs.

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## Appendix

### Appendix A – Vlog Scripts in Dutch

#### *Introduction vlog (viewed at first timepoint)*

URL for bodily address version: <https://youtu.be/JscRWoUwu7g>

URL for no bodily address version: [https://youtu.be/pUFOTj\\_c15k](https://youtu.be/pUFOTj_c15k)

*[animated intro]*

Hallo allemaal, en welkom bij mijn allereerste vlog! Ik zal me eerst maar even voorstellen, dat lijkt me wel zo gezellig. Ik ben Maxime, ik ben 23 jaar en ik woon in Amsterdam Zuid met mijn tweelingzus Estelle. Ik werk nu ongeveer een jaartje als copywriter voor een marketingbureau, en dat gebeurt nu dus vanwege corona eigenlijk voornamelijk thuis. Maar daarnaast ben ik ook net begonnen aan een parttime master communicatiewetenschap aan de UvA. Best druk om dat allemaal te combineren, maar dat is dan wel weer het voordeel van zoveel mogelijk thuisblijven, want omdat alles online is, is dat eigenlijk beter te doen dan ik dacht!

Ondanks dat ik mijn handen hier op zich al vol aan heb, probeer ik naast studie en werk ook nog wel wat anders te doen met mijn leven, en dan vooral lekker met vrienden en familie borrelen of eten, gezelligheid. En verder vind ik snowboarden heel tof; ik ga meestal 2 of 3 keer per jaar naar Frankrijk of Oostenrijk om daar de half-pipe onveilig te maken – nee, okay grapje, dat durf ik helemaal niet. Je vindt me waarschijnlijk eerder op het terras, denk ik. Voordat corona uitbrak ging ik ook vaak op reis, maar helaas staat dat nu even op een laag pitje natuurlijk.

Maar wat ik vooral eigenlijk heel leuk vind is eten (haha) maar ook eten maken; koken dus! Als klein meisje stond ik altijd al in de keuken, helemaal geïnteresseerd te kijken wat voor kunstwerken mijn moeder daar tevoorschijn toverde. Nu moet ik ook wel zeggen dat het er behoorlijk met de paplepel in gegoten is – letterlijk – want mijn moeder is als echt Indonesisch vrouwtje altijd bezig met eten, het liefst voor zoveel mogelijk mensen. Bij ons thuis werd er dus altijd volop getafeld en rook het altijd naar de lekkerste dingen, en nog steeds. Nu kook ik heel vaak samen met haar, maar ook alleen vind ik het heerlijk om uren in de keuken te staan en nieuwe dingen te proberen. Aangezien ik nu niet meer thuis woon was

mijn moeder dan altijd super benieuwd wat ik heb gemaakt, en zo is het eigenlijk begonnen dat ik ging vloggen tijdens het koken. Daar kreeg ik van heel veel mensen zulke positieve reacties op dat ik dacht, why not, ik ga daar eens serieus iets mee doen.

Op dit kanaal kun je dus een heleboel food inspiration verwachten, lekkere recepten, of leuke plekjes in de stad waar je heerlijk kunt eten. En daarnaast hoop ik natuurlijk dat jullie het leuk vinden om een beetje te volgen wat er allemaal in mijn leven gebeurt! Het plan is om sowieso elke week een nieuwe video te plaatsen maar wie weet kom ik nog wel vaker iets leuks of lekkers tegen. In ieder geval bedankt voor het kijken naar deze video en zie ik je volgende week weer?

***Food diary vlog (viewed at second timepoint)***

URL for bodily address version: [https://youtu.be/Aa8U\\_Hn-CpQ](https://youtu.be/Aa8U_Hn-CpQ)

URL for no bodily address version: <https://youtu.be/g2ONMvgHwRw>

Goedemorgen, leuk dat je kijkt naar een nieuwe vlog! Vorige keer heb ik me natuurlijk al kort even kort voorgesteld, maar het leek me nóg leuker als jullie me leren kennen door te zien wat ik allemaal eet op een dag. Dus dat ga ik vandaag voor jullie filmen!

*[animated intro]*

Laten we beginnen met wat ik allemaal in de koelkast heb staan. Je weet wat ze zeggen: je kent iemand pas echt als je z'n koelkast hebt gezien! Eens zien wat er allemaal voor interessants in staat.

Nou ik ben half Indonesisch, dus ik heb altijd wel minstens een of twee potjes sambal in de koelkast staan, natuurlijk. En tja.. Wat valt er nog meer op.. Oh ja, ik drink niet zoveel zuivel, want dat vind ik niet lekker, dus ik heb eigenlijk ook altijd wel havermelk, sojamelk of amandelmelk in de koelkast. Ik drink ook altijd spa rood dus daar ligt een flinke voorraad van, een flesje of drie. En verder ben ik dol op sausjes dus superslecht maar we hebben hier echt een hele la vol met ketchup, mayo, chilisaus, echt alles wat je nodig hebt. En ja verder neem ik jullie gewoon mee door de dag, dus dan zien jullie vanzelf wel wat er allemaal in mijn koelkast ligt!

Oké, het is nu 9 uur ongeveer. Ik begin mijn dag eigenlijk altijd met een gezond ontbijtje, namelijk met een smoothie. Ik heb daarvoor gisteren al wat fruit uit de vriezer gehaald en dat in de koelkast laten ontdooien, dus dat doe ik dan in de blender. En daar doe ik dan nog wat havermout bij en wat amandelmelk. En dan blenden tot het er een beetje drinkbaar uitziet! En dan is dit het eindresultaat. Het zit in dit mooie glas omdat dat het enige glas is waar alles in past. En met een feestelijk rietje erin is het net alsof je een cocktail drinkt. Als dat geen feestje is in de ochtend!

Het is nu 11.30 en ik heb me ook even een beetje normaal aangekleed enzo. Nou ik weet niet of dit echt telt in deze vlog want het is drinken en geen eten, maar ik wou het toch even delen: ik zit aan een ijskoffie van de Starbucks. Dit is echt ineens een soort ‘guilty pleasure’ geworden van mij. Het is een caramel macchiato, maar ze hebben echt heel veel soorten smaken bij de supermarkt.

Hoi jongens daar ben ik weer. Het is nu 13.10 en het is tijd voor mijn lunch. Als lunch heb ik vandaag gekozen voor een salade. Er zit een beetje dressing op, huttekase, zongedroogde tomaat, wat zelfgemaakte croutons, daar komt binnenkort nog een receptje van trouwens, dan balsamicoazijn en tot slot een gekookt eitje. Ik kies tussen de middag heel vaak voor een salade, niet alleen omdat ik dan natuurlijk meteen wat vitamientjes binnen krijg, maar ook omdat ik een salade met veel dingetjes erin echt veel lekkerder vind dan een saaie boterham met kaas.

Het is avond, een uurtje of zes geloof ik, en normaal eet ik eigenlijk nooit zo vroeg maar ik had zo'n honger, dat ik maar gewoon ben gaan koken. Enne, oh ja een tipje van mij, ook al eet je alleen, gewoon even de tafel dekken. Is wel zo gezellig toch?

Maar goed ik heb dus een pasta gemaakt, echt een van m'n lievelingsgerechten met heel veel knoflook en peper. Heel simpel eigenlijk en zo klaar. Het is best wel pittig maar daar hou ik wel van. En vanwege de knoflook moet je niet nog willen daten hierna haha. Maar dat kan toch niet met Corona he!

Nou dat was het eigenlijk alweer jongens, mijn culinaire dagje vandaag. In de volgende video wil ik graag een receptje gaan uitproberen, dus als jullie nog een tip hebben voor iets leuks om te maken, laat het me dan vooral weten! Voor nu bedankt voor het kijken en zie ik je volgende keer weer?

## **Appendix B – Vlog Scripts Translated into English**

### ***Introduction vlog (viewed at first timepoint)***

URL for bodily address version: <https://youtu.be/JscRWoUwu7g>

URL for no bodily address version: [https://youtu.be/pUFOTj\\_c15k](https://youtu.be/pUFOTj_c15k)

*[animated intro]*

Hey everyone, and welcome to my very first vlog! I'll introduce myself first, right? I am Maxime, I am 23 years old and I live in Amsterdam Zuid with my twin sister Estelle. I've been working as a copywriter for like a year or so, and because of the coronavirus that's mainly from home now. But besides that, I also just started a parttime Master study at the University of Amsterdam. Pretty busy to combine all that, but that's also the advantage of staying home as much as possible, because everything is online and also better to combine for me.

Even though I've got my hands full on all of this, I still try to do some more in my life besides studying and working, and this is mostly with friends or family, having a nice dinner or a drink, nice and cozy. And also I really like snowboarding, I usually go to France or Austria 2 or 3 times a year to hit the halfpipe – no, just kidding, I would never dare to do that, haha. You'll probably rather find me on the sun terrace, having a drink! And further, before corona, I also liked to travel very much, I've been to Bali recently, but that's on hold now for a bit of course.

But what I especially like, and how this all started actually, is food (haha) but also making food; cooking! As a little girl, I was always watching my mom in the kitchen creating one masterpiece after the other in there. Now, I must say, cooking and food were already ingrained in my childhood very much, because my mother is like any Indonesian person always talking about food, and always cooking for preferably as many people as possible. At our house, it always smelled of the best food and we spent hours at the dinner table. Now, I still cook with her very often, but I also like to spend hours in the kitchen, trying new recipes. And since I don't live at home anymore, my mom was always super curious what I had created, so I started making little vlogs of the process and the outcome. I've shown this to

some others and they were fairly positive about the vlogs, so I thought: why not! Let's really do something with this, that can be fun.

So, on this channel you can expect a lot of food inspiration, nice recipes, or cute spots in town where you can eat or have a drink that I love to go to. And besides that, I of course hope also like to follow what's happening in my life a bit. The plan is to make a new video at least once a week, but who knows, I might run into some more nice recipes or hotspots. Anyways, thanks for watching my very first vlog, and see you next week?

***Food diary vlog (viewed at second timepoint)***

URL for bodily address version: [https://youtu.be/Aa8U\\_Hn-CpQ](https://youtu.be/Aa8U_Hn-CpQ)

URL for no bodily address version: <https://youtu.be/g2ONMvgHwRw>

Good morning, welcome to my new vlog! Last time I already introduced myself shortly, but I thought it would be even better if you could get to know me by seeing what I eat in a day. So, that's what I'll be filming for you guys today!

*[animated intro]*

Let's start with what I have in my fridge right now, because you know what they say, you only know someone when you've seen what's inside his fridge! Let's see what kind of interesting stuff is in there.

Well, I'm half Indonesian, so I always have at least one or two pots of sambal of course. This one is with tomato, I love it! And also... Let's see... Oh, yes, I don't drink dairy that much, because I don't really like it, so I always have some sort of soy milk, almond milk or oat milk in the fridge. And I love sparkling water, so I always have a stash of that, like a bottle or three. And further... I eat sauce with EVERYTHING. I'm not proud of it, but I've got a whole drawer full of ketchup, mayo, chili sauce, like, really all a person needs in his life. And yes, I'm just gonna take you through my day and you'll see what else there is!

All right, it is now around 9 o'clock. I always start my day with a healthy breakfast, namely a smoothie. For that, I already got some frozen fruit out of the freezer yesterday, so it could defrost in time, and I'll just put that in the blender. And I'll add some oatmeal and almond milk. And then blend it until it looks liquid enough to drink! This is the end result, it's in this

huge gin-tonic glass because that is the only glass it fits in all at once. And also, with the straw, it just feels like I'm drinking a cocktail. If that's not a good start of the day, then what is?!

It is now 11.30 and I've gotten dressed in the meantime. And even though I don't know whether it really counts, because it's a drink and not food, I still want to show this one. I'm drinking an ice coffee from Starbucks that has become a real guilty pleasure of mine all of a sudden. It's a caramel macchiato, but there's lots of different versions in the supermarket.

Hey guys, I'm back! It's now 13.10 and it's lunch time! Today, I chose a salad. It's got some dressing, cottage cheese, sundried tomatoes, some homemade croutons – I'll post a recipe of them soon! – balsamic vinegar and finally a boiled egg. I like to eat salads like these for lunch, not only because there's some useful vitamins in there, but also because I really like a well filled salad so much better than a boring slice of bread with cheese or something.

It's now around 6 o'clock and normally I don't eat this early, but I was soooo hungry, that I just started cooking. And, oh, my personal tip: even though you're alone, still set the table for a nice cozy vibe.

Anyways, I made pasta, really one of my favorite dishes. It's got a lot of garlic, some chili pepper and olive oil, and that's basically it. So simple but so delicious. It's kinda spicy, but I like that. I'm gonna enjoy this!

Well, that was pretty much it guys, my culinary little day. In the next video, I would like to try out a new recipe, so if you have any tips, please let me know in the comments. For now, thanks for watching and will I see you again next time?

### **Appendix C – Questionnaire for the First Timepoint**

Note: questionnaires were provided to the participants in Dutch, but for the sake of clarity, they were translated into English for this Appendix.

*Participants will first read and accept the information and the informed consent. Then they will be randomly assigned to be bodily addressed or not.*

Below, you will find the introduction vlog of the vlogger Maxime. Picture yourself coming across this vlog on YouTube. The vlog has a duration of approximately 4 minutes.

Watch the complete vlog. After approximately 4 minutes, you can continue to the next page. There, we will ask you to answer some questions.

*[participants watch vlog]*

The following questions are about the vlogger Maxime, from which you have just watched a vlog. Indicate to which extent you agree with the following statements.

*1 = completely disagree, 7 = completely agree*

1. Maxime makes me feel comfortable, as if I am with a friend
2. I see Maxime as a natural, down-to-earth person
3. I look forward to watching Maxime on her next video
4. If Maxime appeared in a video on another YouTube channel, I would watch that video.
5. Maxime seems to understand the kinds of things I want to know
6. If I saw a story about Maxime in a newspaper or magazine, I would read it
7. I would miss Maxime when she is ill or on vacation
8. I would like to meet Maxime in person
9. I feel sorry for Maxime when she makes a mistake
10. I find Maxime to be attractive

These questions are about some of your personal characteristics. Indicate to which extent you agree with the following statements. Important: there are no wrong answers. We are simply curious which answer suits you best.

*1 = completely disagree, 7 = completely agree*

1. If other people don't seem to accept me, I don't let it bother me.
2. I try hard not to do things that will make other people avoid or reject me.
3. I seldom worry about whether other people care about me.
4. I need to feel that there are people I can turn to in times of need.
5. I want other people to accept me.
6. I do not like being alone.
7. Being apart from my friends for long periods of time does not bother me.
8. I have a strong "need to belong."
9. It bothers me a great deal when I am not included in other people's plans.
10. My feelings are easily hurt when I feel that others do not accept me.

You are almost done! Finally, we would like to know some information about you.

What is your student number (SNR)?

What is your age (in years)?

What is your gender?

- Male
- Female
- Other
- I'd rather not say

How often do you use YouTube?

- Never
- Less than once a month
- Once a month
- Once a week
- 2-6 times a week
- Once a day
- More than once a day

How often do you watch vlogs?

- Never

- Less than once a month
- Once a month
- Once a week
- 2-6 times a week
- Once a day
- More than once a day

To enter part 2 of this study and receive 1 credit, you need a personal codeword. Please remember this codeword, as you will not be getting access to the second survey without it.

For a codeword, we chose the first name of a famous Dutch painter, to hopefully ease memory. Your codeword is:

*[either 'vincent' or rembrandt' – generated automatically in Qualtrics based on condition]*

Please take the time to note this codeword down or save it in your phone. As soon as you want to participate in part two, we will ask for it.

Noted your codeword? Click the arrow to save your answers and end this survey.

Next week, on the day that you are granted access to the second survey, you will receive an e-mail. From the moment you are granted access, you have 24 hours to fill it in and claim your credit.

## Appendix D – Questionnaire for the Second Timepoint

Note: questionnaires were provided to the participants in Dutch, but for the sake of clarity, they were translated into English for this Appendix.

*Participants are granted access and asked for their codeword, to make sure the conditions match. When the codeword is not found the first time, they get a second chance. If there is still no match, they are asked to contact the researcher.*

Below, you will find the second vlog of the vlogger Maxime, from who you've already watched a vlog last week. Picture yourself coming across this vlog on YouTube. The vlog has a duration of approximately 4 minutes and 30 seconds.

Watch the complete vlog. After approximately 4 minutes and 30 seconds, you can continue to the next page. There, we will ask you to answer some questions.

*[participants watch vlog]*

The following questions are about the vlogger Maxime, from which you have just watched a second vlog. Indicate to which extent you agree with the following statements.

*1 = completely disagree, 7 = completely agree*

1. Maxime makes me feel comfortable, as if I am with a friend
2. I see Maxime as a natural, down-to-earth person
3. I look forward to watching Maxime on her next video
4. If Maxime appeared in a video on another YouTube channel, I would watch that video.
5. Maxime seems to understand the kind of things I want to know
6. If I saw a story about Maxime in a newspaper or magazine, I would read it
7. I would miss Maxime when she is ill or on vacation
8. I would like to meet Maxime in person
9. I feel sorry for Maxime when she makes a mistake
10. I find Maxime to be attractive

We are curious how you have experienced Maxime's physical orientation during vlogging in both vlogs. If you think back to both vlogs of Maxime, do you feel like you could see her face while she was talking?

- Yes, I could see Maxime talk. Her face was constantly visible while she was vlogging
- No, I could not see Maxime talk. I saw what she did, but during the talking, her face was mostly not visible.
- I cannot remember.

To match your answers to the answers given in part one, we need your student number again. What is your student number (SNR)?

*At this point, participants are debriefed about the true purpose of the study and asked to not share this purpose with other possible participants. They are asked to accept the debriefing and after that, they save their answers and end the survey.*