Pictorial cues predicting dating app profile success score

A content analysis of depicted cues predicting profile success of dating profiles on the dating application Breeze

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Abstract

This study presents a content investigation on what kind of pictorial cues (i.e., appearance, personality) and number of pictures displayed on dating profiles of Breeze, could predict dating willingness, measured by profile success score. Breeze is a relatively new dating app, which distinguishes itself by automating the dating arrangement process, meaning that users cannot chat with each other. Instead, when a match is formed, Breeze will arrange a date for its users. The sample consisted of 278 dating profiles that lead to the analyses of the content of 1252 profile pictures, following a codebook. This book was coded into three main categories. First, appearance concerning facial attractiveness, physical fitness, and the presence of a smile. Secondly, personality and characteristics concerning extraversion, openness to experiences, intelligence, caring personality, and self-centeredness. Third, lifestyle in the form of making music, sportiness, vacation, bad habits, and partying. Facial attractiveness and physical fitness significantly predicted the success score of a profile. Furthermore, exploratory research showed that men and women differ regarding appearance. The presence of a smile was positively associated with willingness to date men, and physical fitness was positively related to date women. Besides, exploratory research showed that the depiction of partying cues and bad habits were associated with a higher profile success score. Overall, this study showed that users present themselves through personality cues, but this does not affect date intentions. It further suggests that dating intention is mainly based on the attractiveness of a profile owner consisting of facial attractiveness and physical fitness.

Keywords: Breeze, online dating, self-presentation, dating profile pictures, personality, attractiveness

Pictures predicting dating app profile success

With over six million downloads of dating applications per month, online dating is becoming more influential, with the industry experiencing tremendous growth and dating apps are widely downloaded and used (Finkel et al., 2012; Wiederhold, 2015; Tankovska, 2021abc). Through the popularization of online dating apps, the dating landscape has changed the way romantic partners meet. Previously, new lovers often met because of mutual friend's introductions, but nowadays, meeting each other happens more and more through online services. (Hobbs et al., 2016; Rosenfield et al., 2019). In fact, online dating applications have become *the* tool for many singles to find a new partner (Finkel et al., 2012; Gibbs et al., 2006; Rosenfield et al., 2019; Sharabi & Timmermans, 2020; Wiederhold, 2015). There are many dating apps, providing singles new and different ways to find a potential partner (Tankovska, 2021bc). However, there is also criticism on popular dating applications such as Tinder as it would cause, for instance, pessimism in finding a partner (Pronk & Denissen, 2018; Phan et al., 2021). That is why new applications like Breeze are emerging with a unique approach.

Unlike other dating applications, Breeze automates the dating arrangement process by organizing dates for its users without endlessly swiping and without the possibility to chat with each other (Breeze, 2021). Therefore, users cannot be convinced through chatting, instead, they can only use the content displayed on a profile to decide if they want to go on a date with a profile owner. This also means that people can only convince others to date them through their self-presentation on their dating profiles. Despite this difference from other dating apps, the commonality is in facilitating and easing the dating process by introducing users to each other through a profile (Hitsch et al., 2010; Ward, 2016).

As the first acquaintance on dating applications is a virtual profile, self-presentation is essential, mainly for assessing attractiveness (Hobbs et al., 2016; Rosenfield et al., 2019; Ward, 2016). Previous research (e.g., Fiore et al., 2008; Van der Zanden et al., 2021b) argues that the

profile is an essential tool for dating platform users to present themselves, where photos play a prominent role. On the side of the profile owner, users often engage in selective self-presentation, where users display certain pictures to make them look more attractive (Ellison et al., 2011; Toma & Hancock, 2010; Woptika & High, 2016). On the side of the receiver, the decision to accept a suggested profile is mainly based on the attractiveness of a profile derived from profile pictures (e.g., Fiore et al., 2008; Mcgloin & Denes, 2016; Toma & Hancock, 2010). Furthermore, because the first acquaintance is virtual, users will be very attentive to the pictures' content and overestimate what is displayed (e.g., Gibbs et al., 2006; Gibbs et al., 2010; Hancock & Dunham, 2001). As such, profile pictures play an important role in giving users the chance to show their physical appearance and, in turn, to form an impression concerning attractiveness (Fiore et al., 2008; Mcgloin & Denes, 2016).

Photos seem to contain more information compared to textual aspects of a profile, although research into the exact content of profile pictures on dating apps is limited (Degen & Kleeberg-Niepage, 2021; Fiore et al., 2008; Vranken et al., 2021). What makes profile pictures especially valuable is that people can present what they look like and give visible cues of a particular lifestyle (Degen & Kleeberg-Niepage, 2021). Previous studies have shown that picture attractiveness is crucial for accepting a profile and is mainly associated with facial attractiveness (e.g., Brand et al., 2012; Fiore et al., 2008). However, these studies also showed attractiveness is associated with other attributes. For example, for men, the attractiveness of a male profile is associated with an extroverted appearance. For women, the association is with a lower degree of egocentricity (or self-centeredness) (Fiore et al., 2008).

Remarkably, research has shown that people can assess personality traits from photographs. Besides, personality is vital to people, following evolutionary theories (e.g., Celli et al., 2014; Eftekhar et al., 2014; Liu et al., 2016). Nonetheless, the relationship between

personality displayed with photographs and the date intention is understudied (Vranken et al., 2021).

Evolutionary theories suggest that certain personality traits such as extraversion, risk-taking intelligence, and caring are more desirable for a future partner because they would indicate a better partner (Sefcek et al., 2006). In addition, previous research argued the importance of attractiveness (i.e., Fiore et al., 2008; Van der Zanden et al., 2021b) and interfered personality from profile texts could make a profile more or less attractive (i.e., Wada et al., 2017; Van der Zanden et al., 2019). However, research is scarce about the effect of showing personality on profile pictures in the context of online dating and the effect of date intentions (Vranken et al., 2021).

Based on how Breeze distinguishes itself, it is possible to investigate the relationship between the cues displayed on the profile pictures and date intention as there is no chat interference. It is expected that cues regarding attractiveness and personality depicted on a profile could predict date intention. Also, it is expected that users present these qualities through their profiles. Therefore, this thesis will investigate the effect of the content of profile pictures on attractiveness and personality traits displayed in pictures on intention to date someone. A content analysis of dating profiles of the app Breeze will be conducted to answer the following research questions: **RQ1:** What kind of cues are depicted on profile pictures of Breeze? And **RQ2:** To what extent do these content cues in dating profile pictures predict willingness to go on a date?

Theoretical framework

Online dating apps

Dating applications are based on the affordances of mobile media, which makes the apps popular for singles to use (e.g., Sharabi & Timmermans). The majority of dating app users are singles who look for someone to go on a one-time date with or to develop a casual-, or long-term relationship (Castro et al., 2021; Valkenburg & Peter, 2007). Online dating apps employ certain internet services to facilitate a (big) pool of potential dates through dating profiles (Hobbs et al., 2016). In sum, dating apps offer their users to look for a potential date in a big pool that is easily accessible through mobile devices and therefore available whenever the user desires (Ranzini & Lutz, 2017; Sharabi & Timmermans, 2020).

The online dating process starts with forming a profile. When a profile is finished, one's profile will be presented to the other app users. In return, this person will be able to see profiles of other users. When a profile is displayed, users can accept or reject a profile (Ward, 2016). Furthermore, the application uses an algorithm that suggests other profiles likely to be a match, based on the filled-in selection criteria and previous acceptances and rejections (Brozovsky & Petricek, 2007; Finkel et al., 2012; Courtois & Timmermans, 2018). So, mobile dating takes on the role of a match suggester (Hobbs, et al., 2017; Ward, 2017). When both users choose to accept the suggestion provided by the app, a so-called match is formed. On most dating applications, users then have the possibility to chat within the application, as is the case on Tinder (Ward, 2016). However, some dating applications do not offer a chat function but offer users a (blind) date instead, like Breeze. In the current study, data was gathered from the app Breeze.

Breeze

Breeze is a newly developed dating application that does not offer a chat function but instead automated the dating process for its users. The app was founded in the Netherlands by seven students from the University of Delft. Its reach is growing and is getting more popular

every month. Breeze has organized 5097 dates so far (*Breeze*, May 2021) for its user base (N = 4889, in February 2021). The app was developed with the mission to provide its users a unique experience by offering users organized dates by only showing profiles of (potential) dates. The Breeze profiles contain textual information and profile pictures, like other dating apps, and it lets users form their own profiles (Hitsch et al., 2010). However, Breeze tries to distinguish itself by not offering a chat function on the app.

Accepting a profile by selecting the 'let's date' button means that you accept to go on a date with the profile owner. After two users indicate willing to go on an (offline) date with each other, the process continues. Both users are asked to fill in their availability in a so-called date picker to find a suitable moment for a date. Further arrangements: meeting time and the meeting location are taken care of by the Breeze team. Before the date takes place, both users are asked to pay a certain fee. This is not only how Breeze earns money, but this also increases the chances of people showing up on the date. The dating application organizing the date is something new compared to other popular dating apps like Badoo and Tinder (Badoo, 2021; Breeze, 2021; Tinder, 2021). Not only does communication and organizing dates distinguish Breeze, but the app does not let its users swipe (Breeze, 2021).

The third way Breeze tries to differentiate itself from other dating apps is how dating profiles are presented. Instead of letting users swipe, this app only shows a maximum of two profiles in one day. The decision to limit the number of profiles shown to two per day is supported by the research of Pronk and Denissen (2019), as they found that when given too many choice options as partners, people are more likely to reject due to the rejection mindset. Furthermore, most applications provide an interface where quick decisions are fostered (Heino et al., 2010). But, on Breeze, the decision of profile rejection or acceptance is made final after 24 hours, meaning that users can still revise their choice within 24 hours before new profiles

are shown. Furthermore, profiles are only shown when the other user has not yet viewed the profile or accepted the suggested profile to increase the chances of a match.

Impression formation in online dating

In the context of Breeze, it will be hard to form a good impression of a potential date as users will experience an environment without dynamic cues and must base their judgments on the content of a profile. Cues hold information about someone and help to form and influencing an impression. For example, cues in pictures can be a context like the surroundings or background in a profile picture or other informative content like what kind of activity someone is performing (Degen & Kleeberg-Niepage, 2021; Van der Zanden et al., 2021b). Earlier research argued that impressions are formed in a different way when people are introduced to each other through computer-mediated communication (CMC), like online dating than in a real life situation (i.e., a first face to face meeting). This is because dynamic cues, like eye contact or verbal communication, are missing online (Ward, 2017; Walther, 1996). Next to that, online dating apps are characterized by a context of high levels of uncertainty (D'Angelo & Toma, 2017). Especially with Breeze, higher levels of uncertainty are expected because users cannot interact with each other, and a date is at stake. Because of high levels of uncertainty, users will judge profiles very attentively for any information cues to form their impression (D'Angelo & Toma, 2017).

Although impression formation online is more challenging than face to face, people are motivated to form an impression about others no matter which medium they use. Furthermore, because users cannot directly interact, users will fill in gaps and overvalue the remaining cues (Bacev-Giles & Haji, 2017; Gibbs et al., 2006; Gibbs et al., 2010; Hancock & Dunham, 2001; Walther, 1996). Therefore, pictures are especially helpful, as, for example, a picture allows users to form impressions about attractiveness and body fitness. Previous research has shown

that users form impressions about one's attractiveness and that this will play a role in 'liking' or 'disliking' one.

Next to attractiveness, earlier research found that personality plays a role in online dating (Fiore et al., 2008). Subsequently, previous research on impression formation has found that individuals can derive accurate impressions of personality from pictures (Fiore et al., 2008; Celli et al., 2014; Eftekhar et al., 2014; Liu et al., 2016). Also, previous research argued that pictures could be used to form an impression of a profile owner's interests and hinting at a particular lifestyle (Celli et al., 2014; Degen & Kleeberg-Niepage, 2021; Eftekhar et al., 2014; Liu et al., 2016; Van der Zanden et al., 2021b). The findings of earlier studies (e.g., Degen and Kleeberg-Niepage, 2021; Fiore et al., 2008; Van der Zanden et al., 2021bc) suggest that in an online dating context, next to attractiveness, cues of personality and lifestyle are also used to form an impression.

Presenting the self

Users present themselves to other users through a profile (Ward et al., 2016).
In the Breeze app, users can present themselves on their profiles with demographic information such as age and height, profile pictures, and some textual information about their work, study, hobbies, interests, and some 'funny' questions. Furthermore, Breeze has a couple of guidelines for profile pictures, such as a minimum of two and a maximum of six pictures and suggesting users not to display pictures with wearing sunglasses and show recent pictures.

Research showed that users use their profile often to create an ideal image of themselves by using, for example, pictures that make them look more appealing (Ellison et al., 2006; Gallant et al., 2011). Moreover, Goffman's self-presentation theory (1959) explains that people try to control the impressions of others and manipulate their behavior and appearance as if they are performing on stage (Ward, 2016). In addition, people will try to influence the impression others form about themselves by constructing an impression based on what they think is the

desired impression (Leary & Kowalski, 1990). Regarding online dating, this means that users want to present themselves in a way that other users will like them (Toma & Hancock, 2010).

Research into self-presentation showed that users of dating apps often engage in presenting an ideal representation of themselves (i.e., the ideal self) by selective self-presentation and enhancing attractiveness because they want others to like them (Ellison et al., 2006; Gibbs et al., 2006; Hancock & Toma, 2009; Toma & Hancock, 2010; Woptika & High, 2016). Comparing Breeze with other dating apps that offer a chat function, it is expected that users will be more challenged in what they present on their profiles because there is no possibility to present themselves through chatting. Earlier research posits that pictures are seen as the most critical information source for others to decide whether they like or dislike others (Fiore et al., 2008). Therefore, the current research expects that especially profile pictures are important to present oneself on one's Breeze profile because pictures offer users control and challenge them in what to show and how much to show.

Number of pictures

Regarding the online dating context and self-presentation, it seems essential to disclose oneself. This can be done by displaying more pictures to allow others to form a better impression of oneself (Ward, 2016). The process of revealing information about oneself is self-disclosure (Dindia et al., 1997). Revealing information about oneself is essential because people deal with much uncertainty in the Breeze context as they cannot talk with each other and find themselves in a virtual context (Gibbs et al., 2010; Ward, 2016).

Expected is that presenting more information about oneself reduces uncertainty by the receivers (i.e., Gibbs et al., 2010) and will lead to receiving more likes (which is referred to as 'let's date' on Breeze). Because Breeze does not offer a chat function, people cannot exchange more information about themselves than the profile contains. This means that disclosing oneself relies on the content of the profile but also the amount of content. Earlier research revealed that

the more information users reflect in their photos, the better viewers can form an impression and that people are evaluated more positively (Gibbs et al., 2010; Wu et al., 2015). Therefore, it is expected that the more profile pictures a user presents, the more information is made available. Thus, this would lead to a higher intention to date a profile owner. Hence, the following hypothesis is formulated:

H1: *The more profile pictures users display on their profile, the more other users indicate wanting to date them.*

Cues of physical appearance in online dating profiles

Next to disclosing oneself, the appearance of someone is an essential predictor of willingness to date someone (Fiore et al., 2008). Similar results have been found within an online dating context (e.g., Fiore et al., 2008, Hitsch et al., 2010, Vranken et al., 2021). For example, Van der Zanden and colleagues (2021b) showed that attractive pictures are positively linked to perceived attraction and that people pay more attention to attractive pictures. In addition, research has shown that profiles with more attractive pictures in the online dating context are judged as more attractively overall (Fiore et al., 2008). That attractive-looking pictures receive more attention could be explained by evolutionary ideas, which refer to the fact that people prefer to date someone attractive, which indicates a healthy person (Feingold, 1991; McGloin & Denes, 2016).

Using an evolutionary approach, researchers have been able to explain that attractiveness plays a vital role in partner selection, arguing that an attractive partner is desired because it would be beneficial to the offspring (Feingold, 1991; Frederick & Haselton, 2007; McGloin & Denes, 2016; Woloszyn et al., 2020). In addition, attractiveness would indicate that someone is healthier and carries better genetic quality. These qualities can be addressed in physical characteristics (physical fitness) and facial attractiveness (Hönekopp et al., 2003). Next to that, regarding the online dating context, research has shown that physical appearance is of

greater importance than any other characteristics and could therefore predict the desire to date someone (Feingold, 1991; McGloin & Denes, 2016).

Following the line of research of Toma and Hancock (2010), that concerned research into image construction in an online dating context is attractiveness related to physical (or facial) attractiveness, as well as to how fit someone looks (i.e., physical fitness or physical appearance). Further, Toma and Hancock (2010) implied that attractiveness is related to how users present themselves and that an attractive date is desired in the online dating world, with attractiveness concerning physical fitness and physical attractiveness. In sum, based on evolutionary theory arguments that explain how physical attractiveness relates to willingness to date someone, we formulated the following hypotheses:

H2: *The higher the facial attractiveness of a user, the more others indicate to want to date this user.*

H3: *The more physically fit a profile owner looks on their profile, the more others indicate to want to date this user.*

Furthermore, previous studies on attractiveness in photos found that smiling is related to a positive judgment overall and to the attractiveness of a person (Bowdring et al., 2021; Schmidt et al., 2012). Next to that, another study investigated the effect of smiling in the context of a dating site (i.e., Gallant et al., 2011) and revealed that smiling enhances someone's attractiveness. Moreover, earlier research showed that smiling boosts attractiveness in general (Mehu & Dunbar, 2008). Therefore, because smiling seems to positively influence the attractiveness of someone and is part of how someone appears, it is expected that smiling is a predictor for wanting to date someone. Therefore, the following hypothesis was formed to test this assumption:

H4: *The more pictures contain the presence of a smile, the more other users indicate to want to date this user.*

The effect of personality on willingness to date one

Besides appearance, it was found by Eftekhar and colleagues (2014) that people derive information about one's personality through pictures. This is interesting, as several studies (e.g., Fiore et al., 2008; Woloszyn et al., 2020) argued that personality plays a role in online dating. Fiore and colleagues (2008) investigated how attractiveness in online dating is assessed and argued that users were rated as more attractive when they displayed cues of, for instance, extraversion or low self-centeredness. Furthermore, Degen and Kleeberg-Niepage (2021) argued that users present themselves in a certain way to give others more information about who they are, using pictures. Expected is that depicted cues of personality are considered for dating and play a crucial role in predicting one's profile success on an online dating app. Indeed, personality traits play an important role in selecting a partner (Fiore et al., 2008; Sefcek et al., 2006). As, dating services aim to find possible matches to date and eventually form a relationship (Castro et al., 2021; Valkenburg & Peter, 2007; Ward, 2016). Therefore, it is assumed that theories concerning partner selection can be used for predicting date intentions. Previous research proposed that personality plays a vital role in partner selection because people want a suitable partner in the future (Botwin et al., 1997; Sefcek et al., 2008; Vranken et al., 2021). To get an insight into what depicted personality cues on a profile affect willingness to date a profile owner, we will examine the following traits: extraversion, caring, self-centeredness, intelligence, and openness to experiences, as these are proven to be valuable characteristics for a future partner (e.g., Fiore et al., 2008; Meier et al., 2010; Sefcek et al., 2006; Vranken et al., 2021; Wada et al., 2017).

Extraversion

In general, people like to date extroverts (Meier et al., 2010; Vranken et al., 2021; Wada et al., 2017). Extraversion is distinguished by being sociable, outgoing, talkative, energetic, and liking to be the center of attention (Eftekhar et al., 2014; Meier et al., 2010). Earlier research

(e.g., Meier et al., 2010; Vranken et al., 2021; Wada et al., 2017) discussed that people are more willing to date sociable or extroverted people since it is a positive trait associated with attractiveness. Meier and colleagues (2010) implied that extraversion relates to positive social traits, and therefore people are willing to be around someone who is extraverted.

Several studies argued that extraversion is a trait that can be reflected in pictures (I.g., Eftekhar et al., 2014; Liu et al., 2016) for example, through displaying pictures with others that can thus provide information about a social lifestyle and a specific social network (Degen & Kleeberg-Niepage, 2021; Eftekhar et al., 2014; Liu et al., 2016). Other attributes of extraversion are being in the center of attention, which could be shown through, for instance, a picture of one performing on a stage. In line with the aforementioned studies (i.e., Meier et al., 2010; Vranken et al., 2021; Wada et al., 2017), it is expected that pictures containing cues of extraversion have a positive effect on one's success score. Therefore, the following hypothesis was formed:

H5: *The more extrovert cues a user depicts on one's dating profile, the more other users indicate to be willing to date that user.*

Intelligence

Intelligence is expected to be an essential quality for considering dating one (e.g., Lee et al., 2014). Woloszyn and colleagues (2020) found that profiles containing cues of higher intelligence played an important role in deciding if one is willing to date another for the long or short term. Besides, people desire a partner that is at least equally intelligent to connect (von Adrian-Werbung et al., 2020). Furthermore, according to Lee and colleagues (2014). A higher perceived intelligence of a profile owner positively relates to a higher score of profile attractiveness. This implies that people are more likely to desire an intelligent date. Intelligence

is desirable because it is seen as an internal quality that is socially appealing (Regan et al., 2000).

Lee and colleagues (2014) showed that users of online dating services are able to form impressions about one's intelligence through an online profile. In addition, other researchers argued that this is also possible through pictorial cues (Degen & Kleeberg-Niepage, 2021). For example, presenting that one is intelligent can be done by displaying pictures that indicate that one is highly educated (e.g., going to university) or has a demanding job that requires intelligence (e.g., being a doctor) or is intellectual by reading books. For instance, depicted cues of intelligence are a graduation picture or studying abroad (Lee et al., 2014; Regan & Joshi, 2003). Expected is that depicted intelligence cues will increase willingness to date and, in turn, result in a higher success score of a profile owner. To test our expectations, the following hypothesis was formed:

H6*:* *Users are more willing to date users showing intelligence cues than users who do not.*

Caring

Existing literature regarding partner choice shows that caring is a socially attractive trait. Therefore, it is expected that cues of a caring personality positively affect willingness to date one (Regan et al., 2000). A caring personality or nature features itself by a warm personality, being affectionate, taking care of others, or being kind (Wada et al., 2017; Woloszyn et al., 2020), which are referred to as good partner qualities argued by Woloszyn and colleagues (2021). Following evolutionary theories, helpful and caring behaviors are attractive as they suggest a good parent (Moore et al., 2013), although this was found for long-term relationships (Moore et al., 2013). It is expected that a caring personality would also be desired when users are looking to date others to eventually form a relationship (Ward, 2016), like in the context of Breeze.

Research has highlighted that users explicitly display themselves as caring within the online dating context. But found that users mainly show that they are caring in the textual parts of their profile (Wada et al., 2017). Nonetheless, in line with research (e.g., Degen & Kleeberg-Niepage, 2021), users expect to show pictures that imply a caring and socially helpful person and, in turn, that others are also capable of forming impressions about this. Examples are that people show pictures with elderly or children as the context shows that one is socially responsible. In line with earlier studies (i.e., Regan et al., 2000 and Woloszyn et al., 2020), it is expected that depicted cues of a caring personality will positively affect the willingness to date a profile owner. This led to the following hypothesis:

H7: *Users are more willing to date users showing cues of having a caring personality than users that do not show cues having a caring personality.*

Openness to experiences

According to Baiocco and colleagues (2021), who examined the relationship between personality and pictures social media users post and connect to personality, openness is characterized by curiosity, creativity, and risk-taking. Furthermore, Schwaba and colleagues (2019) added ‘exploration’ to this list. Expected is that users of dating apps will be able to make the same interferences as in previous research concerning social media, as both types of media are based on the affordances of mobile media (i.e., Baiocco et al.,2019; Schawaba et al., 2019; Schrock, 2015). The attributes mentioned could be translated into cues that are displayed in pictures. For example, pictures containing an exotic context can be connected to curiosity and exploring. And an unusual and risky activity (e.g., diving or bungee jumping) can be connected to risk-taking and being adventurous. Following Degen and Kleeberg-Niepage (2021), users of online dating apps show these kinds of pictures to give others an impression of their lifestyle and to profile themselves as international, exceptional, or in other words, open to experiences.

Botwin and colleagues (1997) researched what kind of personality characteristics are valued in a future partner and demonstrated that partners high in openness are preferred in general. Thus, openness is connected to partner selection, especially when both partners score high on openness (Botwin et al., 1997; Schwaba et al., 2019). Moreover, risk-taking behavior, a cue of openness to experiences, is a desired trait for various relationships (i.e., short-term or long-term) (Bassett & Moss, 2004). Evolutionary theories explain openness to experiences as attractive because it implies that one was not afraid to take risks and that people who took risks have good genes (Bassett & Moss, 2004; Kelly & Dunbar, 2001). Nonetheless, it is expected that openness to experiences in an online dating context will be attractive because it implies a particular lifestyle and someone brave, which is also a preference for a partner (Bassett & Moss, 2004; Degen & Kleeberg-Niepage, 2021; Kelly & Dunbar, 2001). Therefore, in the current research, users who show more cues of openness to experiences in their pictures are expected to have more success with their profile. Therefore, the following hypothesis was formed:

H8: *The more cues users show of being open to experiences, the more other users indicate to be willing to date a user.*

Self-centeredness

According to Fiore et al. (2008), self-centeredness (i.e., narcissism) is negatively related to willingness to date someone in online dating. Besides that, some studies indicate that personality can be linked to a higher intention to date someone, do less desired traits in a partner negatively affect one's attractiveness (Fiore et al., 2008; Woloszyn et al., 2020). Jonason and colleagues (2012) investigated, among other things (i.e., dark personality traits), the impact of narcissistic personality and reported that a narcissistic personality is not desired for a romantic partner. Narcissism or self-centeredness is characterized by high self-love, exhibitionism, and self-confidence (Baiocco et al., 2017). These are expected as not desired qualities in a partner and seen as negative traits.

According to Fiore and colleagues' (2008) research, people can process cues of self-centeredness in an online dating context. Additionally, several studies have shown that narcissism or self-centeredness is related to selfie-taking (Baiocco et al., 2017; Koterba, 2021). Therefore, people are expected to appear more self-centered when they only show pictures of themselves. Furthermore, it is expected that when users only display pictures of themselves throughout the whole profile, others are less willing to date those users. To test this expectation, the following hypothesis was formulated:

H9: *Fewer users will indicate to be willing to date a user when a user profile only contains pictures of the user itself than profiles that contain pictures that also involve pictures with other persons.*

Lifestyle or hobby cues

Multiple studies have shown that impressions are formed about profile owners (e.g., Gibbs et al., 2006; Toma & Hancock, 2011) and that the cues displayed indicate if one is willing to date another user or not. As mentioned above, research (i.e., Fiore et a., 2008) argued that appearances and personality cues are associated with attractiveness and are used to consider if one intends to date a profile owner. Another study (i.e., Degen & Kleeberg-Niepage, 2021) focused on profiling the self, demonstrating the cues and information users present on their profiles.

Degen and Kleeberg-Niepage (2021) argued that the pictures that involve cues of someone's lifestyle could be seen to try to communicate with the potential dates to tell them how it will be to be with them. In turn, as mentioned before, users will overemphasize any depicted cues to form an impression (Gibbs et al., 2006). Therefore, it is expected that lifestyle or hobbies (or interests) will affect the willingness to date. However, it is not clear what this effect could be. To get insight into the effects of cues about lifestyle and hobbies, the current study will explore the relationship between those cues and the success of a dating profile.

Method

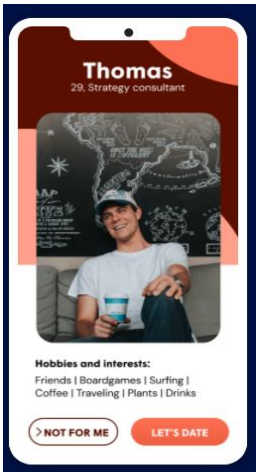
We first performed a content analysis and analyzed 1252 profile pictures originating from 278 profiles sourced from the dating app Breeze. This was done following a codebook. Then, a multiple hierarchical regression analysis was conducted to predict the effect on the number of pictures displayed on a dating profile, someone's appearance (i.e., facial attractiveness and physical fitness), and depicted cues of personality (i.e., extraversion, intelligence, caring, openness to experiences and self-centeredness) on the success score of a profile. Further, exploratory research took place into the effect of gender and showing cues referring to one's lifestyle (i.e., bad habits, partying, going on vacation, sporting, and playing music) on one's profile success score.

Sample

The content analyzed for this study are pictures (N = 1252) from online dating profiles (N = 278) retrieved from the application Breeze. To give an idea of what the profiles of Breeze look like, an example of a (mock-up) dating profile is presented in figure 2. However, this was not the way content was shown to the coder. Therefore, for the content analysis, only profiled pictures, age, gender, number of times a user received 'let's date' (e.g., acceptances or likes), and times a profile was assessed were available to the coder. To summarize, the unit of analysis was online dating profiles, with the removal of the personal written textual parts or demographics that involved private information like, place of living.

Figure 2

Mockup profile of a Breeze user (source: Breeze. social)



The extraction of profiles took place on the 19th of April 2021. It was chosen to analyze the profile pictures of 300 different profiles because, according to the research of Degen and Kleeberg-Niepage (2021), the representative sample size for pictorial analysis is at least 300 to 500 pictures. To extract the profiles from Breeze, a few selection criteria were used. Eventually, 300 profiles were gathered out of the 7500 profiles that were available at Breeze profiles at the time of extraction (N = 7500, *Breeze, 2021 April*).

Apart from four selection criteria, the sampling method used to select the profiles was simple random probability sampling. Before extraction, the first criterion was that selected user profiles had to be active and not in sleep mode, meaning that users choose to actively participate within the app. Sleep mode means users do not wish to be matched anymore, or when a profile is incomplete, users are automatically put in sleep mode. Therefore, it was chosen only to select active profiles as users in sleep mode would not be representable.

The second extraction criteria was based on the sexual orientation of the users. All extracted profiles included profile owners who indicated an interest in dating the opposite sex (i.e., heterosexual).

Third, it was decided to extract an equal number of profiles from men and women (i.e., 150 profiles of men, 150 of women) before the extraction took place. This was done to prevent the effects of gender and to have a good balance. Eventually, the sample consisted of 53.2% of male profiles and 46.8% of female profiles.

Fourth, after the extraction, profiles were excluded before analysis when they were less than ten times assessed by other users. This minimum number was chosen to increase the validity of the calculation of the profile's success scores, as there were also profiles that were only assessed one time, for example. This resulted in the exclusion of 22 profiles.

Finally, as mentioned before, this led to the analysis of 278 profiles, consisting of 1252 profile pictures. With the number of profile pictures, a profile contained ranged from 2 to 6

pictures as were the guidelines of Breeze, with an average of 4 pictures per profile (M = 4.47, *SD* = 1.227). Furthermore, all owners of analyzed profiles were between 18 and 55 years old (*M* = 26.27; *SD* = 5.93). Furthermore, the majority of profile owners were highly educated (92%) (university level or university college level) and living in an area in the North of the Netherlands (*n* = 168) called the 'Randstad' consisting of Leiden, Amsterdam, Delft, Rotterdam, and Utrecht (*Randstad*, z.d.).

Codebook

All pictures were coded according to a codebook that we developed. Based on the literature review, first, the hypotheses were defined, and then the codebook. First, to form the codebook, we decided which categories we would use to code the profile pictures. This resulted in three main categories: appearance, personality, and lifestyle. Then, these main categories were divided into multiple subcategories. Appearance existed out of *facial attractiveness* (e.g., physical attractiveness), *physical fitness* (body type), and *smiling*. Personality consisted of the subcategories *caring, intelligence, extraversion, openness to experiences, and self-centeredness*. Lastly, lifestyle consisted of *bad habits*, *playing sports, making music*, *holiday or vacation pictures,* and *party pictures*. Finally, we created the codes and the descriptions relying on existing literature (i.e., Baiocco et al., 2017; Degen & Kleeberg-Niepage, 2021 & Eftekhar et al., 2014). The codebook is presented in Appendix A.

Appearance

The first main category of the codebook was concerned with the profile owner´s appearance. Three subcategories were distinguished, of which physical attractiveness and fitness were coded based on profile level, meaning all pictures taken together and smiling per picture (with proportion score being calculated afterward).

The first subcategory concerned facial (or physical) attractiveness on a 7-point Likert scale, with 1 = not at all attractive and 7 = very attractive (a profile was coded as 0 when the

facial attractiveness was not visible in the pictures). The second subcategory concerned the physical fitness of the profile owners, in which the specific focus was on how fit the profile owner looked. Again, a 7-point Likert scale was used with 1 = heavily overweight and 7 = looking very fit (e.g., showing abs) (a profile was coded as 0 when physical fitness was not visible in pictures). The final subcategory of appearance concerned if a profile owner was smiling on its pictures. With (0) if there was not a clear image of the face (e.g., a picture showed only one's back), (1) if the smile of the profile owner was absent, and (2) if a smile of the profile owner was present. We choose to take (0) and (1) together as 'no cues of a smile in the pictures' because when a smile is not clear in a picture, it also meant it was absent.

Personality

The second main category concerns personality. This main category was divided into five subcategories (i.e., *extraversion, intelligence, caring, openness to experiences, and self-centeredness*). The first subcategory concerned cues related to an extroverted personality. We coded extraversion for pictures that implicated a sociable personality or a certain social network and lifestyle that could be related to an extrovert person based on literature (e.g., Degen & Kleeberg-Niepage, 2021; Eftekhar et al., 2014; Liu et al., 2016; Meier et al., 2010). The codebook contained the following cues: *being at a party or festival*, *being in the center of attention* (e.g., performing on stage), or *a picture with other people* (e.g., a group of peers).

Second, intelligence concerning cues that could indicate that someone was likely to be (highly) intelligent. The following cues were used: a picture where someone was *studying, a graduation picture, someone reading a book, a picture indicating someone had a difficult job* like being a scientist (e.g., which would be visible by a person wearing a lab coat, for instance) and as of last *a person wearing glasses in a picture* (Lee et al., 2014; Woloszyn et al., 2020). However, later, the last cue was excluded because of contradictions in the literature about

whether wearing glasses is a (reliable) indicator of intelligence (Leder et al., 2011; Wei & Stillwell, 2017).

Third, cues relating to a caring personality. Cues regarding a caring personality were chosen based on the literature review that caring is related to being socially responsible or taking care of others and animals (Degen & Kleeberg-Niepage, 2021; Woloszyn et al., 2020). With *pictures that showed the profile owner with an animal or pet, having a caring profession* (e.g., being a nurse) or *doing volunteering work, having a picture with an elderly person, a child*, or *family pictures*. The last cues of this list will overlap with cues of others concerning the subcategory extraversion. However, the codes seem to be of great importance for both subcategories and could not be ignored for either one of them.

The fourth subcategory of personality concerned openness to experiences. A picture was coded as including a cue of openness to experiences when it was expected to indicate a preference for novelty, curiosity, creativity, risk-taking, and being explorative (Baiocco et al., 2017; Liu et al., 2018; Schwaba et al., 2019). To be more specific, the cues were pictures that depicted *being on vacation or holiday*, cues of *being creative or artistic* (e.g., for instance, painting a canvas), cues of *doing a risky or adventurous activity* (e.g., such as mountain climbing or skydiving), and *being on a boat* which could be connected to novelty and exploring.

Finally, the subcategory self-centeredness was concerned with pictures that showed self-centeredness (or egocentricity) by only presenting the profile owner or a selfie of the profile owner (Baiocco et al., 2017; Koterba et al., 2021).

Lifestyle and hobby

The third main category was meant for exploratory research concerning lifestyle and included five subcategories. The reason to include this main category and corresponding subcategories was to gain insight into what users display on their dating profiles regarding their way of life. All five subcategories were binary coded (0 = absent, 1 = present). The first

subcategory was *music*, which concerned cues depicting someone playing an instrument or making music as for instance, a producer, DJ, or singer. The second subcategory was *partying* and entailed cues like depicting the user at a party, festival, or 'clubbing'. The third subcategory concerned *traveling or vacation*, which consisted of cues depicting the user traveling around the world (i.e., going on vacation or backpacking) like being in an exotic environment, with a backpack, or on a winter sports vacation. Furthermore, the fourth subcategory involved having *bad habits*, with the profile owner showing its bad habits concerning cues implying drinking alcohol or smoking cigarettes. Finally, the fifth subcategory concerned *playing sports* or *sportive* with cues that displayed the user executing any sport, like cycling or running a marathon.

Before starting the coding procedure, a set of 30 profiles was coded to test if the coding book needed any improvements or adjustments. Small reformulations and adjustments were made, and previously coded profiles were revised afterward. After this, the codebook was complete, and no more changes were made. The entire codebook used for coding can be found in Appendix A.

Intercoder Reliability

To test if the first coder was reliable and prevent biased coding, the reliability of the coder was tested by letting a second coder code 10% of profiles from the original dataset (n = 30 profiles, n = 148 profile pictures). Intercoder reliability was between weak and strong for all categories (k = 0.498 - 0.872, M_{kappa} = 0.72). The strongest reliability was found in the bad habits category, and the weakest was found in physical attractiveness. This finding could be explained by the fact that bad habits (e.g., smoking a cigarette) were objective and consisted of fewer options than physical attractiveness, which was more subjective and rated on a 7-point scale. An overview of intercoder reliability can be found in Table 1.

Table 1
Intercoder reliability per category

Main category	Subcategory	Cohen's Kappa *a*	Strength of agreement
Physical appearance			
	Physical attractiveness	0.498	weak
	Physical fitness	0.6	moderate
	Smiling	0.637	moderate
Personality cues			
	Caring	0.788	moderate
	Intelligence	0.848	strong
	Self-centeredness	0.787	moderate
	Extraversion	0.751	moderate
	Openness to experiences	0.748	moderate
Lifestyle			
	Sporty	0.664	moderate
	Bad Habits	0.872	strong

Interpretation for the strength of agreement based on McHugh (2012)

Data collection

The entire coding process took place from the 5th of May until the 19th of May 2021. Content analysis was performed in the sequence of how the profiles were shared, which was randomly provided and executed by a computer. We decided to code the categories at two different levels, profile level, and picture level. First, we coded the subcategories of smiling, personality, and lifestyle on picture level. Then we calculated either a proportion score for several subcategories concerning *smiling, extraversion, and openness to experiences* or allocated a binary score concerning a *caring personality*, showing cues of *intelligence* and a

self-centered personality. The proportion score was calculated by dividing the number of cues related to a subcategory presented on the profile pictures by the number of pictures the profile contained. For example, if a profile contained five pictures and three of these pictures included cues indicating intelligence, the proportion score for intelligence for this profile was 0.60 (i.e., 3 / 5 = 0.60). Important to note is that when a photograph contained more than one cue of a specific personality trait, this cue was counted only once. For instance, a user had a profile with three pictures and displayed two cues of extraversion on one of the pictures, but no cues of extraversion on the other pictures, Then the calculated score of extraversions was 0.33.

Further, we allocated a binary code for the remaining subcategories concerning intelligence, caring, and all lifestyle subcategories (i.e., 0 = no cues are present of this subcategory on the profile or 1 = at least one cue is present on the profile). The difference regarding using binary coding for caring and intelligence or proportion coding for extraversion and openness to experiences was based on the number of cues found throughout the sample. Given that only a few pictures depicted cues of a caring personality (n = 73) and being intelligent (n = 31), it seemed better to allocate a binary code for these subcategories. Furthermore, self-centeredness was also binary as well, but differently. First proportion scores were calculated, but before statistical analyzes were executed, we chose to transform the proportion scores into (0) not only pictures showing the profile owner (i.e., proportion scores ranging from 0.01 to 0.99) and (1) only showing the profile owner (i.e., proportion score 1). It seemed better to measure self-centeredness in displaying only pictures of oneself than in a proportion because users are encouraged to show themselves but can show pictures with others.

Besides coding on picture level, we coded the subcategories concerning one's physical attractiveness and physical fitness on profile level. We chose to assess physical attractiveness and fitness because we expected that an impression regarding these categories would be formed based on all pictures taken together.

We used the following procedure to analyze the profiles and profile pictures. A profile was delivered in a folder consisting of the profile pictures and a text document containing the demographic information (gender, age, number that a profile was assessed, and number that a profile owner received 'let's date'). First, all profile pictures were individually examined, presenting an individual case, on what kind of cues they showed concerning smiling, all personality subcategories, and all lifestyle subcategories. After assessing the profile pictures individually, we calculated proportion scores or allocated binary scores for the profile as one case. Then, a profile owner was assessed on physical attractiveness and physical fitness. Finally, we wrote down the demographic information, counted the number of pictures, and calculated the success score.

Statistical analysis

To test the hypotheses, hierarchical multiple regression was conducted with three different blocks. First, the assumptions of independence, heteroscedasticity, linearity, and normality were tested and met. Then, in the hierarchical multiple regression, we added the number of pictures in the first block, which is relevant for the information presented on a profile (Gibbs et al., 2010; Ward, 2016). Secondly, we added appearance cues (i.e., physical attractiveness, physical fitness, and smiling). We chose to add these variables as second because according to research (e.g., Fiore et al., 2008; Hönekopp et al., 2004;) (facial) attractiveness and appearance are the most important predictor for willingness to date someone in the context of online dating and the most overt cue to assess from a dating profile. Lastly, a third block was added concerning personality, with caring, intelligence, self-centeredness, openness to experiences, and extraversion. After testing the hypotheses, we investigated the data exploratory for any effects of the depiction of lifestyle cues and gender effects.

Results

Content analysis main categories

A total of 1252 profile photos were examined, originating from 278 dating profiles, through content analysis. The times a dating profile was assessed by other users of the app ranged from 10 times to 757 times (M = 134.33, SD = 129.72). Thus, the average profile success rate was M = 0.199 (SD = 0.173).

First, the number of pictures a profile contained was counted, ranging from 2 to 6, which were also the guidelines of Breeze (M = 4.47, SD = 1.23). We found that most users display four (n = 76), five (n = 74), or six pictures (n = 69) on their profiles.

Second, concerning the main category of appearance, which consisted of facial attractiveness and physical fitness, we calculated the mean scores, which showed that the facial attractiveness (M = 4.26, SD = 1.44) and physical fitness (M = 4.20, SD = 1.41) of the profile owners was generally rated as 'average'. A summary of the distributions by outcomes of the profiles is shown in Appendix B, Figure 1 & 2. Furthermore, it was shown that people often choose to display pictures with a smile present, representing 68.7% (n = 860)of the sample rather than pictures without a smile (22.1%) or pictures without a visible face (9.1%).

The next main category involved codes regarding cues of personality. We found that users display multiple cues of (different) personalities on their profile pictures and their entire profile. For example, one user displayed one picture of her with friends (i.e., extraversion), two pictures of herself at a festival (i.e., extraversion), one picture with peers abroad (i.e., extraversion and openness to experiences), and one picture of herself with her dog on her profile (i.e., caring). An overview of the results regarding cues of personality in individual pictures can be found in Appendix B, Table 1.

Regarding cues indicating extraversion, we found that in a total of pictures 29.8% (n = 373) extraversion was presented, and on 74.2% (n = 187) of the profiles. The most prevalent

cue of extraversion was pictured with other people, 20% (*n* = 250). A proportion score of extraversion was calculated for every profile, which led to an average of *M* = .29 (*SD* = .26). Indicating that users scored overall .29 on extraversion on a scale of zero to one.

Secondly, it was found that 33.5% (*n* = 441) of pictures contained cues indicating openness to experiences resulting in 73.7% (*n* = 205) of the profiles containing a cue of openness to experiences with a mean proportion score of *M* = .33, (*SD* = .28). Indicating that people, on average, show openness to experiences in 33% of their pictures. Where vacation or holiday pictures were the most displayed, in total openness to experiences was found on 22.8% (*n* = 286) of the pictures.

Furthermore, regarding a caring personality, it was found that less than ten percent of the pictures had cues that represent a caring personality, 6.15% (*n* = 77). This meant that on 25% (*n* = 63) of the profiles, a caring personality was presented. The most prevalent cue concerning a caring personality was a picture with a pet or animal, which was found in 3.7% (*n* = 46) of pictures. Instead of proportion scores for the profiles, binary codes were used (i.e., 0 = absent, 1 = present). A mean score of *M* = .23 (*SD* = .42) was found for showing a caring personality. This means that profile owners generally scored .23 on a scale of zero to one on a caring personality.

Fourth, it was found that 2.48% (*n* = 31) of pictures showed cues of intelligence. This resulted in 9.17% (*n* = 23) of profiles containing cues of intelligence. The most common intelligence cue was users displaying a graduation picture representing 0.08% of the total sample (*n* = 10). Binary coding was used instead of proportion scores for the profiles (in the same way as for a caring personality). An average score of *M* = .08 (*SD* = .27) for intelligence was found, being the lowest score concerning personality cues. Meaning that in total users in general showed less than one percent of intelligence on their dating profile pictures.

Finally, regarding cues of self-centeredness, in 73.72% (*n* = 923) of pictures, cues of narcissism were found, being the most presented cue throughout the sample. The most presented cue was a picture showing only the profile owner on it *n* = 706 (56.4%). To measure self-centeredness, binary coding was used. This was done differently from caring and intelligence, with 0 = pictures displayed on the profile containing other persons and 1= only pictures displaying the profile owner on the profile. This resulted in 39.57% (*n* = 110) profiles consisting of pictures that only displayed the profile owner. On average, the mean score of the sample was *M* = .40 (*SD* = .49), indicating that users on average have 40% of their profiles consisting of pictures of themselves only.

Exploratory content analysis

We also conducted exploratory research to understand what lifestyle cues occur in profile photos. Therefore, we coded for cues of lifestyle and hobby. In addition, we coded if a cue of a lifestyle indicator was (1) present on the profile or (0) absent. The most uncommon cues were from 'music' (e.g., playing an instrument or producing music), displayed on *n* =10 (3.6%) profiles. The most common were ‘travel or vacation’ pictures, with cues found on *n* = 187 (66.4%) of the profiles. Cues for ‘partying’ were found on *n* = 86 (30.6%) of the profiles, while cues for ‘sports’ were found on *n* = 82 (29.1%) of the profiles. Finally, we found that cues were shown on n = 131 (47.3%) concerning ‘bad habits'.

Hypotheses testing

First, a Pearson's correlation test was performed to check the correlations between all variables. Table 2 provided an overview of all mean scores, standard deviations, and correlation scores of success scores, including all nine subcategories of the multiple hierarchical regression. The means presented no evidence for possible floor or ceiling effects. Overall, the correlations between the predictor variables gave no reason to suspect multicollinearity issues, with all correlation scores between independent variables being .654 and lower ($r < -.654$).

Table 2

Means and standard deviations of all subcategories of the hierarchical regression and their correlations.

	Mean SD	1	2	3	4	5	6	7	8	9
	SD									
1. Success score	*M* = .20									
	SD = .17									
2. Number of pictures	*M* = 4.47	.12								
	SD = 1.23									
3. Physical attractiveness	*M* = 4.26	.60*	.18*							
	SD = 1.44									
4. Fitness	*M* = 4.20	.37*	.35*	.48*						
	SD = 1.43									
5. Smiling (proportion score)	*M* = .69	.23*	.05	.23*	.13*					
	SD = .31									
6. Extraversion (proportion score)	*M* = .28	.12*	.15*	.10*	.14*	.22*				
	SD = .26									
7. Openness (proportion score)	*M* = .33	.07	.21*	.11	.21*	-.05	-.08			
	SD = .28									
8. Caring (binary)	*M* = .23	.03	.16*	.00	.06	.07	.05	0.06		
	SD = .42									
9. Intelligence (binary)	*M* = .08	-.00	.01	.04	.06	.05	.03	-.00	.07	
	SD = .27									
10. Self-centeredness (binary)	*M* =.40	-.12*	-.24*	-.12	-.13*	-.19*	-.65*	-.13*	-.11	-.02
	SD = .49									

*Note. * were significant on a level of p < .05*

Then, a multiple hierarchical regression design was employed to test our hypotheses, with three blocks and the profile success score as the dependent variable. The main results showed that the first model, including the number of pictures as a predictor with outcome profile success, was insignificant (R^2 = .014, F_{change} (1,274) = 3.775, p = .053). Therefore, this indicated that the number of profile pictures displayed does not predict one's profile success.

Furthermore, the addition of the three categories related to appearance (physical attractiveness, physical fitness, and smile presence) in the second model did show an improvement (R^2 =. 373, F_{change} (3,271) = 51.72, p < .001) over the (first) model that only included the number of pictures. This tells us that 37.3% of the variability of the success score of a profile was explained by physical attractiveness, physical fitness, and smiling. Further, the addition of the personality cues regarding openness to experiences, extraversion, caring, intelligence, and self-centeredness in the third model was not significant and did not further improve the model (F_{change} (5,266) = .388, p =.857, R^2 =.377).

The final model, including all categories, reveals that two of the nine variables significantly predict the success score, being the categories facial attractiveness and physical fitness.

The second and third hypotheses were accepted and concerned the effect of facial attractiveness and physical fitness on one's profile score. To be more specific, the second hypothesis posited that the higher users score on being facially attractive, the more others indicate to be willing to date them. Indeed, results showed a significant effect of facial attractiveness on the success score (β = .528, p < .001). Also, it was found that facial attractiveness was the strongest predictor for profile success score. Physical fitness was also a predictor for the likes (i.e., times a user received 'let's date') a profile received (β = .122, p = .037), which is in line with H3. It was thus confirmed that the more physically fit a profile owner looks on their profile, the more others indicate to be willing to date them.

The tested hypotheses concerning the number of photos, the presence of a smile, and all subcategories involving cues of personality were rejected because there were no significant results. The first hypothesis predicted that the more photos users display on their profiles, the more others would indicate a willingness to date one. However, there was no significant effect of the number of photos on profile success score (β = -.029, p = .594). The fourth hypothesis

forecasted that more depictions of a smiling expression on a profile would lead to a higher success score of a profile. But there was no significant effect found of the presence of a smile (β = .088, *p* = .084). The last added category consisted of personality cues and predicted the more cues shown of a personality (i.e., extraversion, openness to experiences, caring, and intelligence), the higher one's success score with an exception for narcissism, which was expected to have a negative impact on one's success score. However, none of these cues significantly predicted the success of a profile. An overview of the results of personality cues can be found in Table 3.

Table 3

Summary of regression analyses for personality variables predicting profile success scores

	β	**SE B**	***p***
Extraversion	-.054	.044	.416
Openness to experiences	-.017	.032	.743
*Caring	.022	.020	.659
*Intelligence	-.037	.031	.451
* Self-centeredness	-.073	.023	.270

*Note. * binary-coded*

Exploratory analyses

In addition to testing the hypotheses, we conducted exploratory analyses to examine the effects of gender and cues of lifestyle on the profile's success score. First gender to see if there are differences between women and men in the effect of presented cues. And second, with the cues representing one's lifestyle to investigate if there is an effect of showing cues that show parts of one's lifestyle (e.g., drinking alcohol) or indicate hobbies or interests (e.g., making music). Firstly, we split the file and reran the multiple hierarchical regression to check for differences in scores for males and females. In general, similar results were found, except for

two cues. First, smiling pictures did not predict profile success in the regression, including all profiles. Still, exploratory analyses showed that the presence of a smile on male profiles (β = -.177 p = .020) (evaluated by women) predicted a significant effect on profile success score. However, this was not found for female profiles (β = .038, *p* = .821) (evaluated by men). Secondly, we found a gender difference in physical fitness predicting profile success in such a way that physically fit women (β = .242, *p* = .008) were more likely to receive more likes. Still, no significant relation was found for physically fit men (β = .139, *p* = .111) and their profile success.

Second, we also conducted exploratory research to investigate if variables concerning cues of lifestyle predicted profile success scores. Therefore, we performed single linear regressions for the categorical variables of depicted cues of traveling, partying, playing sports, making music, and displaying having bad habits (e.g., smoking or drinking alcohol). Two of the lifestyle cues were found to predict profile success. While traveling ($F(1,275) = 0.691$, $p = .407$, R2 = .003), playing sports ($F(1,276) = 1.042$, $p = .308$, R2 = .004), and making music ($F(1,276) = 0.475$, $p = .491$, R2 = -.002) did not significantly relate to the success of a profile, partying ($F(1,276) = 5.652$, $p = .018$, R2 = .020) and bad habits ($F(1,275) = 5.503$, $p = .020$, R2 = .020) did. More specifically, the regression coefficients concerning partying ($B = .053$, CI [.009,.097]) and bad habits ($B = 0.048$, CI [.008, .089]) indicated that the presence of those cues on one's profile success, predict a higher intention to date a profile owner.

Discussion

Research

The purpose of this study was to investigate what kinds of cues users depict on their online dating app profiles and which of these cues predict willingness to date a profile owner. This is investigated by conducting a content analysis of 1252 pictures from 278 individual profiles from Breeze, a Dutch dating app. All profile pictures were coded on several features related to the profile owner's appearance, personality traits, and indications of a particular lifestyle. Then, date intention was measured by calculating each profile's success score using the number of times other users indicate to be willing to date one (i.e., likes) and times other users reviewed a profile. A multiple hierarchical regression was performed with as independent variables the number of profile pictures, appearance, and personality as predictors of date willingness, to test the predefined hypotheses. Finally, some exploratory analyses were performed regarding lifestyle cues depicted on profile pictures.

Findings

In contrast with the first hypothesis, the results did not show that a higher number of photos displayed on a profile led to more success on the dating app Breeze. No association was found between the number of profile pictures and a profile's success. This finding does not accord with previous research that argued that when one presents more pictures, it allows others to form a better impression, which would reduce uncertainty and make one more likely to want to go on a date with a profile owner (Gibbs et al., 2010; Ward, 2016; Wu et al., 2015). This outcome may show that not the number of photos is of great importance in providing information, but that the specific information or content of the pictures is more important. In addition to this, on Breeze, users must show at least two pictures and a maximum of six. Our findings demonstrated that the vast majority of Breeze users presented more than four pictures on their profile (86.9%). Meaning that a significant part of the users already show quite some information about themselves through pictures. Therefore, it is possible that because most people already display four or more pictures, the number does not relate to receiving more likes.

The following set of hypotheses concerned the effect of one's presented appearance the willingness to date one and consisted of three hypotheses. First, it was expected that an attractive physical appearance would positively influence one's profile success. Evolutionary theories pose that facial attractiveness and physical fitness indicate that someone is healthier and carries better genetic quality, which is desired in partner and date selection (Feingold, 1991; Hönekopp et al., 2004; McGloin & Denes, 2016). In line with H2, it was indeed found that a higher facial attractiveness of a user (e.g., physical attractiveness) predicted the willingness to date that user. Furthermore, as hypothesized in H3, results showed a positive relation between looking physically fit and a profile's success score. These findings are in accordance with a body of previous research (e.g., Feingold, 1991; Fiore et al., 2008; Hönekopp et al., 2004; McGloin & Denes, 2016), highlighting the importance of physical attractiveness and fitness for a future partner.

In contrast with the expectations of H4, the results did not show that displaying more pictures containing a smile was related to a higher success score of a dating profile. This finding was surprising because it contradicts the literature that smiling people are considered more attractive and evaluated more positively (Bowdring et al., 2021; Schmidt et al., 2012). This finding may be partly be explained by the positive correlation we found between attractiveness and smiling. It could be that smiling is related to attractiveness, which aligns with earlier research (Bowdring et al., 2021; Schmidt et al., 2012), but that amount of the presence of a smile does not directly predict wanting to date a profile owner. However, while pictures presenting a smile, in general, did not predict profile success, exploratory analyses showed that smiling men (judged by women) were rated more positively in comparison to men that displayed fewer pictures with a smile, unlike smiling women (evaluated by men). This suggests that presenting a smile indicates more success in the context of online dating for men, but that

this effect is not the same for women. This inconsistency may be due to that attractiveness is differently valued for men and women, which was argued by Toma and Hancock (2010).

The second set of hypotheses concerned depicted cues of personality. Overall, no effects of presenting cues of one's personality on profile success were found. More specifically, results demonstrated that cues of extraversion (H5), intelligence (H6), caring (H7), openness to experiences (H8), and narcissism (H9) do not predict willingness to date a profile owner. Research stated that intelligence, caring, openness to experiences, and extraversion are highly appreciated and attractive traits for a partner choice (Bassett & Moss, 2004; Meier et al., 2010; Regan & Joshi, 2003; Regan et al., 2000), and that self-centeredness is not (Jonason et al., 2012). Yet, we found no relation between displaying personality cues and willingness to date a profile owner. It seems possible personality is not as important to people when they are using a dating app to search for a one-time date or causal relationship as in comparison with people when they are seriously considering selecting someone as their partner. It may be the case that people do not value personality traits as highly before a first meeting and that personality will play a role in a later stage of forming a relationship. This can be explained through the relationship development model of Knapp (1978), which posits that people in the first stage, 'initiating,' are not yet determining if one would be a good fit, but are more focused on a first impression. In a later stage, this would be more important when people get more acquainted (Fox et al., 2013). It is plausible that because people did not even meet each other, they are still in the initiating phase. Moreover, earlier studies revealed that a part of the users of online dating apps does not use the apps for finding a serious relationship but uses the apps mainly for fun and hookups (Bryant & Sheldon, 2017; Sharabi & Timmermans, 2020). To elaborate on that, the studies mentioned above (e.g., Bassett & Moss, 2004; Regan & Joshi, 2003) were performed in the research field of partner selection, not necessarily in online dating. Therefore, cues of

extraversion, intelligence, and caring could not lead to more likes because users are not looking seriously for a long-term partner, but for someone to go on a date with.

Regarding self-centeredness (i.e., narcissism), we did not find a significant relationship with one's profile success. Although, previous studies indicated that many pictures of oneself (e.g., selfies) on a profile is an indicator of narcissism, which is not desired in a partner (Baiocco et al., 2017; Jonason et al., 2012; Koterba, 2021), this was not supported by the outcomes of this study. That this was not proven in the current study may be explained by the fact that presenting oneself through pictures is the primary purpose of an online dating profile in online dating (Ward, 2016). Furthermore, users cannot talk with each other within the app. Therefore, a possible explanation is that users would not interpret photographs that only depict the profile owner as highly self-centered but value those pictures instead. This facilitates impression formation by making it easier. In addition, previous research (i.e., Degen & Kleeberg-Niepage, 2021) stated that showing pictures with others can confuse who the profile owner is. This could explain why there is no significant negative effect found of self-centeredness cues on date willingness.

Theoretical implications

This study yields several implications for theory and practice and comes with avenues for future research. This research distinguishes itself from previous research by using content analysis of real dating profiles rather than the use of experimental data (i.e., Toma & Hancock 2010). Moreover, this study did not focus on self-presentation on a dating profile alone (i.e., Degen & Niepage-Kleeberg, 2021 & Ward, 2016) but rather on a combination of self-presentation and profile success, in a way that we investigated what cues users depict while presenting themselves and which cues predicted date willingness.

This study has several theoretical implications. First, this study revealed that next to one's physical appearance, dating app users also display cues that represent, to a certain extent, personality traits and cues of one's lifestyle. To some extent, the personality traits found were

extraversion, openness to experiences, caring, intelligence, self-centeredness (i.e., narcissism). Users do this by displaying certain cues that represent a certain personality or can be connected to aspects of one's lifestyle. These personality and lifestyle cues are not isolated shown. But it can be shown interchangeably, meaning that users do not explicitly reflect one personality cue at the time, but pictures can involve multiple cues of different traits. For example, one profile showed a profile picture with peers drinking cocktails in an exotic environment. This context indicates someone social (i.e., extrovert) and explorative (i.e., openness to experiences) and drinks alcohol (i.e., bad habit). Our findings align with other studies that investigated self-presentation in the context of online dating (e.g., Vranken et al., 2021; Degen and Kleeberg-Niepage, 2021), suggesting that profile pictures of dating app users often show information about one's lifestyle and, or characteristics. Furthermore, the findings of this study are an addition to earlier research which argued that users mainly display pictures on their dating profiles that present the ideal self, based on if they intend to meet other users and choose to display pictures that enhance their attractiveness (e.g., Ellison et al., 2006; Hancock & Toma, 2009). However, our findings implicated that users do not use their profile pictures only to present one's attractiveness, but that user's also use their profile pictures to show cues of their personality or lifestyle. This implies that users like to show more information about themselves than just what one looks like or how attractive one may look.

Second, the current study indicated that presenting more pictures on a dating profile is not a predictor of willingness to date someone. So, profile owners display information about themselves using pictures. While the users displayed different amounts of pictures. The majority of our sample displayed more than four pictures but apparently, showing more of oneself by showing more pictures does not predict profile success. Earlier research suggested that it is essential to disclose information about oneself and that disclosing more information could lead to a more positive assessment and a higher chance of going on a date, but these

studies also examined profile texts and chats between users (Gibbs et al., 2010; Ward, 2017; Wu et al., 2015). However, our results did not show that presenting more pictures and disclosing more information using pictures led to receiving more likes. Therefore, our findings indicate that users of dating apps do not pay that much attention to the number of pictures one displays and that it is not necessary to present the maximum number of profile pictures to be more desired. More specifically, not the number of pictures is essential, but expected is that the content of the pictures and what people disclose on their pictures may play a more prominent role. Also, earlier research indicated the importance of the content, especially if the content shows attractiveness (Ward, 2017; Van der Zanden et al., 2021bc).

Third, one's physical appearance seems to play a vital role in online dating. Appearance consists of two essential components associated with a higher willingness to date a profile owner: facial attractiveness and physical fitness. This means that users who are higher facially attractive and physically fit have more success than users who do not appear to be facial attractive or physically fit. This finding is consistent with previous research investigating the effect of one's attractiveness on impression formation in online dating (e.g., McGloin & Denes, 2018) and showed that attractiveness plays a key role for users. This implies that more attractive users are overall more wanted to date in the online dating context, although users were not send off on a date immediately in those studies (e.g., McGloin & Denes, 2018; Toma & Hancock, 2010; Van der Zanden et al., 2021b). Therefore, the current study indicated that the content of one's dating profile pictures should represent one's facial attractiveness and fitness. Otherwise, users cannot form a good impression and will be less willing to date the profile owner. Therefore, it might be assumed that people's choices about if one is interested in dating someone else are mainly based on physical attractiveness, even if a date is immediately at stake. This aligns with the body of research that emphasized the importance of attractiveness in selecting a partner regarding evolutionary theories (e.g., Feingold, 1991; Frederick & Haselton, 2007) and

in online dating (e.g., Fiore et al., 2008; Hitsch et al., 2010; and Mcgloin & Denes, 2016; Van der Zanden et al., 2021b). Besides that, the current study implies that when people want to go on dates, instead of using a dating app for fun (Sharabi & Timmermans, 2020), that appearance is a significant predictor for users. Possibly is appearance even more critical when a date is at stake than when people can first chat with possible dates, like with apps such as Tinder (Ward, 2016).

Fourth, dating app users tend to depict personality cues on their profile, but our findings show that these cues do not affect their dating profile success. To elaborate on this, using pictures to show that one is extrovert, open to experiences, caring, intelligent or self-centered, will not affect the intention to date a profile owner or not. What did predict date willingness was facial attractiveness and physical fitness. Apparently, users of Breeze are more likely to rely on physical attraction to decide if they intend to date a profile owner than whether one has desirable personality traits. This implies that when people cannot talk with each other like with Breeze, they will weigh more to one's attractiveness to decide if they are interested in dating one or not than what kind of personality their potential date has. This may be since attractiveness relies more on physical appearance than on personality. Earlier research showed that personality played a role besides physical attractiveness (Fiore et al., 2008). However, a difference between Fiore and colleagues' (2008) research and the current research was that real-life data is used and not experimental in the current research. In addition to that, are users of Breeze not able to chat with others, meaning that users directly indicate if they intend to go on a date based on a profile. Therefore, this study supported the importance of attractiveness in the online dating context. But also showed that depicting personality cues does not make users more interested in dating a profile owner. Besides, that added the current research that when a face-to-face meeting is considered, physical attractiveness and fitness are the most important qualities, even though one can infer information related to a person's personality from pictures. Thus, despite studies

regarding partner selection (e.g., Sefcek et al., 2008 & Woloszyn et al., 2020) that referred to the importance of personality, the current study showed that the most important predictor of whether one wants to date someone is not personality but attractiveness. Besides that, depicted personality also do not affect willingness to date one at all. Apparently, the intention of going on a date with someone is mainly based on how handsome and fit someone appears and not on what a person's personality is. This could be explained by that people prefer to go on a date with someone who looks good compared to someone who does not look good.

Lastly, exploratory analyses showed that men and women differed in what they value about the appearance of a potential date in two ways. Namely, women value smiling (in a man) more, whereas men value a woman's physical fitness more. However, the current study's findings do not support the previous research that argued that women pay more attention to personality preferences than men (Botwin et al., 1997; Wiederman & Allgeier, 1992). In fact, it has shown that women, in general, have a higher profile success score. Thus, implying that men are less picky in intending to go on a date than women are. This supported the findings of earlier studies that stated that women are more selective in partner choice than men are (Abramova et al., 2016; Alterovitz & Mendelsohn, 2011). Furthermore, our findings showed that in a real-life context of online dating, it does not matter if one presents cues concerning personality on their profile pictures for both men and women. This supports our implications mentioned above that attractiveness is the strongest predictor for both men and women concerning date willingness (e.g., Mcgloin & Denes, 2016; Toma & Hancock, 2010). Next to that is indicated that attractiveness is assessed slightly differently for men and women. So as for self-presentation, this implies that it is essential for men to display pictures with the presence of a smile and for women, it is more important to display pictures that show their physical fitness.

Practical implications

The present study has several practical implications for the users of Breeze and the application itself. First, users often show pictures that reflect a certain context, such as pictures with peers (e.g., friends) or displaying pictures that they are on holiday. However, those cues do not make other users choose to select the 'let's date' date option more. Therefore, it is suggested that users do not engage themselves in paying too much attention and spending time displaying pictures that reflect a certain personality or lifestyle but focus on showing one's appearance. To be more specific, choose pictures that show one's whole body (to show body fitness) and especially one's face (for facial attractiveness), instead of pictures containing cues of being an extroverted or caring person. Because our findings demonstrated that people are mainly affected by how attractive someone is rather than what kind of personality someone showed, users are recommended to display pictures that give other users the chance to form a good impression regarding one's looks and show pictures that one looks attractive on.

Furthermore, based on our findings, we recommend that Breeze start offering its users a feedback service aimed at users' profile pictures. This is suggested because the average profile success score seemed to be relatively low ($M = 0.199$, $SD = 0.173$). This feedback service could guide users in showing pictures that show their attractiveness and body fitness and emphasize the importance of this. Another example of the kind of feedback this service could offer is based on our findings regarding gender. Specifically, to suggest that men show pictures with a smile present and women show their physical fitness.

Limitations and Future Research

Firstly, the current research was a qualitative study with real-life data from real dating profiles. Because real data was used, it was impossible to test if the cues that were used truly were related to the personality categories or were even noticed by the sample. Therefore, it is suggested for future research to examine what kind of cues are related to (desired) personality traits. This could be done by using pictures consisting of isolated cues, like pictures that only

consist of one cue (e.g., a picture with a blurred background, showing someone with a dog). Besides that, let participants then indicate to what personality traits they relate to the cues that are shown to them (e.g., if pictures of users, among others in a neutral context, are associated with an extroverted personality). Next to that, it would be interesting to measure if people even notice different kinds of personality cues on one's dating profile while assessing it. This could be investigated by showing participants profiles that involve pictures with isolated cues and cues interchangeably and then examining whether participants can derive (correct) conclusions about personality from the profile pictures.

Secondly, the current study focused on the depiction of personality in online dating profiles, which meant that textual parts of dating profiles were not considered. As no significant results were found regarding personality cues on pictures that predict the success of a profile, it would be interesting for further research to investigate whether there is a significant effect of personality on the profile' success score when textual parts are added. Earlier research already showed that people make inferences about personality regarding textual aspects of a dating profile and that textual cues play a role in the attractiveness of a profile (Tong et al., 2019; Van der Zanden et al., 2021ac). However, these studies were mainly experimental, therefore we would recommend extending the current study by performing a content analysis regarding the textual cues of personality on dating profiles next to analyzing pictorial cues. This would give a comprehensive view of the effect of personality cues within a dating profile on profile success score.

Another limitation of this study was that there was no information about the users that assessed our sample profiles. Previous research suggested that similarity is a predictor of partner selection or desirability of a date (Hitsch et al., 2010; Liu et al., 2018; Sharabi & Caughlin, 2017). Therefore, it is recommended for future research to examine if similarities between what profiles depict play a role in predicting willingness to date. For example, risk-takers could be

more interested in dating other risk-takers, or more attractive people could be interested in dating more attractive people. Suggested is to set up an experiment with several participants and to ask those to create a dating profile consisting of pictures. Then the participants would be asked to assess several of the profiles from the participant pool and indicate if they would date that person. Then, a content analysis of all profiles could be investigated if one is more willing to date others that show similar characteristics on their profiles.

Conclusion

The most prominent finding to emerge from this study is that appearance concerning facial attractiveness and physical fitness were the only significant predictors for one's success on an online dating app (i.e., Breeze). However, it was expected that appearance would play an important role. It was also expected that personality and the number of pictures would play a role. Nevertheless, the results did not show that the number of pictures plays a role in the user's intention to date one in the online dating setting, even though it was found that people show cues of personality. This does not make others more or less willing to date them. Furthermore, exploratory analysis has shown that users also tend to display cues of their lifestyle, with a positive effect of cues that reflect having bad habits and partying. Findings in terms of gender differences were also gathered through exploratory research and showed two differences regarding appearance. Namely, men have more success presenting a smile, and that physical fitness is a predictor for the intention to date women. In sum, the current study provides evidence for the importance of facial attractiveness and physical fitness, which showed to be most important when users must directly indicate if they intend to date one.

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Appendices

Appendix A

Category	Subcategory	Analysis score per profile picture or per profile	Connected to which Hypothesis or explorative	Definition/explanation	Measured
Number of pictures		Profile	H 1	The number of pictures users have on their profile, with no attention to the content.	Measured by the number of pictures
Physical appearance/ Attractiveness	-	-	-	-	
	Facial/physical attractiveness	Profile	H: 2	Is someone physically attractive or facial attractive, in terms of how good-looking is someone, judged by their pictures and looking at their face? A proportion score for the whole profile is given.	Interval score: 0 = Not possible to make a judgements due to no clear photos 1 = Not attractive at all 2 = Not attractive 3 = A little bit attractive 4 = Average attractive 5 = Attractive 6 = Really attractive 7 = Very attractive

	Physical fitness	Profile	H: 3	What is someone's physical fitness? Is someone good in shape and muscled or is someone heavily obese? This will be scored over the whole profile.	0 = Not possible to make judgments due to no clear photos 1 = Heavily overweight 2 = Overweight 3 = A little overweight 4 = Average body type/ not overweight not fit looking 5 = Being a little more fit or being a little more fit than average, 6 = having a fit looking body 7 = Looking very fit, showing abs
	Smiling	Analysis per Picture, scoring per profile (%)	H: 4	Coded is if someone displays pictures of themselves smiling. Each picture will be analyzed if there is a smile or not, then a score will be calculated for the whole profile.	Per pictures: 0 = no face present or the picture is too unclear, for instance, because of lighting or distance, so it is not possible to judge this. 1 = smile absent 2 = smile present
Traits/Personality/characteristics	Caring	Analysis per Picture, scoring per profile (%)	H: 7	Are there indications of this person having a caring personality? Caring refers to if the profile shows cues of being a 'caring person. Throughout the profile picture will be examined if there are cues for a caring personality. Indicators will be labelled and a proportion score will be calculated.	0 = No cues present of being a caring person 1 = Picture with a living pet or another animal. *(Not: Hunting pictures)* 2 = Picture of having a caring profession or doing voluntary work. (For instance teaching or being a doctor or nurse). 3 = Picture with an old person (for instance looking like a picture with one's grandma) 4 = Picture with a child 5 = Family pictures

	Extraversion	Analysis per Picture, scoring per profile (%)	H: 5	Are there indications that this person has an extraverted personality? Extravert refers to being a social person that loves being in the center of attention. Throughout the profile, all pictures will be examined if there are cues for an extravert personality. Indicators will be labelled and a proportion score will be calculated.	0 = Cues of extraversion absent 1 = Being at a party or festival 2 = Being in the center of attention (for example performing on stage, or presenting an event) 3 = Picture with other people 4 = Playing an instrument or singing
	Self-centredness	Analysis per Picture, scoring per profile (%)	H: 9	Are there indications that this person has a narcissistic personality? Narcissism is characterized by a high love of self-love and exhibitionism and self-confidence. Throughout the profile, all pictures will be examined if there are cues for a narcissistic personality. Indicators will be labelled and a proportion score will be calculated.	0 = No cues of narcissism or self-centredness (For example, picture with others) 1 = A picture of the user with others in the background, but self-centred. 2 = Cue of narcissism or self-centredness (for instance, a picture with only showing yourself. 3 = Selfies of the profile owner, alone in the picture
	Intelligence	Analysis per Picture, scoring per profile (%)	H: 6	Are there indications that this person is intelligent? Intelligent is characterized by being smart and could refer to having a good job. Throughout the profile all pictures will be examined if there are	0 = No indications 1 = Pictures of studying, like sitting behind a desk with books and doing school work. 2 = Graduation pictures 3 = Pictures of reading a book 4 = Pictures of being at the university or having a difficult job 5 = Wearing glasses

				cues of being intelligent Indicators will be labeled and a proportion score will be calculated.	
	Openness to experiences	Analysis per Picture, scoring per profile (%)	H: 8	Are there indications of this person having an open to experiences personality? This trait is related to risk-taking, curiosity, creativity, and having a preference for novelty. Throughout the profile pictures will be examined if there are cues for Indicators that show that this person is curious, creative, or having a preference for novelty, all indicators will be labeled and a proportion score will be calculated.	0 = No indication of openness to experiences 1 = Being artistic or creative (for example, making art) 2 = A travel picture 3 = Doing a risk-taking activity and showing being adventurous (For instance, bungee jumping, or mountain climbing or diving) or hinting at this (for instance wearing climbing gear or a selfie on top of the mountains) Or an extreme sport (BMX or snowboarding) 4 = Being on a boat (discovering)
Lifestyle/hobby	Traveling	Analysis scoring per profile binary	explorative	Information about someone's travel experiences in terms of traveling the world Indicators could be: - An exotic environment - Wintersport setting - A big backpack	0 = No travel indications 1 = Travel indications

				- A trolly - The picture with a plain - Pictures with mountains - A tropical beach environment not in the Netherlands - Being on the road	
	Playing music	Analysis per Picture, scoring per profile binary	explorative	Informative cues in someone's pictures about if this person makes music. Indicators could be: - Playing an instrument - Holding an instrument - Singing - Being in a band - Holding a microphone - Standing on a stage like performing - Set up as a DJ	0 = No indication of playing 1 = Indicators of playing music
	Playing sports	Analysis per Picture, scoring per profile binary	explorative	Are there any indicators within the profile pictures of this person being sportive? Having more pictures giving indications can tell more about this person playing a lot of sports.	0 = No sport indicators 1 = indications of playing sport

				Indicators could be: - Picture of the person running in running clothes - Pictures in sport clothes - Picture of person working out - Picture of a person playing a team sport - Picture of a sport team - Picture of person surfing - Picture of person climbing - Picture of a person snowboarding/skiing. - Picture of person cycling	
	Go partying	Analysis per profile, binary	explorative	Is this person going to parties or festivals or going out and clubbing? Which is displayed on the profile	0 = No indications of going to parties 1 = Indications of going to parties
	Bad habits: Drinking alcohol or Smoking	Analysis per profilescoring per profile (categorical)	explorative	Is this person displaying cues of drinking alcohol and or smoking	0 = No indications 1 = indication of smoking 2 = indication of drinking alcohol 3 = indications of smoking and drinking both

Appendix B

Overview of the results for content analysis.

Figure 1 &2

Histograms of the distribution of the physical attractiveness and physical fitness scales on the profile level

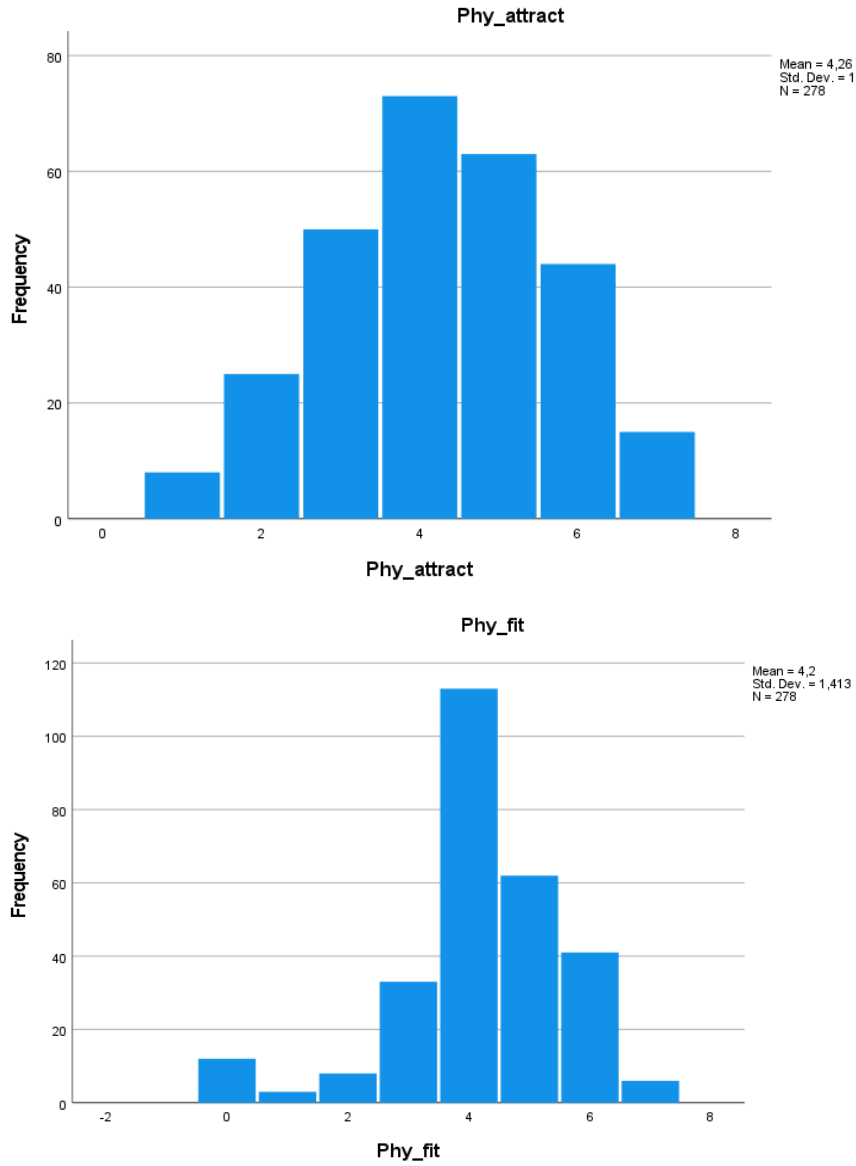

Table 1

Distribution of personality cues shown throughout all profile pictures that were analyzed

Personality		SD	Cues	Number of pictures counted	The percentage that this cue was shown of the total number of pictures
Extraversion	.78	1.29	*Total extraversion cues*	374	29.79%
			At a party or a festival	79	6.3%
			Being in the center of attention	19	1.5%
			With other persons	250	20%
			With other persons at a festival or party	26	2.1%
Intelligence	.07	.463	*Total intelligence cues*	31	2.48%
			While studying or being at the university or school	4	0.3%
			Graduation	10	0.8%
			Reading or holding a book	6	0.5%
			Having a difficult job	11	0.9%
Caring	.13	.633	*Total caring cues*	77	6.1%
			Pet or animal	46	3.70%
			Caring job or volunteer	4	0.30%
			An old person	14	1.10%
			Children	3	0.2%
			Family	10	0.80%
Self-centeredness	.52	.999	*Total self-centeredness cues*	923	73.7%
			Others in the background	78	6.2%
			Showing only the profile owner	706	56.4%

			Selfies	139	11.1%
Openness to experience	.85	1.29	*Total openness to experiences cues*	441	35.2%
			Artistic or creativity	34	2.7%
			Traveling	286	22.8%
			Risky or adventurous activity	64	5.1%
			Being on a boat	34	2.7%
			Traveling & adventurous	14	1.1%
			Multiple cues of openness	9	0.7%

Note: Results based on data set assessment of profile pictures