Exploring the Role of Personality Traits and Attachment Styles in Shaping Dating App User Experience

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Abstract

This investigative thesis explores the interactions and encounters of individuals using dating apps, examining how attachment styles and the big five personality traits shape their experiences. The study reveals that attachment styles do impact users' experiences. Users' different levels of experience exhibit preferences for different features. Long-term users show a greater appreciation for add-on features compared to new users. Among personality traits, agreeableness shows a positive association with meeting and forming intimate connections with other users, while other traits exhibit less consistent correlations. The findings underscore the importance of personalized user experiences and improved matching algorithms. This research contributes to the field and highlights the need for further studies to refine methodologies and explore interventions that can enhance the overall dating app experience.

Keywords*: Online Dating, Dating Apps, Information Science, Social Psychology, Attachment Styles, The Big Five Personality Model.*

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1. Introduction

According to Statista, a database organization, which specializes in market and customer data, there were over 360 million online dating service users worldwide in 2022 (Dixon, 2023). The most downloaded dating app, Tinder, had more than 64 million downloads. Followed by Bumble (28 million) and Badoo (26 million), in second and third place (Ceci, 2023).

Dating traditions have developed and evolved over the centuries. With the rise of the internet and later on use of smart phones, dating apps have become a popular way to find a potential match (Zhou, Y., 2023). Some of the advantages are also highlighted by Finkel et. al. (2018) such as a wider range of access to potential romantic partners, matching algorithms, and safe and convenient communication.

This thesis goes beyond examining the utility of dating apps and improving the human-computer interaction associated with them. Its motivation extends to addressing a broader issue prevalent in Western civilization today.

Population decline is known to be a global phenomenon with significant implications for social stability and economic growth. More specifically, a lot of research has been done in that regard in Japan, where they have been significantly affected due to low fertility and increased life expectancy. Japan, along with a few other countries have been addressing this issue and implemented fertility and migration policies. (Parsons, A. J. Q., & Gilmour, S., 2018)

Hungary is one of the countries that has prioritized tackling its declining birth rate by implementing family policies that specifically target women. According to a report from the EU Commission, starting from January 1, 2020, mothers who are currently raising at least four children or have raised four or more children during their lifetime are granted a full exemption from personal income tax (Fruzsina, 2020).

According to studies, there is a trend indicating that women are getting married at a later age and having fewer children, often in their later years. Statistical projections indicate that by 2030, approximately 45% of prime working age women in the US will be unmarried. Furthermore, the average number of births per woman in the US has decreased from 2 in 2009 to 1.73 in 2018 (Stanley, 2019).

The concern extends beyond the prevalence of unmarried individuals; it encompasses the underlying statistics of marriages as well. Divorce rates are increasing in Western countries, with the United States experiencing the highest frequency. According to statistics, European countries have an average divorce rate of 40% among married couples. These trends often have negative implications for children of divorced parents, including limited socialization opportunities and decreased familial affection. It has been noted that societies with lower divorce rates generally exhibit better family and social well-being (Sheykhi, M.T., 2020).

It should also be said that individuals who meet online are more likely to indulge in dating and romantic relationships than marital relationships. Additionally, breakup rates for both martial and non-marital relationships are found to be higher for couples who met online. (Aditi Paul, 2014)

This thesis centers on investigating the impact of dating apps in contemporary society, with a specific focus on the influence of attachment styles and the Big Five personality traits. Through an exploration of user perspectives and experiences, it aims to deepen our comprehension of dating app interactions and propose avenues for improvement. The primary objective of this thesis is to examine how users engage with these dating apps, utilizing the frameworks of the Big Five personality traits and attachment styles to provide a comprehensive understanding. However, the overall motivation is primarily geared towards exploration rather than reaching definitive conclusions. It seeks to expand knowledge about the evolution of dating and the influence of dating apps on the dating culture, while also inspiring other researchers to contribute to this field of study.

1.1 Problem formulation and research questions

The problem formulation is composed of one main question, followed by three research questions. These will allow for a deep dive into the usage of dating apps and how the user experience is influenced by attachment styles and the big five personality traits.

1.1.1 Problem formulation:

'How do individuals' interactions with dating apps vary based on their personality traits and attachment styles?'

The problem formulation investigates the diverse ways in which individuals engage with dating apps, taking into account their personality traits and attachment styles. It seeks to understand how these factors influence the patterns of interaction and behavior exhibited by users on dating apps.

Personality traits, such as extroversion, openness, conscientiousness, neuroticism or agreeableness, are likely to impact how individuals approach and navigate these platforms, shaping their communication style, preferences, and overall experiences.
Furthermore, attachment styles, including secure, anxious, dismissing, or preoccupied, may influence users' expectations, level of trust, and emotional dynamics within the context of dating app interactions.

By exploring these complex relationships, this thesis aims to gain insights into the nuanced interplay between personality traits, attachment styles, and the ways individuals engage with dating apps, ultimately contributing to a better understanding of human behavior in the digital dating landscape.

1.1.2 Research Questions

RQ1: How do personality traits impact patterns of interaction with other users through dating apps?

This research question aims to examine the influence of personality traits on how individuals engage with dating apps and other users. It seeks to understand whether traits like extroversion, openness, or conscientiousness, for example, affect the frequency and manner in which users interact with potential matches. Additionally, it explores whether specific personality traits are associated with higher or lower levels of intimacy experienced through dating app platforms.

RQ2: What is the correlation between the experience level of dating app usage and the functionalities preferred by users?

This research question aims to explore the relationship between users' experience level with dating apps, measured by the duration of app usage, and their preferences for specific functionalities. It seeks to determine whether there is a correlation between the length of time individuals have been using dating apps and their prioritization of features or capabilities. By examining this correlation, valuable insights can be gained regarding the factors that influence users' preferences for specific functionalities based on their experience level with dating apps.

RQ3: How can attachment styles be used to predict the experiences of dating app users and their communication regarding these experiences?

This research question focuses on the role of attachment styles in predicting the experiences and communication patterns of dating app users. It explores whether attachment styles can provide insights into how individuals approach dating app interactions, their expectations, and the way they communicate about their experiences on these platforms. By examining this relationship, it aims to deepen the understanding of how attachment styles shape the user experience within dating apps.

2. Related work

This section will present an analysis of the already existing literature gathered that is related to the topic of this research. A conceptual literature review will be conducted, which can be defined by the main method of searching for key components that are the core focus of this study. The literature review approach and search process will be elaborated on, as well as the main themes.

2.1 Literature review

The primary aim of carrying out a literature review is to establish a comprehensive understanding of a particular subject and to gain familiarity with prominent researchers in that field. It may also uncover significant areas of research that are yet to be explored and provide inspiration for formulating well-constructed research questions. (Cronin, et. al., 2008, p. 38)

While literature reviews can take on various forms, four predominant styles are known as the traditional, systematic, meta-analysis and meta-synthesis. The traditional review involves a critical analysis of the literature to identify gaps in knowledge. While the systematic seeks to comprehensively identify all relevant literature in the topic area to promote research knowledge. (O'Gorman, et. al., 2015, p. 32)

The meta-synthesis review is a qualitative research method that systematically integrates data from various studies to generate new interpretations and insights into a particular phenomenon. On the other hand, meta-analysis is a statistical approach that combines and analyzes data from multiple quantitative studies to identify patterns, relationships, and overall effects. (Cronin et al., 2008)

A conceptual literature review is a method that will be predominantly used to identify, analyze, and synthesize existing literature related to the topic of online dating. Similar to a systematic review, it aims to explore the development and evolution of a concept and the different theoretical frameworks and perspectives used to understand and explain it. However, unlike a

systematic review, a conceptual review is not limited to strict searches on academic databases but instead involves a more reflective and interpretive approach to literature analysis. (Cooper, 1988, p. 112)

All the concepts included in this review are related to online dating, yet from different perspectives. The themes covered in this literature review are:

- **Online Dating**: This concept aims to provide a comprehensive understanding of online dating.

- **Personality**: This theme explores how personality theory can be used to assess an individual's perception of a relationship.

- **Methodology**: This section will provide insight into methods that can be employed to study the behavior of online daters.

- **Sharing and Privacy**: This section will offer insight into sharing and privacy concerns associated with the sharing of sensitive user information on dating apps.

2.1.1 Search process

The search process was initiated with the method of keyword searching, which is one of the most commonly used search strategies. Relevant keywords or phrases were utilized to search a database or search engine to find relevant articles. The main search engines that were employed were Google Scholar and ResearchGate. To start with, the quick and easy tactic was utilized, with Boolean operators such as 'AND', 'OR' and 'NOT' being employed (Cronin et al., 2008, p. 40). An example of this process is the use of keywords such as "Online Dating" AND "Personality".

The snowballing method was employed after relevant articles were found. This technique involves using references cited in the relevant articles to identify other articles and sources that may be relevant to the subject (Hochrein & Glock, 2012, p. 11). For instance, other articles that were also relevant to the subject were found using the "Cited by" feature in Google Scholar.

To summarize the keywords and the building blocks concept, a table was created to give a more visually appealing representation of the keywords searched for. The primary block (1) was the only one used alone, the rest were used in combination with the first.

Block 1: Dating	Block 2: Personality	Block 3: Methods	Block 4: Information
"Online dating" OR "Dating apps" OR	"The Big Five" OR "Five Factor Personality Model" OR "Attachment Theory" OR "Attachment Styles" OR "Psychology" OR "Personality"	"User behavior" OR "Methods" OR "Methodology" OR "Approach"	"Information Sharing" OR "Privacy" OR "Ethical" OR "Information Seeking"

Figure 1: Literature search building blocks

2.2 Online Dating

This section will focus on reviewing the paper Online Dating: A Critical Analysis From the Perspective of Psychological Science by Finkel et. al. (2012).

The critical analysis by Finkel et. al. (2012) examines claims made by online dating sites, which include their uniqueness and superiority over the more conventional methods of meeting partners, offline. The main question this paper wants to empirically answer is whether online dating represents a fundamental change in the process of forming and maintaining romantic relationships and whether online dating users improve their chances of experiencing positive romantic outcomes compared to those who rely completely on conventional methods of meeting potential partners.

The paper provides a review that summarizes the findings of various studies on the topic of online dating and dating in general. It notes that there are both positive and negative effects on the process of forming romantic relationships that were initiated online. The outcomes of said relationships may depend on various factors, such as the type of relationship sought and the individual's characteristics.

This paper can play a key role in creating a foundation of this thesis, as it establishes an overview of the current state of online dating and the contextualization of the set research questions.

The highlighted topics of discussion within the critical analysis involve access, communication and matching with potential romantic partners through online dating. The below paragraphs will further elaborate on their findings in order to gain better understanding of the current atmosphere around online dating from the psychological aspect.

Keywords: Online Dating, Access to Potential Romantic Partners, Computer Mediated Communication, Matching Algorithms, Psychology

2.2.1 Access to Potential Romantic Partners

The authors of the text indicate that online dating offers users much more access to potential partners that might otherwise not be as available in conventional offline dating.

One highlighted counter-point however, is that online dating might transform three-dimensional people into two dimensional displays of information. This could lead to a small number of appealing potential partners to become overwhelmed with first-contact requests, which can cause them to disengage from the process altogether.

In addition, having access to such a broad range of potential partners, may alter users' decision process in a way that could potentially undermine romantic outcomes with a particular potential partner.

Finally, swiping through such a high number of profiles might decrease a users' level of interest in any specific potential partner, which might potentially undermine their level of commitment to a prospective partner once a relationship moves offline.

Despite these disadvantages, Finkel et. al. (2012) mention that online dating as a method provides convenient means of communicating via computer mediated communication, which can help users learn more about them and potentially set up a face-to-face meeting.

2.2.2 Communication: Computer Mediated Communication (CMC)

The term CMC was first used in 1996, which was defined as the process of creating, exchanging and perceiving information using a networked telecommunications system. CMC has two different aspects: synchronous communication, which occurs in real-time, and asynchronous communication, which involves a delay. CMC is associated with both writing and speech, and it allows for the recall and examination of communication. (Romiszowski & Mason, 2013, pp. 338, 339)

The paper by Finkel et. al. (2012) explores the concept of CMC. It questions the existing research, which suggests that CMC is not as effective at relationship formation caused by the lack of

informational feedback and depersonalization. Finkel et al. (2012) agree that CMC cannot completely replace face-to-face interaction. The paper highlights that it is easier to misrepresent oneself online and that individuals seek face-to-face verification before forming an offline relationship. The conclusion however is that CMC methods do give better opportunities for access to potential romantic partners. On the other hand, the level of nuance and texture that is an outcome of a face-to-face interaction, is very unlikely achieved through CMC methods.

In summary, Finkel et al. (2012) suggest that online communication can aid the formation of romantic impressions, but the two key factors that need to be considered are the timing between initial online communication and the first face-to-face interaction, and the aspects of social interaction that can only be assessed in face-to-face interactions, such as chemistry and gut-level evaluations.

2.2.3 Matching Algorithms: Matching with Compatible Romantic Partners

Finkel et. al. (2012) also discuss matching algorithms in online dating sites, questioning the empirical or theoretical basis for matching. Evaluating the procedures used by online dating providers against the existing literature on predicting and understanding romantic outcomes. The authors mention two successful matching outcomes: identifying partners with whom users are likely to experience a romantic spark or a satisfying long-lasting relationship.

In summary, empirical literature suggests that online dating sites can efficiently screen potential partners based on stable individual differences, but their promise to identify uniquely compatible mates is unlikely to have empirical support. Online dating allows people to connect with potential partners and enhances initial attraction through computer-mediated communication. However, it also has drawbacks, like prioritizing profiles as the primary introduction to potential partners and encouraging judgmental evaluations that can harm romantic outcomes.

2.2.4 Conclusion

In conclusion, this paper discusses the advantages and disadvantages of online dating compared to the more conventional methods. The authors mention that there are many advantages such as that online dating offers access to many potential partners, the ability to communicate safely and conveniently. There is always room for improvement, such as closer collaboration between researchers and online dating providers. The paper concludes that dating has fundamentally been altered by this technology. It is only effective to the extent that it introduces individuals to potential partners, which they would have been unlikely to encounter otherwise. It also facilitates rapid transition to face-to-face interaction. Finkel et. al. (2012) highlight that as online dating evolves, it should be informed by rigorous psychological science to improve its effectiveness.

2.3 Personality

This section reviews the paper "Personality and Romantic Relationship Satisfaction" by Gerlach, Driebe, and Reinhard (2018). It examines the concept of relationship satisfaction, its measures, and the significance of romantic relationships. The focus is on how individual personality differences relate to relationship satisfaction. The paper aims to explore various assessment approaches for relationship satisfaction and emphasize the role of personality differences in predicting satisfaction. (Gerlach et al., 2018, p. 2)

Even though it might not be obvious at first glance, why this paper might be an interesting addition to the related works section, it plays a key role in understanding the theory used throughout this thesis. The study considers theories such as the five-factor model of personality also known as the Big Five personality traits, and Attachment theory, which are both studied throughout this thesis. In addition, the researchers also consider self-esteem, narcissism and personality similarity.

2.3.1 The Five Factor Model of Personality

The authors mention that personality plays a major role in determining an individual's outcomes in work performance, health, and longevity. However, their focus also lies on how personality determines an individual's approach to social and romantic relationships. They highlight that current research covers two touchpoints:

- Actor effects: How an individual's personality traits affect their own feelings of happiness or contentment in their relationship.
- Partner effects: How an individual's personality traits affect their partner's feelings of happiness or contentment in the relationship. (Gerlach, et. al, 2018. p. 2)

This study uses the five-factor model of personality, on the basis that it is one of the most "*established taxonomy of personality*" (Gerlach, et. al, 2018. p. 2). The five-factor model of personality is broken down into five dimensions: Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A) and Neuroticism (N) (McCrae & Costa, 1999, p. 139). The five dimensions are elaborated on in section 3.2 The Big Five Personality Traits.

The following sections will briefly describe the specific findings that the authors Gerlach, Driebe, and Reinhard (2018).

- **Openness**

  Openness is not a strong predictor of relationship outcomes. Some studies have found a positive correlation between wives' openness and sexual satisfaction, but not overall relationship satisfaction. Other studies have had inconsistent or insignificant findings regarding the effects of this dimension on both an individual's and their partner's satisfaction in a relationship. (Gerlach, et. al, 2018. p. 4)

- **Conscientiousness**

  Various research studies have revealed favorable connections between conscientiousness and one's relationship satisfaction, as well as their partner's, in large samples from

countries such as Australia, Britain, and Switzerland. Nevertheless, the findings regarding the function of conscientiousness in married couples have been ambiguous. In particular, some studies have indicated a positive correlation between conscientiousness and individual satisfaction but not their partner's relationship satisfaction. However, a meta-analysis has authenticated the affirmative link between conscientiousness and partner's relationship satisfaction. (Gerlach, et. al, 2018. p. 3)

- **Extraversion**

Higher levels of extraversion have been linked to marital quality in some studies involving couples from the Netherlands, Australia and Britain. On the other hand, other studies did not show any significant correlation, particularly in women. (Gerlach, et. al, 2018. p. 4)

- **Agreeableness**

Gerlach, Driebe and Reinhard (2018) find that agreeableness shows positive effects on one's own relationship satisfaction as observed in two extensive studies, as well as its affirmative correlation with partners' relationship satisfaction in a research involving 214 newlyweds. Other studies also established this positive association between agreeableness and relationship satisfaction. (Gerlach, et. al, 2018. p. 3)

- **Neuroticism**

Extensive research has demonstrated a correlation between higher levels of neuroticism and decreased relationship quality, ultimately leading to higher rates of divorce. The underlying factors contributing to this association include problematic interpersonal behaviors, the manifestation of negative and hostile behaviors during conflict discussions, and a tendency to interpret ambiguous relationship situations in a negative and potentially damaging manner. Additionally, the findings suggest that when one partner exhibits high levels of neuroticism, it can adversely affect the overall satisfaction of the other partner in the relationship (Gerlach et al., 2018, p. 3).

In summary, some personality dimensions play a more crucial role in determining an individual's approach to social and romantic relationships. As seen through the text written by Gerlach, Driebe and Reinhard (2018), Neuroticism in particular has been linked to lower relationship quality and higher rates of divorce, whereas some studies show a positive correlation between higher levels of Extraversion, Agreeableness and Conscientiousness and relationship satisfaction.

While the topic of this thesis may not directly relate to relationship satisfaction, the discussion of the five-factor model of personality and its application to understanding individual differences in relationship approach lends credibility to its use in examining individual differences in the use of dating apps. Therefore, the insights presented in this section may indirectly contribute to the overall analysis of the thesis.

2.3.2 Attachment Theory

In their thesis, the authors delve into attachment theory, a crucial topic to consider in their research. Understanding what the authors say about attachment theory and its relevance to relationships will prove beneficial, as it is another theoretical framework examined throughout this thesis. Developed by Bowldy in 1973 to explore the emotional bond between a child and a parent, Hazan and Shaver later expanded on the theory by examining how this bond may impact romantic relationships in adulthood (Gerlach, et. al, 2018. p. 4).

Attachment theory highlights the existence of diverse relationship models adopted by individuals. These models are commonly classified into two primary dimensions: secure attachment and insecure attachment. The latter dimension encompasses fearful, preoccupied, dismissing and secure categories, providing a more nuanced understanding of attachment patterns (Scharfe, 2017, p. 4).

Attachment theory is more specifically elaborated on in the section 3.3 Theory: Attachment Theory.

Conclusion of the Study

The presence of secure attachment is a strong indicator of relationship satisfaction, which could be explained by the fact that individuals characterized by secure attachment have a better conflict resolution style. The insecure styles present an avoidance and reluctance to accept emotional dependency, which are factors that contribute to the detrimental effects of avoidance on relationship satisfaction. Insecure styles have both been linked to individual and partner reduced satisfaction. (Gerlach, et. al, 2018. p. 5).

In conclusion, the paper by Gerlach, Driebe and Reinhard (2018), says that secure attachment is positively linked to relationship satisfaction, while insecure attachment styles are detrimental to relationship functioning.

2.3.3 Other theories

There are three other dimensions that the authors acknowledge, which can give useful insight into other existing theories that might play a major role when looking at relationship formation. The three concepts are self-esteem, personality similarity and narcissism. Below are short descriptions of each and their findings:

- **Self-Esteem**

  Self-esteem refers to the assessment of one's own value and is a feature that exhibits a strong association with the happiness of a couple, as well as the soundness and constancy of intimate connections. Those who are characterized by reduced self-esteem display increased susceptibility to relational risks and confront more difficulties in their relationships. On the other hand, individuals who hold elevated levels of self-esteem perceive fewer threats amid disagreements and are inclined to have more fulfilling and satisfying relationships. In conclusion, having a high level of self-esteem contributes to not only one's own contentment in a relationship but also that of their partner's. (Gerlach, et. al, 2018. p. 5).

- **Personality Similarity**

  Romantic partners exhibit similarities in diverse characteristics, although evidence of personality similarity is limited. Nevertheless, perceived similarity among couples may be more crucial than actual similarity, as it has a positive correlation with relationship satisfaction. Studies examining the influence of actual personality similarity reveal mixed outcomes, whereas perceived similarity consistently links to increased relationship satisfaction. (Gerlach, et. al, 2018. p. 5)

- **Narcissism**

  Narcissism is a trait marked by an excessively positive self-image. Research suggests that high levels of narcissism, particularly the antagonistic component of narcissistic rivalry, are linked to decreased relationship satisfaction, as well as lower levels of commitment and perceived relationship quality. On the other hand, the self-promoting element of narcissistic admiration is often associated with increased relationship satisfaction. Hence, it is crucial to distinguish between these two aspects of narcissism when studying its relationship with relationship quality. In summary, the hostile facets of narcissism have a negative association with relationship functioning, while the proactive aspects do not. (Gerlach, et. al, 2018. p. 5).

2.3.4 Conclusion of the Study

The study by Gerlach, Driebe and Reinhard (2018) found that personality traits such as neuroticism, agreeableness and conscientiousness are closely related to relationship satisfaction, with higher levels of neuroticism being linked to lower relationship satisfaction and higher levels of agreeableness and conscientiousness being linked to higher relationship satisfaction.

Secure attachment, high self-esteem, and perceived similarity between partners are also positively correlated with relationship quality.

The study also notes that the antagonistic aspects of narcissism are related to poorer relationship quality.

Overall, the study highlights the importance of secure attachment and higher agreeableness, and potentially higher conscientiousness personality traits for healthy relationships, while insecure attachment styles and high neuroticism personality trait can have detrimental effects on relationship functioning.

2.3.5 Useful Outcomes

As previously mentioned, this paper aligns with the purpose of the master's thesis by exploring theories such as the Big Five personality traits and attachment styles, which are integral to the thesis. Furthermore, the study investigates relationship satisfaction, which is a desired outcome of dating apps. The question remains: how do these theories relate to dating app users?

It is worth noting that these theories have been validated in numerous studies, and there are correlations between them. Understanding the role of neuroticism, agreeableness, and conscientiousness in relationship satisfaction, as well as the impact of secure attachment style on successful relationships, could provide a hypothesis that these traits and styles predict not only relationship satisfaction but also online dating app user satisfaction.

To sum up, this literature review provides a solid foundation for further research in this area using the given theories.

2.4 Methodology

This section focuses on the study conducted by Sharabi and Dykstra-DeVettethis (2019), which aims to investigate how online dating influences the initiation and development of offline relationships. The study adopts a qualitative, inductive approach and examines email messages exchanged by 105 online daters. Additionally, participants are followed up after their first face-to-face date to determine the likelihood of establishing a lasting relationship. The study explores theories related to self-disclosure, uncertainty reduction, and the hyper personal model of online communication.

Reviewing this literature can potentially benefit this thesis in several ways. Firstly, it can provide a theoretical framework to identify relevant theories and concepts that can guide research questions and develop a solid foundation for the thesis. Secondly, it can offer methodological guidance, inspiring the utilization of various effective research methods and techniques used in the field. Thirdly, it can enhance understanding of the topic of online dating and relationship

initiation, which can help develop more nuanced research questions and hypotheses and improve the overall quality of the thesis.

2.4.1 Foundation of the Research and Research Questions

The authors decide to break-down their research into three main building blocks, where they highlight the following topics:

- **Relationship initiation strategies**

  In the article, it is argued that traditional theoretical frameworks used in relationship initiation research are insufficient in comprehending the distinctive features of online dating, such as matching algorithms and norms for online self-presentation. As a result, scholars have begun to investigate online dating using online records, revealing that men are more inclined to start communication and that messages sent by physically attractive individuals or with particular linguistic cues are more likely to elicit a response. The article intends to expand on this research by examining the unique tactics that online daters utilize to commence relationships, leading to the formulation of the first research question. (Sharabi & Dykstra-DeVettethis, 2019, p. 4)

- **Gender differences in relationship initiation strategies**

  The impact of gender norms and scripts on dating behaviors is explored, and how these behaviors conform to social expectations for prescribed gender roles, leading to gender disparities in relationship initiation. Although it was initially thought that the lack of social cues in computer-mediated communication (CMC) might level the playing field, research shows that gender differences persist in online dating. The article delves into the potential for varying initiation tactics used by men and women in online dating communication. (Sharabi & Dykstra-DeVettethis, 2019, p. 3)

- **Online dating and the first offline date**

    The main focus of the third research question is to investigate how online dating communication influences the success of the first in-person date. The study aims to determine if particular relationship initiation strategies used in online dating can forecast favorable outcomes when transitioning offline. The final research question seeks to establish if specific strategies are linked with an increased probability of continued offline dating after the first date. (Sharabi & Dykstra-DeVettethis, 2019, p. 5)

2.4.2 Methodology

The study recruited participants from various sources, including online dating platforms, coffee shops, libraries, and university campuses, among others. Participants were asked to upload email messages sent to their potential offline dating partners, and demographic information was collected. A total of 105 participants provided 207 pages of email data, with 72.4% being women and 27.6% men. The majority of participants identified as White/Caucasian and heterosexual. The study also identified the most popular dating platforms used by participants, with Tinder being the most common, followed by OkCupid, Match, PlentyOfFish and eHarmony. Finally, participants who provided data on their first date rated their likelihood of a second date on a 0-100% scale. (Sharabi & Dykstra-DeVettethis, 2019, p. 6)

The authors conducted a qualitative content analysis of the data in two phases using grounded theory and the constant comparative method. The hyper personal model was used as a sensitizing framework. A codebook was established to define and locate concepts in the data, and seven categories and 18 subcategories of strategies were identified. Approximately 25% of the data was coded for the presence or absence of each strategy using NVivo 11 software, and intercoder reliability was achieved before the rest of the data was coded. (Sharabi & Dykstra-DeVettethis, 2019, p. 6)

2.4.3 Results

The study found that different strategies were used by participants to initiate relationships in online dating, such as matching algorithms and referencing profile information. Some participants also paid attention to their partner's writing style and response time, as nonverbal cues are absent in online communication. These findings suggest opportunities for future research on initiating relationships in online dating. (Sharabi & Dykstra-DeVettethis, 2019, p. 7)

The findings of RQ2 demonstrate distinct patterns in how men and women initiate relationships through online dating. Men tend to take a more direct approach by initiating first contact and using playful or direct pickup lines to express their interest in potential partners. Conversely, women exhibit greater selectivity and are more likely to indicate dissimilarities between themselves and potential matches. However, both genders displayed similarities in various other strategies, such as discussing their status, resources, and goals for online dating. It is important to acknowledge the commonalities among participants alongside the identified gender differences. (Sharabi & Dykstra-DeVettethis, 2019, p. 14)

The results of RQ3 show that the strategies used to initiate relationships in online dating may affect the outcome of the first date. Participants who used strategies that indicated a stronger possibility of a second date, such as discussing partner preferences, had a better chance of establishing a relationship that would result in a second date. Furthermore, the participants who met their partner offline were largely successful in establishing a relationship that would result in a second date. This finding provides additional evidence of the potential for online communication to spill over to affect features of offline relationships.

This study's limitations include a relatively young sample, participants' self-selection, the lack of partner-provided messages, and the homogeneity of the sample. However, the study offers valuable insights into the online dating process, including the relationship initiation strategies

used, how they differ based on gender, and how they may influence the success of a first date. (Sharabi & Dykstra-DeVettethis, 2019, p. 14)

Overall, this study suggests that communication prior to meeting may affect the outcome of a first date, and future research should explore how different user groups initiate relationships in online dating.

2.5 Sharing and Privacy

2.5.1 Sharing

This section will primarily focus on the paper written by Rosamond (2017), To sort, to match and to share: Addressivity in online platforms. The purpose of the paper was to examine the concept of addressivity in online dating platforms. Rosamond primarily chose to focus on OkCupid and how it is used to cultivate users' love for data analysis and desire to be part of aggregate data sets. Other themes that appear through this paper are user-generated data, data analysis and platform capitalism.

2.5.1.1 Online Dating Platforms and Self-appreciation

The author decides to focus on OkCupid as an exemplar of addressivity in online dating as the founders of the app focused on presenting automated matchmaking to the public with a fascination of data analysis. OkCupid is a dating site that analyzes user data using algorithms and generates detailed profiles to help users find compatible matches. These platforms encourage users to view their personal traits and preferences as valuable assets, contributing to a culture of self-appreciation. The idea of "human capital" explains how the self is turned into skills and capabilities that can be capitalized upon. Online dating platforms profit from collecting user data and selling targeted audiences to advertisers, while users use their personal traits as assets to attract potential dates. Analyzing the interactions between online daters and the platforms they use, which mix both libidinal and surveillance capitalist motivations, can help us understand this relationship. To analyze the complexities of online dating platforms, Rosamond

proposes a method known as addressivity, adapting a concept from literary studies. This method identifies five levels of addressivity in OkCupid, which are significant to understanding surveillance capitalism as an imbalance in the addressivity of the self as an asset. (Rosamond, 2017, p. 2)

2.5.1.2 Addressivity

According to Rosamond, Bakhtin defined addressivity as "*The quality of turning to someone*" or "*quality of being addressed to someone*" (Bakhtin, 1986, in Rosamond, 2017, p. 3). Put simply, this means that communication involves interaction between an author and an addressee, emphasizing the dialogic nature of language. Characters in literature and individuals constructing online dating profiles both demonstrate addressivity, as their self-consciousness is always turned outward. (Rosamond, 2017, p. 3)

2.5.2.2.1 Addressivity Among Online Daters

Co-founder of OkCupid, Christian Rudder, conducted extensive research on the linguistics and demographics of online dating preferences, which he compiled in his book called Dataclysm. He includes analysis studying how race affects dating preferences and the most commonly used phrases in dating profiles by different groups. His aim is to understand general questions about online dating profiles and identity through his analysis. (Rosamond, 2017, p. 4)

According to his research, online dating profiles reflect not only the user's self-perception but also their awareness of the platform's influence on their presentation as a dating subject. Users are conscious that their profile is being viewed by others and may therefore create a false image of themselves. Additionally, Rosamond posits that online dating platform users exist as an interface between humans, platforms, and automated analytics, and are not fully human in this context. (Rosamond, 2017, p. 4)

2.5.2.2.2 Addressivity From the Platform to the User

Adding another layer to addressivity is the platform's interaction with the user. OkCupid and other dating apps generate revenue from advertising and premium subscriptions, which involves monitoring user data to customize profiles for advertisers. This practice establishes the basis for online dating and surveillance capitalism. However, some users may not realize the algorithmic scrutiny involved in presenting themselves on the platform, leading to an imbalance in addressivity. This discrepancy is inherent in surveillance capitalism and is particularly relevant in the context of the desire to be seen romantically. In summary, the imbalance arises from the transparency users provide to the platform and the ambiguity the platform provides to the users. (Rosamond, 2017, p. 5)

2.5.2.2.3 Addressivity From the Platform to the Public

In an effort to address the unequal distribution of user engagement, OkCupid adopts a transparent approach by openly sharing information about its algorithm with the public. This initiative aims to provide users with a deeper understanding of how addressivity operates within the realm of online dating. The article highlights OkCupid's commitment to educating its users about data analytics, portraying their approach as informative and indicative of the company's dedication to user enlightenment. (Rosamond, 2017, p. 5)

The concept of platform capitalism and its relation to dating apps are also discussed by Rosamond. Platform capitalism refers to companies that provide platforms for users to generate data that is then sold to advertisers. The author introduces Nick Srnicek's theory of platform capitalism, which highlights the unique nature of platforms as intermediaries that bring people together (Srnicek, 2017, in Rosamond, 2017, p. 6). Rosamond argues that OkCupid's co-founder, Christian Rudder, presents platform-capitalist interests as being in the service of sociology, but the data sets he collects are driven by the interests of platform capitalism. (Rosamond, 2017, p. 6)

In general, dating websites not only employ user data to match them with potential partners for the sake of love, but also to connect them with advertisers. Although Rudder may be enthusiastic

about using data to foster romantic relationships, this practice is deeply embedded in platform capitalism and entails sharing personal data with advertisers. (Rosamond, 2017, p. 6)

2.5.1.3 Conclusion

Rosamond's analysis reveals that online dating platforms involve multiple layers of addressivity. The imbalance in the directionality of addressivity is apparent, with users focused on self-assetization while the company sees them as aggregate data sets. This is why OkCupid seeks to cultivate a love for data analysis in its users. By using Bakhtin's concept of addressivity, researchers can analyze the directionality and balance of acts of sharing online. This analysis helps to create a fuller picture of the complex relationships between online users and data analytics, including how romantic desire can be mobilized to align users with the analytic desires of platform capitalism.

2.5.2 Privacy

This thesis must address the crucial topic of privacy when it comes to sharing sensitive information online. Online users divulge various private information on a daily basis, such as their photos, interests, intentions, and even confidential thoughts shared with other users on the platform. The section will center on examining the privacy policies implemented by online dating platforms, with a specific focus on Privacy and Security Issues Associated with Mobile Dating Applications, a paper authored by Hayes and Snow in 2018.

2.5.2.1 Background

When using dating apps, users must reveal personal information, and their data may not be encrypted, making them vulnerable to social engineering attacks. The study by Hayes and Snow (2018) questions whether dating apps pose security risks or violate user privacy, citing a security flaw in Grindr where user location data was disclosed. Dating platforms collect vast amounts of data from users for marketing and revenue purposes, raising concerns about unethical behavior from app developers. (Haynes et al., 2018, p. 2)

2.5.2.2 Related Research

Previous research has explored the privacy and security concerns related to mobile apps. Haynes and Snow (2018) reference a study conducted by Pace University that found mobile apps collect and transmit user data without their knowledge. Other research has identified privacy risks in mobile dating apps, such as unauthorized access to private images and messages. (Haynes et al., 2018, p. 3) Additionally, research presented at an international conference revealed how hackers could exploit data gathered by dating apps (Qin et al., 2014 in Haynes et al., 2018, p. 3).

2.5.2.3 Methodology and Procedure

Haynes and Snow (2018) conducted a two-phase research on Tinder, Bumble, and Grindr dating apps. In the first phase, they analyzed the code, SQLite database, and HTTP requests to identify potential privacy policy violations. Their findings revealed that most app developers do not encrypt user information, posing a risk to both users and organizations. Additionally, they reviewed federal privacy laws and noted that while there is no single law requiring companies to maintain a privacy policy, certain state and federal laws imply the need for a written privacy policy concerning the collection and sharing of personally identifiable information with third parties. (Haynes et al., 2018, p. 4)

2.5.2.4 Results and Findings

The study shows that many app developers incorporate analytic reporting and advertising systems into their apps without disclosing the information collected by third-party companies, who can exploit permissions and share data beyond what privacy policies outline. The study suggests that users should have control over their data, and GDPR compliance by mobile app developers should be more closely monitored. Deep-linking between dating apps and other apps is not clearly disclosed, and companies should be transparent about how personal information is being used and shared.

2.6 Related Work: Conclusion

In conclusion, this literature review provides a comprehensive analysis of various aspects related to online dating. Through this review, it is evident that online dating has fundamentally changed the way people seek relationships and has created opportunities for meeting potential partners that may have been unlikely in conventional methods.

The literature review examines several topics, including online dating, personality, methodology, sharing, and privacy. Regarding personality, previous studies indicate that secure attachment and positive traits are strong predictors of successful relationships. The review also provides an example of qualitative content analysis utilizing grounded theory and the constant comparative method with NVivo 11 software to identify participants' online dating strategies. Additionally, the review delves into the concept of addressivity and its multi-layered nature when users interact with dating platforms. It highlights how users may be too preoccupied with their self-presentation to understand how the platforms utilize their data. This section also explores privacy concerns, suggesting that GDPR compliance should be closely monitored, particularly with regards to undisclosed deep linking between dating apps and other apps, and transparent sharing practices by companies. Overall, this review establishes a strong foundation for further research in these areas.

In summary, the review of the related literature provides a comprehensive overview of the current research areas related to online dating. It sheds light on the definition and impact of online dating platforms on contemporary dating culture, highlights the significance of personality traits in shaping user behavior and perception, and identifies successful methodologies for conducting qualitative content analysis. Furthermore, the paper discusses the importance of transparency and privacy issues in online dating platforms. These topics collectively form a solid foundation of knowledge that could inspire and guide future research in this field.

3. Theory

The theory section of the thesis will provide an in-depth understanding of the historical context and background of dating technology, as well as its evolution over time. This section will also discuss the various models and frameworks that have been used to study human behavior in the context of online dating.

The main models presented will be the Big Five personality traits and the theory of attachment as the theoretical framework for the study. Both theories have been widely researched and established as important concepts in the field of psychology for understanding human behavior, including motivations, impulses, desires, and needs. (Noftle & Shaver, 2006, p. 180)

In the context of online dating, understanding the Big Five Personality Model and Attachment Theory could provide insight into why certain individuals have different experiences using online dating apps.

For example, the Big Five personality traits could influence an individual's approach to online dating, such as the types of people they are attracted to and the level of effort they are willing to put into creating and maintaining a relationship. Additionally, understanding the various attachment styles could provide insight into why some individuals may be more susceptible to anxiety or insecurity in the context of online dating.

In summary, the combination of the Big Five personality traits and attachment theory provides a comprehensive framework for understanding individual differences in personality and how these differences influence behavior in the relation to online dating.

3.1 Dating Technology

The following section will provide an overview of dating technology, including its early origins and how it evolved over time. As well as the social and cultural factors that contributed to its widespread adoption and normalization in modern society (Stoicescu, 2019, p. 22). It will also explore the role of user experience and interface design in shaping the use of dating apps, and the impact of these factors on user behavior and interactions.

In recent years, the focus of research on dating technology has shifted from social and cultural aspects to more information science-based studies. The main themes across research have been on self-presentation, mate selection, algorithm analysis, privacy issues and users' data exploitation. (Comunello & Parisi, 2020)

3.1.1 History of Dating and Dating Technology

The following section will focus on the history of dating and what role technology plays within dating today.

3.1.1.1 History of Dating

The word date can be traced back to the book titled *Complete Guide to the Forms of a Wedding*, written in 1852 by George Routledge. (Routledge, 1896, pp.44)
It referred to a public outing when a man and woman would meet publicly. In the same book, the author gives guidance on how to conduct oneself in social situations, courtship rituals and expectations for romantic correspondence. (Routledge, 1896, pp.5)

The 1920s dating scene gained popularity among mixed college students. Later on, the 30s became known by collecting dates for college students who spent less money but dated even more. This type of romance was known as "*Rating and Dating*". In the 1950s and 60s, young individuals paired with one another in what was called *"The Steadies"*, which was a reflection of the postwar boom. Free love was a concept that became popular in the late 1960s, followed by

the taste-obsession yuppies of the 1980s, who mirrored an increasingly niche consumer-oriented economy. (Weigel, M., 2016)

Today, the Cambridge Dictionary defines the verb to date as: "*to regularly spend time with someone you have a romantic relationship with*". The word is also associated with synonyms such as courtship, pursue, hook up, etc. (Cambridge Dictionary, n.d.)

Dating and courtship have long been recognized as the building blocks of marriage, a fundamental institution that plays a crucial role in forming families and shaping nations. These processes serve as a means for individuals to understand and navigate their interactions with one another, creating meaningful connections. However, the advent of modernization and globalization has had a significant impact on the emotional experiences tied to marriage. As societies become more interconnected and cultures blend, the diversity of emotional experiences associated with marriage has become more uniform or flattened. The influence of global trends and cultural shifts has led to a homogenization of emotional norms and expectations within marital relationships. (Barclay & Thomson, 2020, p. 5)

The dating landscape has experienced significant transformations in the 21st century, largely due to remarkable technological advancements. Recent research reveals the pivotal role of online platforms in facilitating romantic connections, indicating that around one-third of married individuals in the United States between 2005 and 2012 met their partners through online means (Cacioppo et al., 2013, p. 10136). Moreover, the study by Cacioppo (2013) emphasizes that marriages that originated online exhibit higher levels of satisfaction and lower rates of separation or divorce (Cacioppo et al., 2013, p. 10139). These findings underscore the positive outcomes and potential advantages associated with the use of online platforms for initiating and nurturing relationships in today's society.

3.1.1.2 History of Dating Technology

Overall, technology has emerged and spread widely since the internet became a standard part of our society. Today, there are over a billion Facebook users and 500 million Twitter users (Cacioppo et al., 2013, pp. 10135). Statistics show that men spend 9.65% of their leisure time online, where women spend 6.81%. (U.S. Bureau of Labor Statistics, 2012)

Dating technology dates back to 1959, when Marriage Planning Service was launched by Philip Fialer and James Harvey. They used an IBM 650 computer to pair up 49 women and 49 men. (Gillmor, 2007, p. 74)

In 1965, Operation Match first emerged and was established by Jeff Tarr, Doug Ginsburg, and David Crump. This was the first computer dating service in the US. utilizing paper questionnaires processed on an IBM computer to match young college students seeking dates. Users received printed lists of matched individuals, providing names and telephone numbers, marking a significant milestone in the history of computer-based matchmaking. (Cohen & Weil, 1966, p. 4)

In 1995, the first online dating website dedicated to finding a significant other was founded, called Match.com. It allowed users to select their preferences such as gender, age range, location, hobbies, and lifestyle habits. Match.com has 30 million members today. (Sahib, 2019, p. 1)

Match.com's completion eHarmony launched in 2000. It is significant because it differentiates itself from other dating sites by focusing on creating long-term matches based on 29 dimensions of compatibility. Originally founded on strong Christian principles, eHarmony has expanded and adapted to compete in a more mature and competitive market, targeting both the religious and secular market segments. (Gupta, et. al., 2012, p. 48)

Dating apps began to surface around 2003 and experienced a significant surge in popularity between 2007 and 2008 (Quinoz, 2013, p. 183).

There are several dating apps on the market today, and it is estimated that there are 366 million active users worldwide, and the prediction for 2027 is that there will be 440 million users. One of the most popular dating apps today, with 50 million users worldwide is Tinder. (Dixon, 2023).

3.1.2 User Experience and Interface Design

As the internet has become widely accessible, dating apps have gained significant popularity as a means of being able to find a potential match (Thomas, 2012, p. 525). In the following section, two different dating applications that have been quite popular will be examined: Tinder and Bumble.

3.1.2.1 Tinder

3.8/4 Rating on Apple App Store
3.0/5 Rating on Google Play Store

Tinder App Description & Features

Tinder's App description states that they have had over 70 billion matches up to date. They highlight the following features:

- **Inclusivity**: referring to different kinds of sexuality, all are welcome.
- **Interests**: another popular feature on tinder is adding one's interests to the profile to give a better overview about oneself and their potential matches.
- **Verification**: Tinder also mentions that they have a feature called "*Photo Verified Profiles*", where an individual can verify the way they look in order to prevent scams and negative experiences.
- **Video Chat**: This feature is meant to provide a way to test whether there is chemistry between matches before meeting in person.

The premium features (paid features):

- **Likes**: This feature lets users see whoever has swiped right on them (initiated a matching).
- **Unlimited Likes**: This feature lets users swipe for as long as they like. The regular version of the app has "timeouts", which means that there is a limited number of profiles a user is allowed to swipe on.
- **Rewind**: This feature allows users to correct their "like" or "dislike".
- **Use Passport**: This feature allows users to swipe on profiles that are in different zip codes, cities, countries of the world.
- **Monthly Boost**: This feature allows users to get more attention by potential matches.
- **5 Super Likes per week**: This feature allows users to "super-like" profiles, which those profiles can then see and might influence them to swipe right and match.

(Tinder, 2023)

3.1.2.2 Bumble

4.3/5 Rating on Apple App Store

4/5 Rating on Google Play Store

Bumble App Description & Features

Bumble's App description states that millions of people have registered with them, with the motivation to create *'meaningful relationships, find friends and make purposeful connections'* (Bumble, 2023). This app does not only include the feature to find a romantic connection, but also a friendly one and a professional one. Some of their highlighted features include:

- **Top Filters**: This feature helps users filter the profiles they would like to see, based on the information they have inputted (ex. Non-smoker, political preference, religion, etc.)
- **Super Swipe:** This feature helps users get attention from the profiles they have liked
- **Spotlight:** This feature allows users to get more attention by potential matches.
- **Travel:** This feature allows users to swipe on profiles that are in different zip codes, cities, countries of the world.

They describe their rules as follows:

- **Inclusivity, equality, and respect:** Bumble emphasizes inclusivity, equality, and respect as foundational principles. They strive to create a dating environment that values diversity and treats all users with fairness and respect.

- **Heterosexual matches:** In the case of heterosexual matches, women are given 24 hours to initiate a chat, while men have 24 hours to respond. This approach empowers women to take the first step in initiating conversations.

- **Other matches:** For matches that are not heterosexual, both parties have 24 hours to start a chat or reply before the match expires. This ensures equal opportunity for both individuals to initiate communication.

- **Various settings:** Bumble offers three different modes to meet people: Date, BFF (to find new friends), and Bizz (to make professional connections). This allows users to explore different types of relationships and connections based on their preferences.

- **Basis**: Bumble operates based on principles of kindness and respect. Users are encouraged to report any abusive behavior encountered within the app, fostering a safe and supportive community.

(Bumble, 2023)

3.1.2.3 Conclusion

In conclusion, both Tinder and Bumble are popular dating apps that offer unique features and experiences for their users.

Tinder, with over 70 billion matches to date, focuses on inclusivity and interests. Users of all sexual orientations are welcome, and the option to add interests to profiles provides a better understanding of oneself and potential matches. Tinder also offers features such as verification for preventing scams and negative experiences, as well as video chat to test chemistry before meeting in person. The premium features include Likes, Unlimited Likes, Rewind, Passport,

Monthly Boost, and Super Likes, which enhance the user's experience and increase their visibility and matching opportunities.

Bumble, with millions of registered users, aims to facilitate meaningful relationships, friendships, and professional connections. The app highlights features like Top Filters for personalized profile filtering, Super Swipe for attracting attention from liked profiles, Spotlight for increased visibility, and Travel for connecting with people from different locations. Bumble stands out for its emphasis on inclusivity, equality, and respect. Women are empowered to make the first move in heterosexual matches, while non-heterosexual matches provide equal opportunities for both parties to initiate communication. Bumble also offers three modes (Date, BFF, and Bizz) to cater to different relationship preferences and fosters a community based on kindness and respect, encouraging users to report any abusive behavior.

Overall, both Tinder and Bumble provide platforms for individuals to explore different types of relationships, with each app offering unique features and guidelines that shape the user experience.

3.1.3 Social and Cultural Implications of Dating Technology

Online dating, dating applications and access to the internet have changed society in many different ways. The following section will highlight three different effects that dating technology has had on society today.

3.1.3.1 Diversification and Modernization

Diversification and modernization have been facilitated by the emergence of online dating, which provides individuals with the chance to connect and establish relationships with people they might not have encountered otherwise. This phenomenon has had a transformative impact on our society (Hergovich & Ortega, 2018, p. 1). Additionally, studies indicate that online dating has contributed to an increase in interracial relationships, highlighting the potential for greater diversity in romantic connections (Hergovich & Ortega, 2018, p. 3).

3.1.3.2 Rejection-mindset

While it may initially appear advantageous that dating app users have expanded their opportunities to connect with potential matches, this aspect also carries a downside. The sheer abundance of options can create a negative impact. Individuals may find themselves unsure of when to halt their search, resulting in a fear of commitment and a prevailing "rejection mindset." Paradoxically, the multitude of potential partners can lead to discontentment and exasperation, contradicting the notion that a greater number of choices would enhance the chances of finding an ideal partner. (Pronk & Denissen, 2020, p. 388)

3.1.3.3 Impact on Technological Advancements

Dating apps and their functionalities have not only had an impact on individuals but have also extended their influence to a broader societal level. The matching algorithms utilized by dating apps have served as a foundation for matching organ donors with recipients, as well as identifying potential matches among patients with similar genetic disorders (Gottlieb et al., 2015, p. 434). The remarkable implications of this application highlight the potential for further advancements in technology through the utilization of dating app features and algorithms.

3.1.3.4 Conclusion

In summary, dating technology has had significant social and cultural implications. Online dating has become the primary method of meeting partners, promoting diversification and modernization in relationships. However, the abundance of choices can lead to a "rejection mindset" and dissatisfaction. Additionally, dating app features have influenced technological advancements in areas such as organ donation and genetic matching. Overall, dating technology has reshaped society by changing how people connect and opening doors for further technological advancements.

3.1.4 Conclusion

In summary, dating technology has undergone significant advancements since the 1950s, revolutionizing the process of forming romantic connections and leading to notable social and

cultural implications. Dating apps have emerged as a popular method for seeking romantic partners in the United States, each offering distinct features and user experiences. Notably, these apps prioritize inclusivity and diversity, incorporating features such as profile editing, matching algorithms, video chat, and premium options to enhance the user's experience.

The impact of dating apps on society is multifaceted. On one hand, they have contributed to the diversification and modernization of society by enabling individuals to connect and establish relationships with people they may not have encountered otherwise. Additionally, dating apps have presented challenges, with the abundance of options leading to a rejection mindset and fear of commitment. However, dating app technologies have also influenced other industries, inspiring the development of technologies that benefit society in various ways.

In conclusion, dating technology plays a significant role in today's society. As society continues to evolve, the influence of dating technology is expected to shape the dynamics of relationships in the future.

3.2 The Big Five Personality Traits

The subsequent sections will emphasize the significance of personality psychology and delve into the reasons why The Big Five personality traits has been chosen for this thesis. The rationale behind selecting this framework will be supported by showcasing other established personality tests.

3.2.1 Introduction to Personality Psychology

An important subdivision of psychology explores personality, which studies individuals' uniqueness and their peculiar personality traits. The aim of this discipline is to give insight into how different psychological factors play a major role in the way these differences express themselves among individuals. There is a lot of debate regarding how situation, context, conscious vs. unconscious processes, genes, and environment shape one's personality. The current state of personality psychology has a healthy atmosphere, which has been supported by advances in genetics, neuroscience, social-cognitive theory, and the motivation to learn more about the relationship between emotion and personality. (Corr & Matthews, 2009, p. xxii)

The perspective on personality traits is that they have a casual force, which in its nature represents more than just an average of behavior. The theory of the trait is significant in order to understand underlying stability and causes of individual differences. (Corr & Matthews, 2009, p. xxix)

The three major perspectives in personality theory are: biological, cognitive, and social-psychological, of which each has its own aim of research.
The <u>biological</u> perspective highlights the role of genetics and brain development in imposing personality differences.
The <u>cognitive</u> perspective views personality as being shaped by one's thoughts, beliefs, and mental processes. The way in which an individual processes information and how that process impacts their behavior and actions.

The <u>social-psychological</u> perspective looks at personality and the relation to the social environment, including how individuals interact with each other, how cultural and societal norms impact personality development, and how social roles and expectations influence behavior and attitudes. Each of these perspectives offers a unique lens through which to understand the complex and multifaceted nature of human personality.

(Corr & Matthews, 2009, p. xxx)

3.2.2 Background and Overview of The Big Five Personality Traits

In psychology, the Big Five personality traits, also known as the five-factor model, has been widely researched and established as a validated framework for personality assessment (Goldberg, L. R., 1993). This model was first introduced by Donald Fiske (Fiske, D. W., 1949) and later extended by psychologists such as Paul Costa and Robert McCrae (McCrae, R. R., & Costa, P. T., Jr., 1999).

3.2.2.1 The Big Five Personality Traits: Five Dimensions

The Big Five Personality traits are made up of five dimensions. Those are also known as OCEAN, which stands for Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. (Johnson, 2017, p. 2)

Below each dimension will be described:

- **Openness**

    The dimension commonly known as openness to experience encompasses the interpretation of cognitive, emotional, and perceptual information by individuals. Those who score high in openness tend to exhibit a strong inclination towards exploration, displaying qualities of imagination and creativity. Furthermore, individuals with higher openness scores are more likely to support the notion of societal advancement through progressive and innovative social policies. (McCrae & Costa, 2012, p. 6)

- **Conscientiousness**

  Individuals with a conscientious disposition are marked by their ability to exercise self-discipline, exhibit organizational proficiency, and regulate their impulses. Those who score high in conscientiousness are typically recognized for their logical approach to decision-making, punctuality, and unwavering dedication to achieving exceptional outcomes. (McCrae & Costa., 2012, p. 6)

- **Extraversion**

  Extraversion is the dimension commonly referred to as sensitivity to positive emotion. It is observed that individuals who score higher in extraversion demonstrate heightened sensitivity to positive emotions. They exhibit a strong inclination towards sociability and actively engage in social gatherings (Costa et al., 2001, p. 164).

- **Agreeableness**

  Agreeableness pertains to individuals who exhibit traits of kindness and are commonly associated with empathy. Those who score high in this dimension actively seek to avoid conflicts and genuinely prioritize the feelings and well-being of others. (Costa et al., 2001, p. 164)

- **Neuroticism**

  Neuroticism is the term used to describe the dimension related to sensitivity to negative emotions. Individuals who score higher in this dimension tend to exhibit heightened sensitivity to negative emotions. They are more prone to experiencing feelings of anxiety, depression, anger, and emotional instability. (Costa et al., 2001, p. 164)

3.2.3 Justification for Utilizing the Big Five Personality Traits in the Study

The following section will present an overview of other personality models commonly utilized in clinical settings, as well as examine the strengths and weaknesses of each model. Additionally, this section will emphasize the reasons why the Big Five personality traits is considered to be the most fitting approach for this study, by presenting supporting evidence and discussing the benefits of using the Big Five personality traits over alternative models.

3.2.3.1 An Overview of Alternative Personality Models in Clinical Settings

The following section will present and examine alternative personality models that have been used in past research. These models will be evaluated by providing their advantages and disadvantages.

3.2.3.1.1 Myers-Briggs Type Indicator (MBTI)

This model was initially developed by Isabel Briggs Myers and her mother, Kathrine Briggs, having its roots within Carl Jung's theory of psychological types. (King & Mason, 2020, pp.1)

The result of the categorization process is the assignment of individuals into 16 distinct personality types, with four dichotomies, ex. INTJ. (King & Mason, 2020, pp.2)

- Extraversion-Introversion: The focus of attention separates individuals into two categories, those who focus more on the external environment, known as extraverts, and those who focus more on the internal environment, known as introverts. (King & Mason, 2020, pp.2)

- Sensing-Intuition: The information intake dimension divides individuals by a more structured and methodical way, relying on physical senses, known as sensing. Whereas intuition on the other hand, points out individuals that have a more holistic view on gathering information and perceive it in a wider context. (King & Mason, 2020, pp.2)

- Thinking-Feeling: The decision making dimension differentiates individuals based on using a more rational approach to determining their conclusions, known as thinking. In contrast, the feeling utilizes their empathy and personal values to conclude their verdict. (King & Mason, 2020, pp.3)

- <u>Judging-Perceiving</u>: This dimension examines the way individuals navigate in life. Valuing a structured, organized and decisive approach are those who score high in judging. Whereas those that score higher in perceiving prefer a more flexible, open minded, adaptable approach. (King & Mason, 2020, pp.3)

Strengths

There are several strengths that can be found in using the MBTI. A few of those are briefly discussed in the points below:

- **Encouraging Self-Discovery and Personal Development**

  The MBTI, due to its widespread use and accessibility, has been demonstrated to promote self-awareness and provide deeper insight into an individual's behavior patterns. This can lead to increased recognition of personal strengths and weaknesses, thereby promoting personal growth and development. (Carter Stark, L., 2011, pp. 14)

- **Versatile and User-Friendly Design**

  The MBTI can be used in many different settings, which makes it truly flexible. This includes counseling, coaching, team building, conflict resolution and career development. It also is known for its user-friendly design, with straight-forward and easy to understand questions. (Carter Stark, L., 2011, pp. 15)

Weaknesses

The MBTI has received some criticism in the field of personality psychology. Some of those include the following concepts, which are supported by empirical evidence:

- **Lack of empirical support**

  The criticism received in the perspective of lack of empirical support is determined by low levels of construct validity. The idea is that the model does not accurately measure what it declares to measure. "*The ipsative nature of the test means in essence people are*

measured against themselves, and the bipolar conception assumes that traits are opposites" (Furnham, 2020, pp. 3)

Druckman and Bjork (1991) highlight that there are a number of criticisms aimed at the model in regards to its reliability, validity, and effectiveness of applications (Druckman & Bjork, 1991, pp. 96). Additionally, the authors note that the model has not been thoroughly validated through long-term studies, raising concerns about why it continues to be widely employed by numerous organizations despite the lack of evidence (Druckman & Bjork, 1991, pp. 99).

- **Lack of predictiveness**

  Research findings indicate that the MBTI's reliability does not meet the expectations that personality remains a stable and relatively unchanging trait in adulthood. The test-retest reliability of the MBTI has been reported to range from 0.48 to a high of 0.73; however, this reliability decreases over longer retest intervals. Additionally, many participants receive different results upon retesting, especially when their initial scores fall near the midpoint of the scale. Such inconsistencies raise concerns regarding the accuracy of the four-letter type score and the validity of type interpretations for individuals with scores close to the middle of the scale (Pittenger, 2005, p. 214).

- **Lack of cultural sensitivity**

  Some research highlights the limitations of the MBTI test model in its sensitivity to cultural diversity. Cultural diversity encompasses unique characteristics that should not be overlooked when evaluating the validity of psychological test results. Therefore, cultural differences must be taken into account when conducting a validity assessment of such tests. (Shao, 2004, abstract)

- **Oversimplification**

  Some researchers argue that the Myers-Briggs Type Indicator (MBTI) oversimplifies human personality, reducing it to just a few traits. Additionally, there are concerns about the misuse of the instrument and oversimplification or incorrect application of information about preferences (Davison, 2005, pp. 437). In addition, the tool is often criticized on the basis of not covering a greater scope of one's personality, where it does not look at aspects such as neuroticism (King & Mason, 2020, pp.5).

To summarize, the Myers-Briggs Type Indicator (MBTI) is a well-known and frequently used personality model that is rooted in Carl Jung's theory of psychological types. Despite its broad recognition and versatility, the MBTI has faced numerous criticisms regarding its lack of empirical evidence, predictive power, cultural sensitivity, and oversimplification of personality psychology. On the positive side, the MBTI has a user-friendly design and can facilitate self-discovery and personal growth. However, after weighing the strengths and weaknesses, it appears that the MBTI may not be the best choice for use in this particular research setting.

3.2.3.1.2 Eysenck Personality Questionnaire (EPQ)

The Eysenck Personality Questionnaire (EPQ) was developed by psychologists Hans Jürgen Eysenck and Sybil B. G. Eysenck in the mid-20th century. It is considered a personality assessment instrument, designed to determine a person's levels of extraversion, neuroticism, and psychoticism (Hans Jürgen Eysenck & Sybil B. G. Eysenck, 1975).

This model is rooted in physiology and genetics and believes that personality differences are largely determined by genetic inheritance (Barret et al., 1998, p. 806).

Upon completion of the Eysenck Personality Questionnaire, an individual's scores are analyzed to generate a personality profile. The scores are then compared to the average scores of a normative sample to determine the individual's levels of extraversion, neuroticism, and psychoticism. This provides a description of the individual's personality in relation to the three dimensions measured by the questionnaire. (Colledani, Anselmi, & Robusto, 2018, pp. 2)

Dimensions

- Extraversion-Introversion

  This dimension differentiates individual's on their character and interaction with the outside world. Extraverted individuals are defined by their sociableness, talkativeness and dominance. On the other hand, introverts come off as more silent types, passive individuals and a strong sense of self-reflection. (Vázquez, Otero, & López, 2019, pp. 91)

- Neuroticism-Stability

  This dimension distinguishes individuals based on their sensitivity to negative emotion. Individuals that are more closely associated with neuroticism often feel anxious, depressed and insecure. On the opposite end, individuals that resonate stability are often characterized by emotional balance, security and higher levels of self-esteem. (Vázquez, Otero, & López, 2019, pp. 91)

- Psychoticism/Socialization

  This dimension contrasts individuals by their tendency toward psychological attachment/detachment. Individuals that identify with characteristics such as aggressiveness, impulsivity, manipulativeness, and egocentrism are leaning more towards the psychoticism side of the scale. On the other hand, characteristics such as compassion, cooperation and empathy categorize individuals more towards the other side of the scale. (Vázquez, Otero, & López, 2019, pp. 91)

Strengths

- **Reliability**

  The reliability of the Eysenck Personality Questionnaire (EPQ) has been evaluated in a number of studies, with results indicating that it produces consistent and valid results. One such study was conducted by Wilson and Doolabh (1992) who found evidence of reliability and factorial validity in their research. The abstract of the study highlights that

the EPQ is a reliable tool for measuring personality traits, providing consistent results with high factorial validity.

- **Cross-cultural sensitivity**

  Various studies have shown that the EPQ demonstrates cross-cultural sensitivity. A recent study examined data from 33 countries to assess the EPQ's measurement invariance across cultures. The results indicated that the EPQ's four-factor structure was generally applicable when compared to an English reference group. Although some item invariance issues were observed between countries, these findings do not impede the EPQ's effective use as a research tool in diverse cultural contexts. Overall, these results support the notion that the EPQ's factor structure is universal across different cultures (Bowden et al., 2016).

Weaknesses

- **Methodology**

  The Eysenck Personality Questionnaire (EPQ) has faced criticism over its accuracy. The issue is not with the questionnaire itself, but with the methods used to analyze results. The criticism is mostly based on studies done with non-British samples. There is a possibility that cultural differences could play a role in inconsistent results. (Hammond, 2002)

- **Simplistic approach**

  The Eysenck Personality Theory is criticized for being too simplistic and based on three flawed assumptions. The theory views personality traits as separate, distinct and independent, and regards them as the ultimate cause of a person's personality. This approach is not supported by the holistic perspective required for the study of personality and is considered problematic in the field of personality psychology. (Bagheri Noaparast, 1995, pp. 53-54)

- **Controversy**

  In other research conducted by Eysenck, he has been involved in a scandal, which overshadowed his research's trustworthiness and credibility. The allegations surrounding this scandal have not been investigated and this has raised concerns regarding his work. (Pelosi, 2019, pp. 434)

While the EPQ has some strengths, such as its reliability and cross-cultural sensitivity, it also has some significant drawbacks. Despite its strengths, the EPQ has faced criticism over its methodology and accuracy, with concerns raised about inconsistent results. Additionally, the EPQ has been criticized for its overly simplistic approach, which views personality traits as separate, distinct, and independent, and for its association with a scandal involving the lead researcher. Given these limitations, it may not be the most appropriate model for determining an individual's personality. Its flaws and controversies raise significant concerns about its validity and usefulness.

3.2.3.2 Validation of the Big Five Personality Traits Framework

The Big Five personality traits have been widely researched and the following sections will present the positive aspects as well as the limitations of the framework:

Strengths

- **Empirical Support**

  The Big Five personality traits have been extensively researched and have received substantial empirical support in terms of their reliability and validity. (McCrae, R. R., & Costa, P. T., 1987, p. 81-90)

- **Cross-Cultural Generality**

  The Big Five personality traits have been found to be universally applicable across cultures and languages, making it a useful framework for cross-cultural comparison and research. (Rolland, J. P., 2002, p. 20)

- **Parsimony**

  The Big Five personality traits are based on a parsimonious framework, meaning that they capture the most fundamental elements of human personality with just five dimensions. (McCrae, R. R., & Costa, P. T., Jr., 2008, p. 116)

- **Predictive Validity**

  The Big Five personality traits have been shown to have predictive validity in a wide range of domains, including health, well-being, job performance, and relationship satisfaction. (Bauer, T. N., & Erdogan, B., 2011, p. 41)

Weaknesses

- **Subjective Judgment in Factor Interpretation**

  Factor analysis is a method used by researchers to find patterns or themes in data. However, the problem with applying factor analysis to the Big Five personality traits is

that it involves subjective judgments in interpreting the meaning of the factors, which can vary among researchers. (Johnson, 2017, p.18)

- **Labeling Discrepancies**

  The labeling discrepancies in the five-factor model refer to different researchers using different names for the same factors, which creates confusion and makes it difficult to compare findings across studies. This issue hampers the ability to establish a consensus on the interpretation and labeling of the factors, potentially affecting the clarity and precision of the model. (Johnson, 2017, p. 8)

- **Item Variability**

  The variability in item selection and measurement instruments across studies in the Big Five personality traits makes it challenging to compare item factor loadings and ensure consistent findings. This lack of comparability and generalizability highlights the importance of using standardized measures and consistent item selection to improve the model's reliability and replicability. (Johnson, 2017, p. 27)

3.2.4 Conclusion

After evaluating alternative personality models commonly utilized in clinical settings, it is evident that the Big Five personality traits framework is the most appropriate choice for this study. The Myers-Briggs Type Indicator (MBTI) was considered, but its lack of empirical support, low predictiveness, limited cultural sensitivity, and oversimplification of human personality make it less suitable for this research.

Similarly, the Eysenck Personality Questionnaire (EPQ) has some strengths, such as reliability and cross-cultural sensitivity, but its methodology, simplistic approach, and controversies surrounding its lead researcher raise concerns about its validity and usefulness.

In contrast, the Big Five personality traits framework offers several compelling reasons for its selection. It has extensive empirical support, demonstrating reliability and validity across

numerous studies. The framework also exhibits cross-cultural generality, allowing for meaningful comparisons across diverse populations. Additionally, the Big Five's parsimony captures the fundamental elements of personality with just five dimensions, facilitating simplicity and ease of interpretation. Moreover, the Big Five personality traits have predictive validity in various domains, making them valuable for understanding individual differences in health, well-being, job performance, and relationship satisfaction.

While the Big Five personality traits framework has strengths, it is important to acknowledge its weaknesses. Subjective judgment in factor interpretation and labeling discrepancies among researchers can introduce variability and affect the consistency of findings. Item variability across studies further hampers comparability and generalizability. However, these limitations can be mitigated through the use of standardized measures and consistent item selection.

Given the substantial empirical support, cross-cultural applicability, parsimony, and predictive validity, the Big Five personality traits framework emerges as the most suitable approach for this study. By leveraging its strengths and addressing its limitations, this framework offers a comprehensive understanding of personality that aligns with the research goals and facilitates meaningful analysis and interpretation of findings.

3.3 Theory of Attachment

Attachment theory can be described as a psychological theory, focused on relationships between individuals. It is also thought to be an evolutionary and ethological theory due to its exploratory nature into human behavior and social organization, with emphasis on how individuals change over time. (Cassidy J., 1999, p. 3, 4)

3.3.1 Overview of Attachment Theory and Attachment Styles

Attachment theory was first recognized by psychiatrist and psychoanalyst John Bowlby. In his early work, he noted that there was great impact stemming from the mother-child relationship as a predictor for psychopathology later in an adult's life (Cassidy J., 1999, p. 3).

3.3.1.1 Attachment Styles

The below section will elaborate on the different attachment styles that are defined by attachment theory. Those include preoccupied, fearful, dismissing, and secure attachment.

Secure Attachment

Adults with a secure attachment style are confident in the reliability and availability of their attachment figures. They exhibit attachment behaviors, such as crying or expressing vulnerability, when faced with separation or loss. They are comfortable receiving and providing care to others and have low levels of avoidance and anxiety (Obegi & Berant, 2009, p. 334).

Preoccupied Attachment

Individuals with a preoccupied attachment style display low levels of avoidance but high levels of anxiety. They tend to score high on measures of self-disclosure, emotional expressiveness, and reliance on others. They frequently cry in the presence of others and use them as a secure base. However, they may score low on measures of coherence and self-confidence (Obegi & Berant, 2009, p. 59).

Fearful Attachment

Those with a fearful attachment style exhibit both high levels of avoidance and high levels of anxiety. They avoid close involvement with others due to fear of rejection. Compared to preoccupied individuals, they score lower on measures of self-disclosure, intimacy, reliance on others, and the use of others as a secure base (Obegi & Berant, 2009, p. 60).

Dismissing Attachment

The dismissing attachment style is characterized by high levels of avoidance and low levels of anxiety. These individuals struggle to trust the reliability of their attachment figures. They exhibit compulsive self-reliance and employ deactivating strategies, such as inhibiting crying during vulnerable or stressful situations. They are typically unwilling to receive caregiving from others or provide care for themselves. Their caregivers were consistently detached and unavailable, leading them to deactivate their attachment system and become compulsively self-reliant (Obegi & Berant, 2009, p. 337).

3.3.2. Justification for Utilizing the Attachment Theory in the Study

The following section will give an overview on the Theory of Attachment and clarify the relevancy of it being used to highlight the differences in behavior among online dating app users.

3.3.2.1 An Overview of Alternative Attachment Theory in Clinical Settings

Numerous interconnected concepts contribute to and enhance the comprehension of attachment theory, offering a comprehensive understanding of how human connections influence mental health, well-being, and self-identity. This section will introduce two of these concepts. Subsequently, a brief discussion will explain why attachment theory aligns more closely with the thesis compared to other theories.

3.3.2.1.1 Objects Relations Theory

Object relations theory emerged as a significant psychoanalytic framework through the contributions of Melanie Klein, W.R.D. Fairbairn, and D.W. Winnicott. This theory places a strong emphasis on the importance of interpersonal relationships and the ways in which individuals internalize their experiences with others, ultimately shaping their psychological functioning. By exploring the intricate dynamics of human connections, object relations theory provides valuable insights into the profound impact of relationships on mental health and overall well-being (Mills, 2010, p. 3).

3.3.2.1.2 Social Learning Theory

Social learning theory, pioneered by Albert Bandura, posits that individuals acquire knowledge and behavior by observing and imitating others, particularly when they perceive positive outcomes. This theory integrates elements from behaviorist and cognitive theories, emphasizing the significance of attention, memory, and motivation in the learning process. By highlighting the role of observation, imitation, and modeling, social learning theory acknowledges that behaviors can be learned through these processes (Tadayon Nabavi & Bijandi, 2011, p. 5).

3.3.2.1.3 Discussion and Comparison

Attachment theory offers a more suitable framework compared to Object Relations Theory and Social Learning Theory. While Object Relations Theory emphasizes interpersonal relationships and the internalization of experiences, attachment theory provides a more comprehensive understanding of how human connections impact mental health, well-being, and self-identity. It recognizes the unique bond between individuals and the profound impact it has on their emotional development. On the other hand, Social Learning Theory focuses on observation and imitation of others' behaviors, but it falls short in capturing the depth and complexity of attachment relationships. Attachment theory's emphasis on the attachment bond, caregiver responsiveness, and the interplay between emotions and relationships makes it a more compelling choice for understanding the dynamics of human connections.

This is why attachment theory proves to be more beneficial in this study compared to object relations theory and social learning theory when examining users of dating apps and their behavior and interaction with these platforms. The emphasis on the attachment bond and caregiver responsiveness within attachment theory provides valuable insights into how individuals form and maintain romantic relationships in a digital context. By considering users' attachment styles and their impact on dating app usage, this theory allows for a deeper understanding of patterns of interaction, relationship satisfaction, and the overall well-being of individuals engaged in virtual relationships. Thus, the utilization of attachment theory offers a more comprehensive framework to explore the complex dynamics of dating app experiences.

3.4 Theory: Conclusion

In conclusion, the theory section of this thesis provides a comprehensive overview of the theoretical frameworks and models relevant to the study of dating technology and human behavior within the context of online dating.

The Big Five personality traits and attachment theory emerge as the most suitable theories to examine individual differences and the impact of attachment styles on behavior in relation to online dating. The five-factor model offers insights into the influence of personality traits on individuals' approach to online dating, while attachment theory provides a deeper understanding of the attachment bond and caregiver responsiveness in the digital realm.

Moreover, this section highlights the historical evolution of dating technology and its societal implications. Dating apps have revolutionized the process of forming romantic connections, offering diverse features and user experiences that reflect inclusivity and diversity. While these apps have contributed to the modernization and diversification of society, they also present challenges such as a rejection mindset and fear of commitment.

By employing the Big Five personality traits and attachment theory, this study aims to delve into the complexities of dating app usage and examine users' behavior and interactions. The emphasis on attachment styles and caregiver responsiveness within attachment theory offers

valuable insights into how individuals form and maintain relationships in the digital context. By considering users' attachment styles, the study seeks to uncover patterns of interaction, relationship satisfaction, and overall well-being among individuals engaged in virtual relationships.

In conclusion, the combination of the Big Five personality traits and attachment theory provides a robust theoretical framework for understanding the dynamics of human behavior and relationships within the realm of dating apps. Through the utilization of these theories, this study aims to contribute to a deeper understanding of the complex dynamics and experiences of individuals using dating apps, ultimately shedding light on the impact of dating technology on society and relationships.

4. Methods

This section outlines the research methodology used in this study, which addresses the research questions. The research approach incorporates both qualitative and quantitative methods to collect and analyze empirical data. In order to achieve this, methods such as surveying through Google Forms, semi-structured interviews, conducting a pilot study and analysis of the data in R Studio will be utilized.

The methods used in this study are guided by a constructivist research paradigm, which emphasizes the social construction of reality and acknowledges the importance of individual experiences and perspectives in shaping understanding (Duarte & Baranauskas, 2016, pp. 3).

The **ontology** of this paradigm explains that reality is socially constructed and that individuals actively create their own understanding of the world through experiences and interactions. (Duarte & Baranauskas, 2016, pp. 3)

In this thesis, the focus on understanding how different individuals, with different personality traits and attachment styles, view and use dating apps aligns with the constructivist ontology. The study seeks to explore how individuals construct their own meaning and understanding of dating app technology.

The **epistemological** aspect of the constructivist paradigm highlights the subjective nature of knowledge. It emphasized the importance of individual experiences and perspectives, which shape the understanding of a given subject. (Duarte & Baranauskas, 2016, pp. 3)

The use of mixed methods in this study, with the consideration of Google forms survey to collect quantitative data; along with semi-structured interviews, to gather qualitative data; the idea aligns with the constructivist epistemology, as it acknowledges the importance of individual experiences and perspectives in shaping understanding.

The **methodology** of the constructivist paradigm involves a focus on inductive reasoning, the exploration of multiple perspectives and the use of qualitative methods. (Duarte & Baranauskas, 2016, pp. 3) The mixed-methods approach used in this research aligns with the above, by exploring multiple perspectives and using both qualitative and quantitative methods.

The constructivist **axiology** recognizes that the researcher's values and biases are inevitably intertwined with the research process. To promote a more nuanced and comprehensive understanding of the research topic, it is important for the researcher to be aware of their own values and biases (Duarte & Baranauskas, 2016, pp.3). In this study, participants' diverse experiences and opinions are valued, and reflexivity is encouraged to minimize potential biases. By being transparent about personal values and avoiding leading questions, this research can be conducted ethically and respectfully.

The **rhetoric** of the constructivist paradigm involves a focus on understanding how language and communication shape knowledge and understanding (Duarte & Baranauskas, 2016, pp.3). In this study, the use of semi-structured interviews to gather qualitative data aligns with this rhetoric, by allowing participants to express their experiences and perspectives in their own words.

The overarching research question that this study seeks to answer is how different people view and use dating apps, with the aim of exploring how the dating scene can evolve and create more personalized approaches that foster deep and meaningful connections between individuals.

To explore this question, a mixed-methods approach is being used to collect both qualitative and quantitative data. A Google Forms survey will be used to collect quantitative data on personality traits, attachment styles, and dating app usage, while semi-structured interviews will be conducted to gather qualitative data on participants' experiences and perspectives. The use of both data collection methods recognizes the subjectivity of knowledge and acknowledges the importance of individual experiences in shaping understanding.

Data analysis will be conducted using R and will include statistical analysis and thematic analysis to identify patterns and themes in the collected data. The researcher's role is to actively participate in the research process and to acknowledge their role in shaping the knowledge that is produced.

In addition, ethical considerations are being taken into account, such as maintaining participant anonymity and obtaining consent from participants. The instruments used to collect data will also be validated through comparison with existing research and exploration of patterns between participants' responses.

Overall, the constructivist paradigm provides a framework that allows for a nuanced and holistic understanding of how individuals view and use dating apps. By acknowledging the importance of individual experiences and perspectives, this study aims to contribute to the development of more personalized approaches to dating apps that foster meaningful connections between individuals.

4.1 Participants and Data

The participant pool was split into two different segments, where one segment was used to answer survey questions through google forms online and the other was used to interview in person.

4.1.1 Survey Participants

The initial pool of participants (n=27), referred to as survey participants, was composed of individuals who were not deliberately selected but rather obtained through word-of-mouth and online forums. The age range of these participants varied from 18 to 32 (Appendix 1, 1.3.1 *Age Histogram Distribution*), and both males and females chose to take part in the survey, with a slightly higher number of females responding (ratio 16:10), while one participant chose not to answer (Appendix 1, *1.3.2 Gender Bar Chart Distribution*).

Most survey participants reported having some level of education, with the majority indicating "high school or equivalent" as their highest educational attainment (Appendix 1, *1.3.3 Education and Employment Bar Chart Distribution*). Furthermore, a majority of participants stated that they were engaged in full-time employment (Appendix 1, *1.3.3 Education and Employment Bar Chart Distribution*), and most indicated being in a romantic relationship (Appendix 1, *1.3.4 Relationship Status Bar Chart Distribution*). In terms of attachment theory, most participants exhibited characteristics associated with the preoccupied attachment style (Appendix 1, *1.3.7 Barchart Attachment Styles Distribution*). Additionally, significant findings in the big five personality traits indicated high scores in the dimension of openness (Appendix 1, *1.3.5 Histogram The Big Five Scoring Distribution*).

4.1.2 Interview Participants

The participants for the interviews (n=20) were recruited using a combination of word-of-mouth and physical message boards. The majority of interview participants are students enrolled at Aalborg University in Copenhagen, which served as a convenient location for recruitment due to its high concentration of international students who are often open to participating in research studies. Similar to the survey participants, the age distribution of the interview participants ranges from 19 to 33, with a slightly higher representation of males (Appendix 1, *3.2.1 Demographic Interview Data: Age and Gender*).

An analysis of the interview participants reveals that there are individuals scoring higher in the dimensions of agreeableness, conscientiousness, neuroticism, and openness, while the dimension of extraversion shows a higher proportion of participants scoring low (Appendix 1, *3.2.2 The Big Five Personality Traits*). Notably, the prevailing attachment style among the participants is dismissal, with secure attachment being the second most prevalent (Appendix 1, *3.2.3 Attachment Theory*).

4.2 Research design and Materials

The research design and choice of suitable data collection methods play a vital role in any study, as they significantly influence the quality and trustworthiness of the gathered data. These factors ultimately contribute to the validity and comprehensiveness of the research findings (Sutton, 2021, p. 237).

In the following section, we will primarily focus on two key data collection methods employed in this study: surveys and semi-structured interviews.

4.2.1 Survey

A survey is defined as a means of collecting information and has been used for as long as individuals have been asking questions. Surveys are helpful in making conclusions based on respondent's opinions, beliefs, attitudes, practices, opinions and commitments. They are also used to evaluate, describe, compare, contrast, predict or explain something about how people think, feel and act. Surveys can be used to evaluate changes in attitudes, beliefs, or knowledge, as well as to better understand people by collecting basic demographic information. (Sutton, 2021, p. 9)

4.2.1.1 Important Considerations to Surveys

When initiating a survey project, careful planning and organization are vital. This involves developing a purpose statement, creating clear survey items, organizing the survey effectively, and considering ethical considerations. Encouraging respondent participation is also important. (Sutton, 2021, p. 79)

After gathering the data, understanding, and presenting the survey results is equally crucial. A thorough analysis and interpretation of research results is essential to glean insights from the collected data. In addition, it is important to understand concepts like reliability and validity, which help to ensure the accuracy and quality of survey data. (Sutton, 2021, p. 154, 162)

Finally, the communication of survey results is also crucial. This entails crafting survey reports that are tailored to different audiences. Learning from other examples of survey reports can provide valuable insight into creating reports that are effective in conveying the findings to diverse audiences. Additionally, consideration should be given to presenting the survey results to an audience in a clear, concise, and engaging manner, such as through visual aids or presentations. (Sutton, 2021, p. 191)

4.2.1.1.1 Justification of Survey Usage

Surveys serve as a powerful method for collecting quantitative data on individuals' feelings and thoughts, enabling researchers to identify patterns and draw conclusions about group perceptions. By employing surveys, researchers can efficiently collect large amounts of data, which can then be analyzed to gain insights and make meaningful correlations. (Sutton, 2021, p. 9) In the context of this study, which aims to examine the relationship between personality traits, attachment styles, and dating app usage and interaction, surveys are particularly suitable as a data collection method. One of the key advantages of surveys is their ability to capture a wide range of responses from a diverse sample size. In this study, the survey allows for the collection of data from a significant number of participants, facilitating a comprehensive analysis of the variables of interest (Sutton, 2021, p. 9). By measuring personality traits, attachment styles, and dating app usage and interaction through survey items, the researchers can systematically explore the relationships between these factors.

Moreover, surveys provide a structured and standardized approach to data collection. By employing carefully designed survey items, the study ensures consistency in the measurement of the variables across participants. This standardization enables researchers to draw reliable and valid conclusions based on the collected data. (Sutton, 2021, p. 175)

Furthermore, surveys offer the advantage of anonymity and confidentiality, which can promote honest responses from participants. In the context of studying sensitive topics such as dating app usage and attachment styles, the ability to gather candid responses is crucial to gaining a deeper understanding of individuals' experiences and perceptions. (Sutton, 2021, p. 65)

Overall, surveys provide a practical and efficient means to collect quantitative data and explore the correlations between personality traits, attachment styles, and dating app usage and interaction. The structured nature of surveys, the ability to collect large amounts of data, and the potential for anonymity contribute to the justification of using surveys as the primary data collection method in this study.

4.2.1.2 Google Forms

The choice of Google Forms as a survey tool and the use of different functionalities within this research will be explained in the following section.

4.2.1.2.1 Justification of Google Forms Usage

Google Forms, as a data collection method has become popular over the years, as a reflection of the shift towards using the internet as a medium. It is a versatile tool, which allows researchers to create surveys using various question types. Some of those include: multiple-choice, short answer, long answer, checkboxes and linear scale. With the customizable and moldable features, Google Forms makes a great user experience and user design, to make the process of building a survey as smooth as possible. (Kumar & Naik, 2016, pp.118, 123)

The tool allows to gather a large amount of data, which can be easily tracked and analyzed. One of the features that is greatly appreciated, is the fact that all answers are recorded and a Google Sheets is automatically created, in order to display the data in an excel format. This feature helps with later analysis, with the functionality to export the data in a CSV format and can then be imported into statistical software such as R or Python to perform more complex analysis. (Kumar & Naik, 2016, p.119)

Compared to the more old-fashioned ways of data collection, such as mailed questionnaires or Excel-based forms, this tool creates a faster and more efficient way to collect data. It eliminates the need for manual data entry, which reduces the potential for errors. In addition, the easy-to-

use interface and ability to customize the survey make it an attractive option for researchers who would like to collect high-quality data in a short amount of time. (Kumar & Naik, 2016, p.119)

It is worth emphasizing that Google Forms provides a cost-free solution for collecting information, as it is available to all users with a Google account. There are no concealed charges or expenses associated with its usage, making it an advantageous option for researchers seeking to avoid the costs of expensive survey tools or software. Google Forms enables the creation of numerous surveys with customizable sections and questions, catering to the specific needs of researchers. This accessibility renders it particularly appealing for individuals with limited budgets or resources who require data collection for their research projects. (Google Forms, Pricing)

In their about page, Google emphasizes their value of ethics and security in their service. The platform provides industry leading security measures such as advanced malware protections and encryption in transit. Additionally, Google adheres to robust privacy commitments and data protections, in order to ensure that it is private by design. Users can trust that their data is safe and secure on the platform and that only they have control over their own data. They also highlight that they never use the content for ad purposes or sell personal information to third parties. These measures demonstrate Google's commitment to protecting user data and privacy. (Google Forms, Security)

4.2.1.2.2 Google Forms in this Study

Google Forms was used to collect quantitative data on demographics, personality traits, attachment styles and dating app usage. The following points will better describe the use of different functionalities:

- **Sections**

  Google Forms has a feature that enables researchers to segment different sets of questions and implement rules such as conditional branching, whereby participants can be directed

to specific sections based on their responses to certain questions. This allows for a more streamlined survey experience and reduces the perceptive-length of the questionnaire. Additionally, using conditional branching ensures that participants are only presented with questions that are relevant to them. For example, if a participant indicates that they have never used dating apps, they can skip the corresponding section of the survey, as it would be irrelevant for them to answer questions about dating app experiences.

- **Required Answer**

  In several sections of the Google Forms survey, respondents are expected to answer all questions that have a "required answer" function. However, there are a few questions on the topic of intimacy that are optional. This decision was made to ensure that participants do not feel obligated to answer sensitive questions and to reduce any potential pressure on them to disclose personal information.

- **Multiple Choice**

  In this section, the use of multiple choice questions was deliberate as it allowed participants to choose from a set of predetermined options rather than having to enter their own data. This approach simplifies the analysis process as there are no discrepancies caused by participants entering the same values in different formats. Additionally, the multiple choice questions included an "other" option to allow participants to input their own response if none of the given options fit their answer.

- **Short & Long Answer**

  The survey comprises various question types, including short and long answer formats, to gather both quantitative and qualitative data. To ensure data accuracy, specific rules have been implemented for certain short answer questions, such as age, to only accept valid numerical values and minimize errors. Another short-answer question type prompts participants to elaborate on their "yes" or "no" responses, enabling a deeper understanding of their experiences and opinions. While this type of answer is more

qualitative, it provides valuable context for the research. Lastly, a long answer question allows participants to share additional comments or thoughts about their dating app experiences, offering an open-ended opportunity for insights beyond the earlier questions.

- **Check-boxes**

  Throughout the study, check-box questions have been utilized in two instances. Firstly, participants were presented with a question regarding which dating apps they have used, and check-boxes were used to enable respondents to select more than one answer. In addition, an "other" option was provided in case the apps used by the participant were not listed.

  Secondly, participants were asked to select their top five most and least appreciated dating app features using check-boxes. This allowed respondents to select multiple answers, including an "other" option. To ensure the validity of the data, a rule was implemented where participants were required to select no more than five features, and an error message was displayed if more than five features were selected: "*Please note that you can select up to 5 features*".

- **Linear-scale**

  The 5-point linear scale question type was exclusively utilized in the sections that assessed the big five personality traits and attachment styles. This was a deliberate decision, based on established research that advocates for the use of this specific method. The scale consists of two endpoints, with one being "*Strongly Disagree*" and the other being "*Strongly Agree*", or "*Not at all characteristic of me*" and "*Very characteristic of me*".

4.2.1.2.3 Conclusion

In summary, Google Forms proved to be a highly effective and efficient tool for collecting data in this study. The various question types, including multiple-choice, short and long answer, checkboxes, and linear scale, provided flexibility to collect both quantitative and qualitative data. The feature of segmenting different sets of questions and implementing rules, such as conditional branching, ensured that participants were only presented with relevant questions, leading to a more streamlined and shorter survey experience. Additionally, the tool's accessibility, affordability, and user-friendly interface make it a desirable option for researchers who are looking to gather high-quality data in a short amount of time. Finally, the emphasis on privacy and security measures by Google reinforces the trust and confidence in the platform for researchers and participants alike.

4.2.1.3 Survey Guide

The survey was structured into multiple sections to ensure a thorough collection of data across different aspects. These sections encompass obtaining consent, gathering demographic information, exploring dating app usage, assessing the Big Five Personality Traits, and examining the Attachment Theory. For the specific questions included in each section, please refer to Appendix 2: Interview and Survey Materials.

- **Consent**

  The first section of the survey is dedicated to obtaining consent from the participants. It outlines the purpose of the survey, assures confidentiality and anonymity, and explains the participants' rights.

- **Demographic Information**

  The second section aims to gather demographic information from the survey respondents. This includes questions related to age, gender, education level, occupation, and any other relevant demographic variables.

- **Dating App Usage**

  The third section focuses on collecting data about participants' experiences and behaviors related to dating app usage. This includes questions about the frequency of app usage, preferred dating apps, duration of app usage, and specific features they appreciate or dislike in dating apps.

- **The Big Five Personality Traits**

  The fourth section aims to evaluate the Big Five personality traits, which are widely recognized as fundamental dimensions of human personality. In this section, participants will be asked to rate 44 statements on a 5-point Likert scale. These statements are carefully selected from The Big Five Trait Taxonomy, authored by John Srivastava (1999), and they cover aspects related to extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience.

- **Attachment Theory**

  The last section of the survey is dedicated to gathering data concerning attachment theory, which investigates how individuals develop and nurture relationships based on their attachment styles. In this section, participants will be prompted to rate 18 statements on a 5-point Likert scale, which represent various attachment styles. These statements have been carefully chosen from Nancy Collins' work (2008) to accurately capture different dimensions of attachment.

4.2.1.4 Pilot Survey

According to research, piloting a survey before launching it to a larger audience can be a beneficial process to avoid mishaps. The pretest should use the same software, recruiting, and data collection methods as the final survey, with a smaller sample size of 5-10 participants. It is important to keep track of how long it takes participants to complete the survey and any issues they encounter. Following up with pilot participants via email can provide additional insight into any problems or issues encountered during the pretest. (Goodman et al., 2012, pp. 348)

A pilot survey with five participants was conducted in-person to gain insights into the survey creation process. The participants were not informed that it was a pre-test to ensure accurate results. The pilot survey provided useful feedback on the survey, as seen in the table below:

Pilot Participant	Time (min)	Summarized Feedback
1	7:25	Not enough questions in the app section. Maybe add an open-ended question too?
2	5:43	One question was repeated in the personality section
3	8:36	There was no question on whether we agree to share our data
4	7:47	It was shorter than I expected
5	6:54	Straight to the point, I enjoyed answering the questions

Figure 2: Table presenting pilot survey results

The average time taken by the participants to answer the questions was 7 minutes and 17 seconds, which is useful information for advertising the survey. The participants provided some useful comments, such as adding an open-ended question to the app section and noting that a question was repeated in the personality section. Another important highlight was the absence of a question regarding sharing data in the study. Two participants enjoyed the survey, while one

noted that it was shorter than expected. Overall, the pilot survey was useful in identifying areas for improvement in the survey design. All comments were considered and the survey was upgraded and expanded afterwards.

4.2.2 Interview

Interviewing refers to the process of gathering information about individuals' experiences, including their feelings about those experiences and how they impacted their lives. This method is widely used in qualitative research due to its flexibility and affordability. Interviews are particularly useful in mixed-methods studies, as they provide rich and detailed data that can complement quantitative data and provide a more comprehensive understanding of the research topic. According to Bryman (2016), there are two types of interviews: semi-structured and unstructured. Semi-structured interviews are organized and consist of a predetermined set of questions for participants to answer. In contrast, unstructured interviews allow participants more control and flexibility in exploring the subject matter, resulting in a more in-depth and spontaneous discussion. (Bryman, 2016, p. 446)

The use of the semi-structured interview method within this research will be justified in the following section, along with an explanation of how the method was utilized. Additionally, a pilot interview was conducted to gain a better understanding of potential issues that might arise and how the process could be improved for a better experience for the participants.

4.2.2.1 Semi-structured Interview

The semi-structured interview is widely utilized in the social sciences and serves as an exploratory tool for researchers to delve deep into a topic and uncover new insights. Its primary purpose is to explore individuals' narratives and life stories, providing valuable context for the research. Unlike structured interviews, the semi-structured format offers flexibility and freedom, enabling researchers and interviewees to go beyond the predetermined questions and delve into various aspects of the subject matter. (Ruslin, 2022, p. 4)

This type of interview is characterized by its informal style, resembling a dialogue exchange rather than a rigid question-and-answer format (Ruslin, 2022, p. 5). It aligns with the constructivist paradigm, which emphasizes the importance of individuals' experiences and perspectives. By employing the semi-structured interview method, participants are given the space to express themselves authentically and fully (Frances, 2009, p. 310).

Researchers advise against using rigid, predetermined questions and suggest adopting a flexible approach instead. It is crucial to outline the intended topics and themes for discussion during the interview process. Incorporating closed-ended questions can facilitate a transition to open-ended discussions. Creating a comfortable environment for participants, particularly when addressing socially sensitive questions, is important. Additionally, it is recommended to begin with non-threatening inquiries and gradually introduce deeper and more sensitive subjects. (Adams, 2015, p. 498)

4.2.2.1.1 Semi-structured Interview in this study

To gain a better understanding of how different types of people interact with dating apps, semi-structured interviews were conducted. The objective was to gain insights into participants' thoughts and perspectives in a flexible and agile manner. The semi-structured format allowed for participants to discuss additional topics that were not initially covered in the interview guide.

Participants were recruited through a post on the Aalborg University in Copenhagen bulletin board, in order to gain a wider range of audiences. The interview questions were broader compared to the survey questions and included inquiries about participants' app usage, favorite and least favorite app features, emotional reactions to app use, and information sought from potential matches. Additionally, upon participant's comfortability, they were asked to show their dating app profiles and explain their use of the app.

One challenge encountered during the interviews was that participants were eager to keep talking, resulting in sessions that sometimes went on longer than anticipated. Nevertheless, the data collected from the interviews was valuable and insightful.

The interviews were recorded and later coded for analysis. However, there may be some challenges with data alignment as the conversations could lead to several different directions due to the non-structured nature of the interviews. Future analysis will involve sentiment analysis of the interview transcripts.

4.2.2.1.2 Semi-structured Pilot Interview

A semi-structured pilot interview was deployed in order to see how the process could be improved. 4 participants were interviewed and not included in the final results, to only examine whether the environment, questions and set-up was most productive.

Pilot Participant	Time (min)	Summarized Feedback
1	35:32	Felt comfortable, good time, great outlining questions.
2	25:43	Did not have much to talk about, did not enjoy the straight-forwardness, questions were too personal.
3	44:26	Enjoyed the dialogue, could keep on talking forever.
4	29:16	Short and sweet, felt good in the environment, and could share more.
5	51:22	It was quite long, would have appreciated a cut-off earlier on. Questions and dialogue was fine.

Figure 3: Table presenting semi-structured pilot interview results

The semi-structured interview received mixed responses. Some respondents expressed comfort and enjoyment during the dialogue, while others mentioned concerns about timing and directness. This feedback served as a valuable learning experience for the interviewer, helping them gauge the progression of questions and determine when to conclude the interview. The feedback was carefully reviewed and incorporated into the subsequent real semi-structured interviews.

4.2.2.2 Semi-structured Interview Guide

The semi-structured interview was set up in the following way:

- **Pre-Interview Survey**

  Prior to the interview, the participants were required to complete a survey that included questions about attachment styles and the Big Five Personality Traits.

- **Semi-Structured Interview**

  The interview followed a semi-structured format, where a set of overarching questions were established to guide the discussion. Each participant was presented with a maximum of 5 questions, although additional questions were prepared for reference and inspiration. Please refer to Appendix 2: 2.2 Interview Questions for the complete list of questions.

4.3 Analysis

In the forthcoming sections, the methodologies employed to analyze the collected data and address the research questions will be elucidated. The R programming language was utilized to implement these methods.

4.3.1 Text Mining in R

Text mining has emerged as a popular approach for analyzing vast amounts of data, which is particularly relevant in today's digital era characterized by a significant surge in information volume (Kim Hung, 2021, p. 3).

Text mining involves the extraction and analysis of textual data with the objective of presenting it in a meaningful manner (Kim Hung, 2021, p. 4). There are various techniques available to present data when employing text mining as a method. These techniques encompass tasks such as cleaning up text data, word frequency analysis, generating word clouds, constructing word association charts, conducting sentiment analysis, and more (Kim Hung, 2021, p. 5).

In this study, text mining will be employed to analyze the collected interview data. Analyzing transcripts from interviews with 20 participants can be a time-consuming endeavor. However, text mining facilitates the identification of frequently discussed topics, the most commonly used words, and even provides insights into the participants' sentiments towards the discussed topics.

4.3.1.1 Tidy Text Format

To initiate the text mining process, it is crucial to grasp the concept of the tidy text format. This approach involves segmenting a substantial text corpus into tokens, where each column represents a variable and each row contains individual tokens, also referred to as words. The implementation of this method utilizes packages such as dplyr and tidyr (Silge & Robinson, 2017, p. 1).

4.3.1.2 Sentiment Analysis

Sentiment analysis involves examining the tidy text format to discern the emotional connotations associated with words in a dataset. This analytical process assigns a positive or negative context to each word (Silge & Robinson, 2017, p. 13).

For instance, words like "happy" would be considered positive, while "sad" would be regarded as negative. In the context of the data collected through semi-structured interviews in this thesis, sentiment analysis proves valuable as it goes beyond mere word frequency counts, enabling a deeper understanding of the meaning and emotional expression conveyed by the participants.

4.3.2 Regression

Regression is a statistical modeling technique that involves modeling the relationship between an outcome variable and one or more predictor variables, represented mathematically as a function.

Regression is used for two main purposes: modeling for explanation, where the goal is to describe and quantify the relationship between the outcome variable and the predictor variables, and modeling for prediction, where the focus is on making accurate predictions of the outcome variable based on the information in the predictor variables.
Regression can be used to analyze and understand the effects of different variables on an outcome of interest, determine the significance of relationships, identify causal relationships, and make predictions about the outcome variable based on the predictor variables. In this book, the focus is on linear regression, which is a commonly used and easily understandable approach to modeling. (Ismay & Kim, 2020, ch. 5)

In this thesis, regression will be used to understand relationships between different variables. Good examples are research question 1 and 2, where the first examines the relationship between

The Big Five Personality Traits and dating app usage, and the second one examines the relationship between frequency of dating app usage and preferred functionalities.

Due to smaller sample size and possible outliers, it might be beneficial to use LOESS regression, which is useful when the relationship between variables is expected to be non-linear or when local patterns in the data need to be captured, allowing for more flexible modeling and accounting for potential nonlinearities or irregularities in the data (Tate et al., 2005, p. 275).

A LOESS regression can be achieved by using geom_smooth() function and setting the method argument as LOESS. (Healy, 2018, ch.6)

4.4 Methods: Conclusion

In conclusion, this section has provided a comprehensive overview of the research methodology employed in this study to address the research questions. The research approach integrates qualitative and quantitative methods to collect and analyze empirical data. The constructivist research paradigm guides the methods used in this study, emphasizing the social construction of reality and acknowledging the significance of individual experiences and perspectives in shaping understanding.

The mixed-methods approach, combining surveying through Google Forms and semi-structured interviews, aligns with the constructivist ontology and epistemology. The focus on inductive reasoning, exploration of multiple perspectives, and utilization of qualitative methods in this research align with the constructivist methodology. Moreover, the constructivist axiology highlights the recognition of researchers' values and biases, which are addressed through valuing participants' diverse experiences and encouraging reflexivity.

The use of semi-structured interviews, particularly, allows participants to express their experiences and perspectives in their own words, aligning with the constructivist rhetoric.

Additionally, the survey and interview participant characteristics have been presented, providing an overview of the demographic profiles and attachment styles exhibited by the participants.

Furthermore, the analysis methods used in this study have been outlined. Text mining, including sentiment analysis, is employed to analyze the qualitative data gathered from the interviews, enabling a deeper understanding of the emotional connotations associated with participants' responses. Regression analysis, specifically LOESS regression, is utilized to examine the relationships between variables, considering the non-linear nature and possible outliers in the data.

In summary, the combination of qualitative and quantitative methods, guided by the constructivist research paradigm, allows for a comprehensive exploration of how individuals view and use dating apps, while considering the subjective nature of knowledge and the significance of individual experiences and perspectives.

5. Results

The results section provides a comprehensive overview of the data collected from the survey and semi-structured interview. An analysis of the data will be conducted to address the research questions. Summarized results from the data collected can be found in Appendix 1: All Results. As described in the methods section, a combination of text mining and regression analysis was employed.

5.1 Data

The collection and utilization of two data sets, survey data and interview data, was described in the Methods section of the study. The following is a summary of the two data sets:

5.1.1 Survey Data

The survey dataset contains 27 observations and 34 variables. These variables are organized into two distinct sections: Demographics, which encompasses demographic information, attachment styles and personality traits, and Dating App Usage, which focuses on data related to the participants' usage of dating apps. For a comprehensive breakdown of the variables, please refer to Appendix 1, section 2.1 titled "Dating App Usage Survey Data."

- **Demographics**
    - Participant ID
    - Age
    - Gender
    - Education Status
    - Employment Status
    - Relationship Status
    - The Big Five Personality Traits (Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness)
    - Attachment Styles (Dismissing, Secure, Anxious, Preoccupied)

- **Dating App Usage**
    - Dating App Usage
    - Dating App Type
    - Dating App Features Likes
    - Dating App Features Premium Paid
    - Dating App Chat Amount
    - Dating App Meet Amount
    - Dating App Date Amount
    - Dating App Intimate
    - Dating App Intimate Amount
    - Dating App Relationship Status
    - Dating App Usage Frequency
    - Dating App Conversation Initiation
    - Dating App Ghosted Others
    - Dating App Experience Amount
    - Dating App Additional Info
    - Dating App Motivation
    - Dating App Features Dislikes

5.1.2 Interview Data

The dataset obtained from the interviews consists of 20 observations and 10 variables. These variables are described in the columns provided. For additional details and a comprehensive overview of the interview data, please refer to Appendix 1, specifically section 3.1 titled "Interview Data."

- Participant ID
- Age
- Gender
- The Big Five Personality Traits (Extraversion, Agreeableness, Neuroticism, Conscientiousness, Openness)
- Attachment Styles (Dismissing, Secure, Anxious, Preoccupied)
- Interview Transcript

5.2 Research Question Results

The following section is intended to address and provide insights into the research questions outlined in the introduction. A clear understanding of these research inquiries will be sought through a comprehensive analysis of the collected data.

5.2.1 RQ1: How do personality traits impact patterns of interaction with other users through dating apps?

This research question will be further divided into three categories to align with the divisions in the interaction with other users through dating apps: the number of potential matches met, the number of potential matches dated, and the number of intimate potential matches. The data set used will be from the survey participants.

5.2.1.1 Relationship between Personality Traits and number of potential matches met.

The analysis of the dataset provides valuable insights into the relationship between personality traits and the number of potential partners met in person. Despite the presence of outliers, several patterns can be observed from the visualizations.

Firstly, individuals with higher scores in <u>agreeableness</u> tend to meet a higher number of potential partners in real life, indicating a positive association between agreeableness and meeting potential matches.
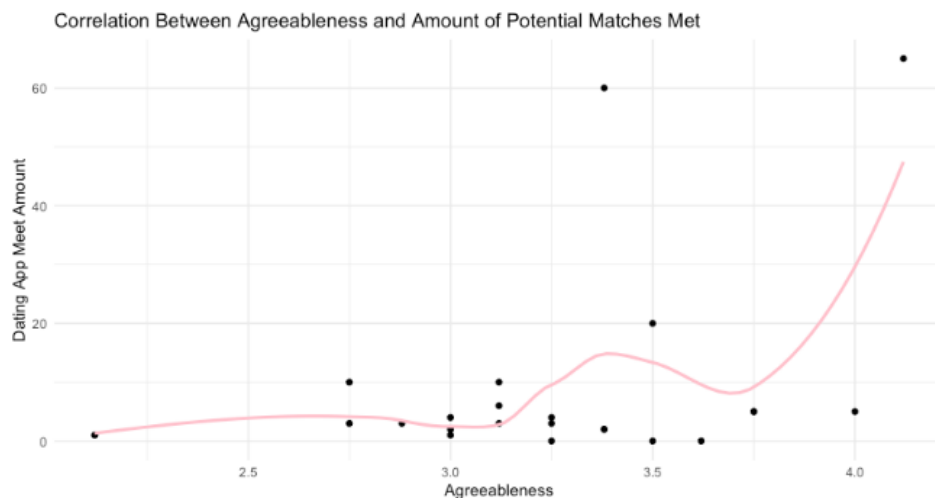
In the <u>extraversion</u> dimension, there is a slight increase in meeting matches in real life for individuals scoring between 3 and 3.25. An intriguing outlier with an extraversion score of 3 and a remarkably high number of potential matches (60) suggests that higher extraversion scores correlate with meeting more potential partners.


Correlation Between Extraversion and Amount of Potential Matches Met
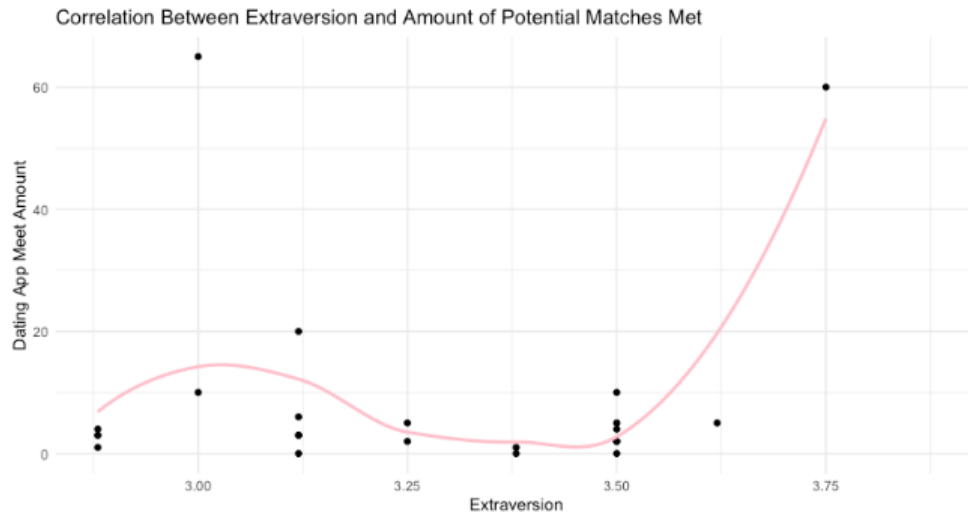
Surprisingly, <u>openness</u> does not strongly predict how individuals meet potential partners. In fact, individuals with the highest openness scores meet fewer potential partners in real life compared to those with lower scores. This finding suggests that the relationship between openness and meeting potential partners is not straightforward and may be influenced by other unknown factors.

Correlation Between Openness and Amount of Potential Matches Met
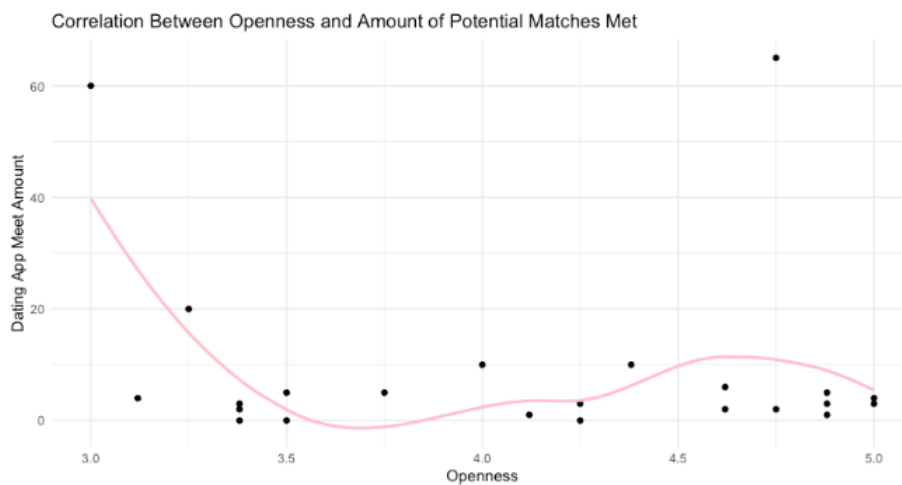
Furthermore, participants with higher <u>conscientiousness</u> scores tend to meet fewer potential partners. The curve representing this relationship starts high below a score of 3, gradually decreases around 3.5, and then drops significantly at a score of 4. This indicates a negative association between conscientiousness and the number of potential matches.

Correlation Between Conscientiousness and Amount of Potential Matches Met
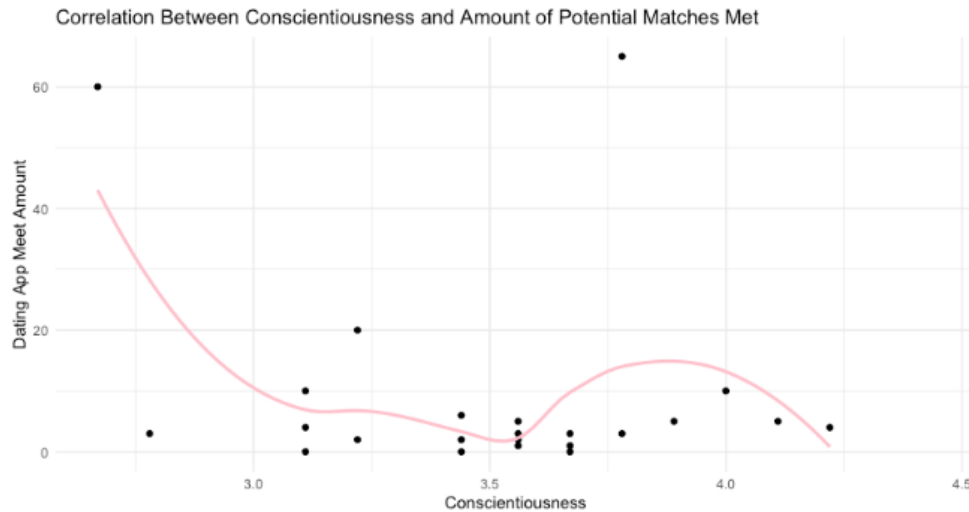
Regarding <u>neuroticism</u>, individuals scoring between 3 and 3.3 tend to meet more potential partners, and the number of matches also increases for those scoring higher than 3.7. This suggests a nonlinear relationship between neuroticism and meeting potential partners.

Correlation Between Neuroticism and Amount of Potential Matches Met
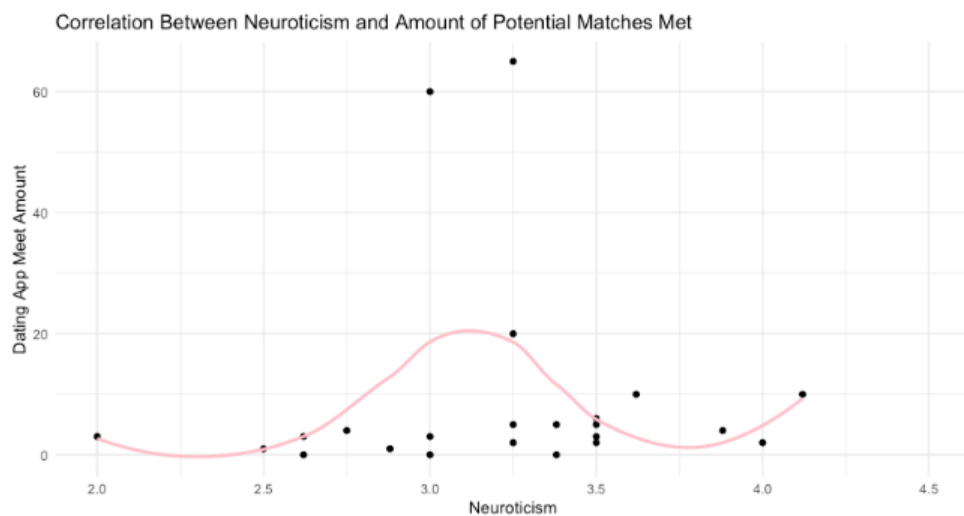
5.2.1.2 Relationship between Personality Traits and number of potential matches dated.

The visualizations provide a clearer understanding of the relationship between personality trait scores and the number of individuals participants have dated.

Regarding <u>openness</u>, it can be noted that higher levels of openness do correlate to the survey respondents having dated more potential partners. In the graph between scores 4 and 5 there are some that hadn't dated anyone, however also some that have dated 2-4 potential partners.

Correlation Between Openness and Amount of Potential Matches Dated
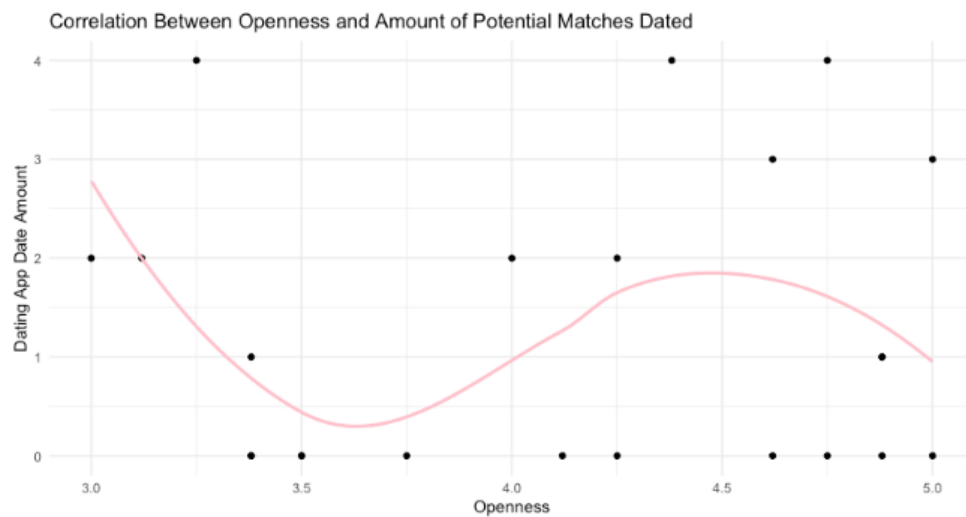
The relationship between <u>neuroticism</u> and the number of potential partners dated is dynamic, with higher scores of neuroticism generally corresponding to more individuals dated, but lower scores also showing a significant number of individuals dated.

Correlation Between Neuroticism and Amount of Potential Matches Dated
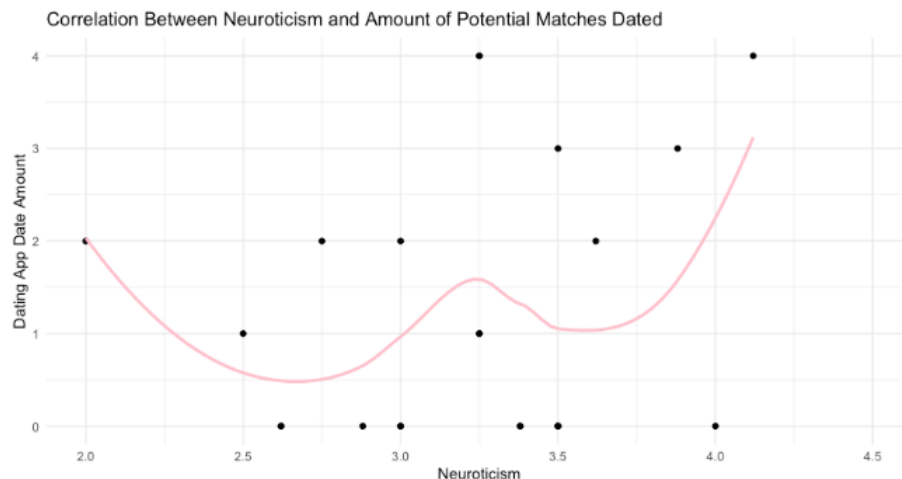
Regarding <u>extraversion</u>, contrary to expectations, a higher number of individuals dated is associated with lower scores, specifically between the range of 2.75 and 3.25. However, as the extraversion score decreases at 3.25, the trend starts to increase, and exhibits a positive association.

Correlation Between Extraversion and Amount of Potential Matches Dated
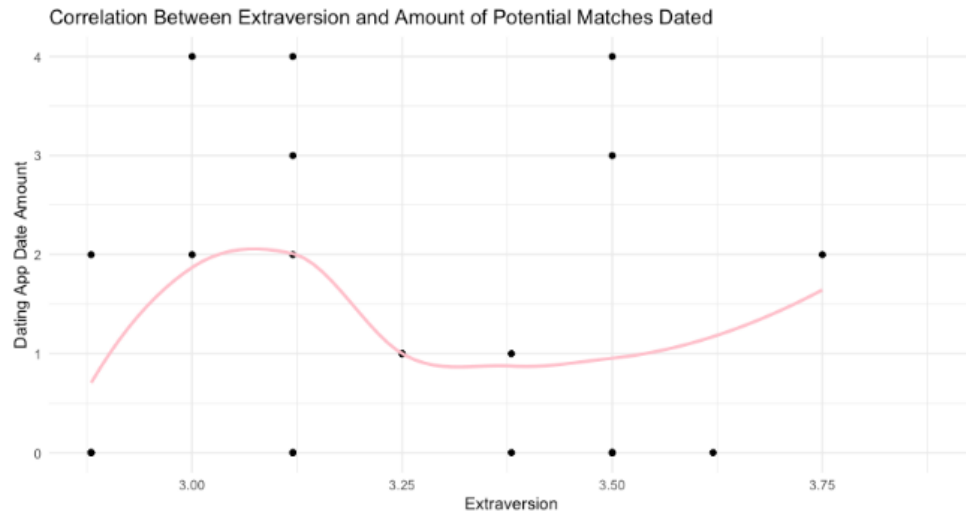
While <u>agreeableness</u> generally shows a positive relationship with the number of individuals dated, there are some inconsistencies in the data, making it difficult to draw a clear conclusion. The inconsistencies are related to the low volume of survey respondents and outliers.

Correlation Between Agreeableness and Amount of Potential Matches Dated
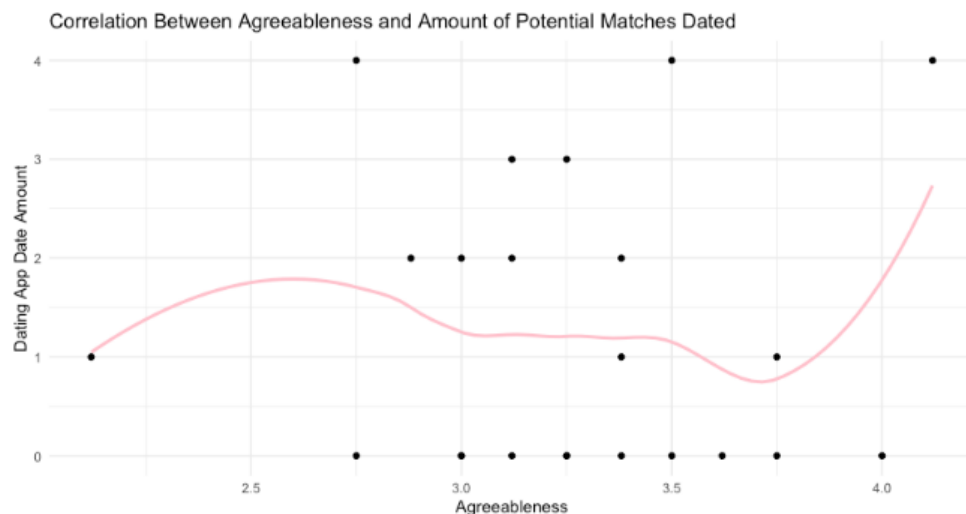
Finally, <u>conscientiousness</u> appears to have a positive relationship with the number of individuals dated, although there are participants within the 2.5 to 4 score range who have responded that they have not dated anyone. The overall trend shows a positive association.

Correlation Between Conscientiousness and Amount of Potential Matches Dated
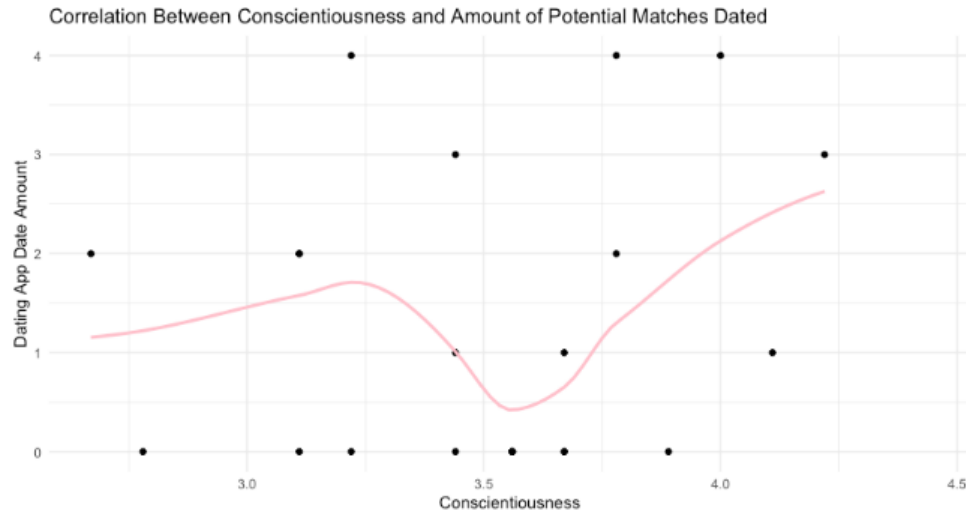
5.2.1.3 Relationship between Personality Traits and number of potential matches been intimate with.

The visualizations presented below offer a comprehensive overview of how Personality Traits relate to the number of potential matches with whom the survey respondents reported being intimate.

When examining <u>agreeableness</u> scores, it becomes apparent that higher scores in Agreeableness correspond to a greater number of intimate partners. Notably, there is an outlier who scores above 4 in agreeableness and also reports the highest number of intimate partners.
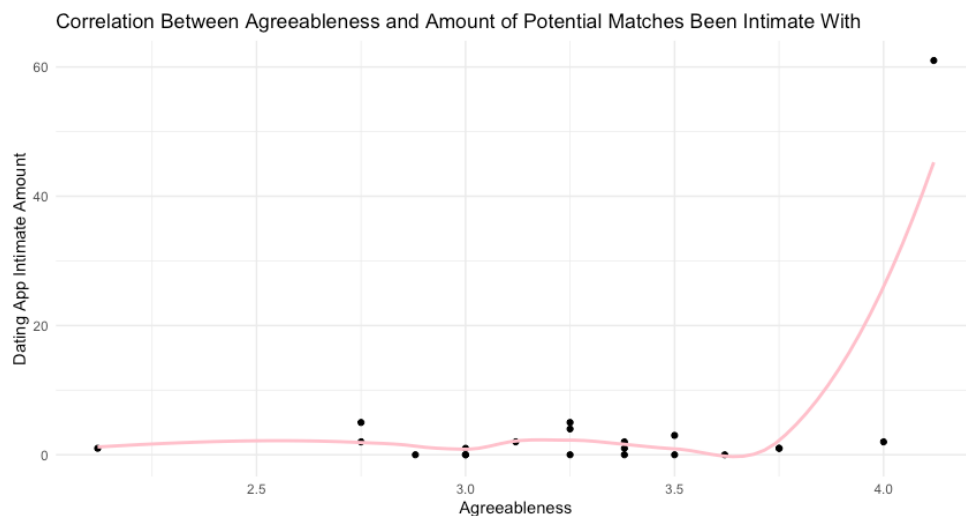

The relationship between <u>conscientiousness</u> and the number of partners is not as straightforward. Individuals scoring between 3.5 and 4 on this trait tend to have a higher number of partners, which could be influenced by an outlier scoring in the middle range.
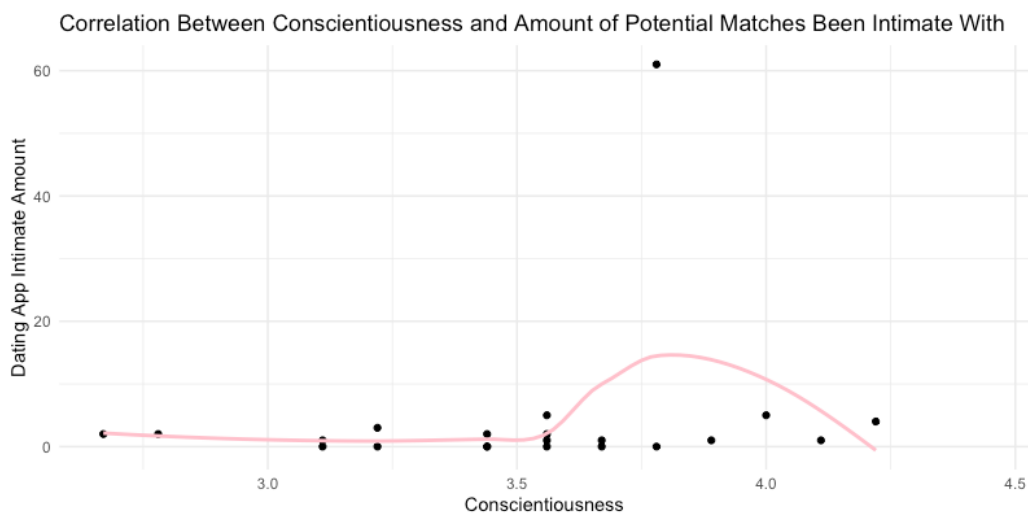
Analyzing <u>extraversion</u>, it appears that the outlier scored at 3, which explains the upward trend in the regression line for this data point. However, when considering the overall graph, there does not seem to be a significant correlation between extraversion and the number of partners.

Correlation Between Extraversion and Amount of Potential Matches Been Intimate With
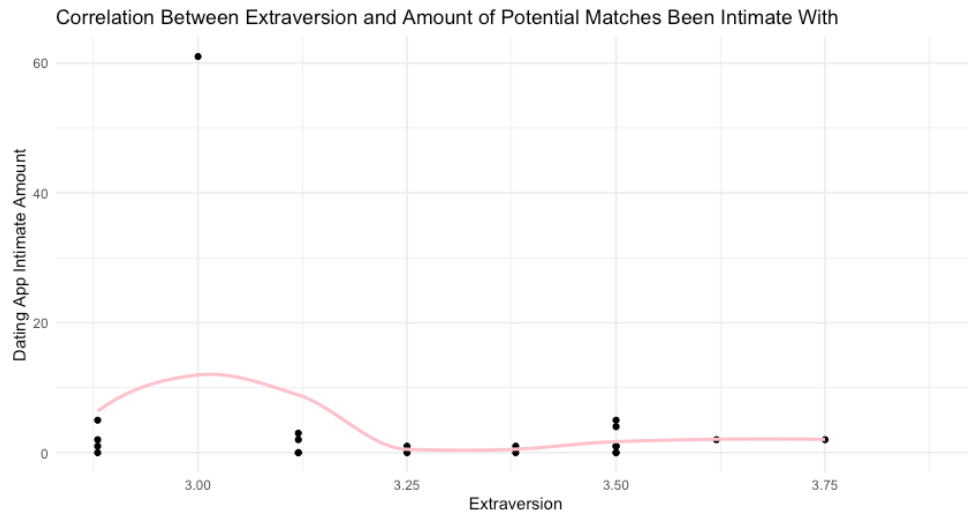
The same observation applies to <u>neuroticism</u>, as there is no apparent significant correlation among the participants in this dataset.

Correlation Between Neuroticism and Amount of Potential Matches Been Intimate With
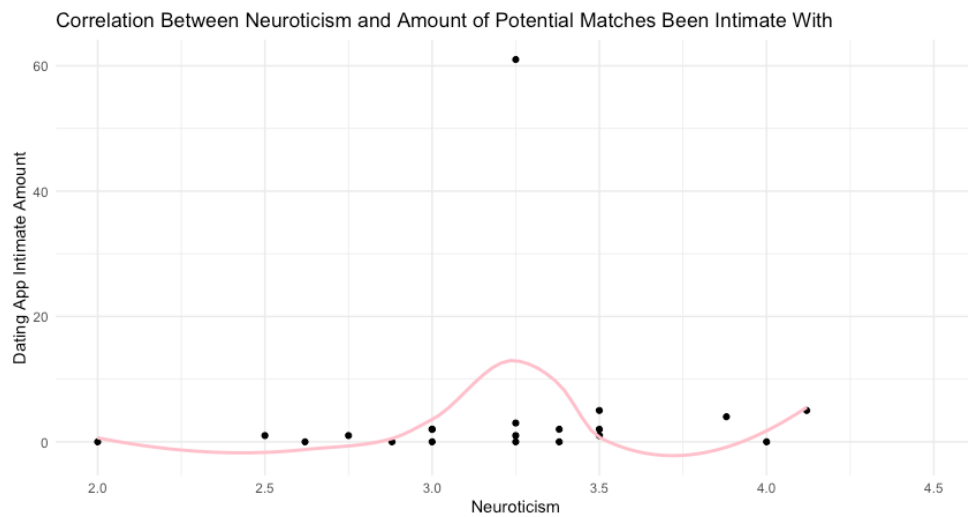
On the other hand, <u>openness</u> exhibits a noticeable trend where participants with high scores, specifically in the range of 4.5 to 5, tend to have a greater number of intimate partners. This suggests a potential correlation between Openness and the frequency of intimate encounters among the participants.

Correlation Between Openness and Amount of Potential Matches Been Intimate With
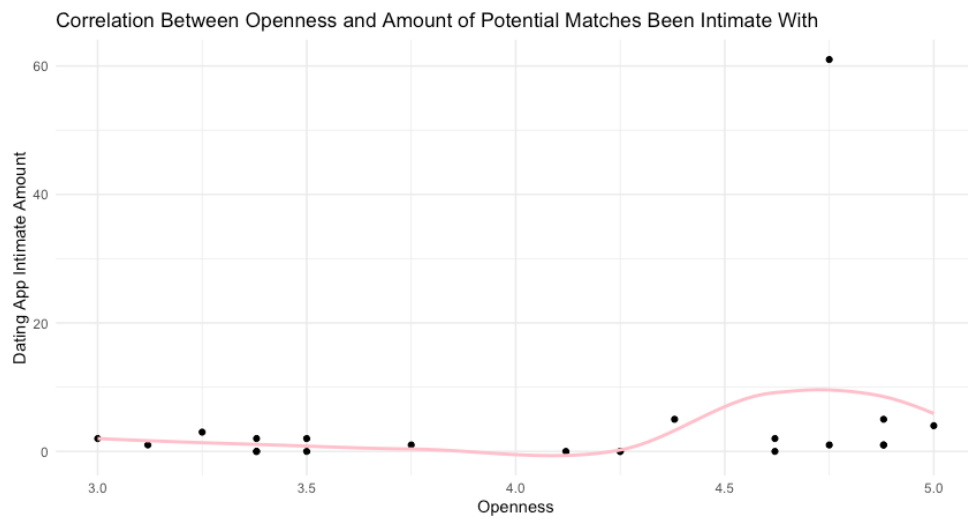
5.2.1.4 RQ1: Conclusion

These findings shed light on the relationship between personality traits and patterns of interaction with other users through dating apps. The analysis revealed interesting insights into the impact of personality on various aspects of dating outcomes.

In terms of the number of potential matches met in real life, higher agreeableness scores were associated with a greater number of potential partners. Extraversion displayed a positive trend, particularly for scores between 3 and 3.25, with an intriguing outlier showing a remarkably high number of potential matches. Openness did not strongly predict meeting potential partners, while conscientiousness showed a negative association, indicating that individuals with lower scores tended to meet more potential partners. Neuroticism exhibited a nonlinear relationship, with specific score ranges indicating higher dating success.

When examining the number of potential matches dated, higher levels of openness were correlated with dating more potential partners. Neuroticism displayed a dynamic relationship, with both higher and lower scores associated with a significant number of individuals dated. Surprisingly, lower scores in extraversion were associated with a higher number of individuals dated within a specific range. Agreeableness generally showed a positive relationship, although some inconsistencies were observed due to low survey response volume and outliers. Conscientiousness showed a positive association overall.

In terms of the number of potential matches with whom participants reported being intimate, higher scores in agreeableness were linked to a greater number of intimate partners, with an outlier scoring above 4 in agreeableness reporting the highest number. Conscientiousness displayed a mixed relationship, with individuals scoring between 3.5 and 4 having a higher number of partners. Extraversion and neuroticism did not show a significant correlation, while openness exhibited a trend where higher scores were associated with a greater number of intimate partners, particularly in the range of 4.5 to 5.

These findings emphasize the nuanced influence of personality traits on patterns of interaction and dating outcomes through dating apps. Understanding the role of personality in online dating can assist both individuals and providers of dating apps. For the individuals, it is aiding how to best navigate the complexities of initiating, forming, and keeping connections and how to building meaningful relationships. On the other hand, dating app providers could also take insight into studies with similar research questions to better understand their audience and personalize their products and services.

5.2.2 RQ2: What is the correlation between the experience level of dating app usage and the functionalities preferred by users?

The objective of this research question was to examine the varying experience levels of dating app usage, determined by the duration of user interactions with dating apps, and explore their preferences regarding functionalities and features. Participants were categorized into four distinct groups based on their experience levels: completely new users, those using dating apps for six months or less, those using dating apps for six months to a year, and those with more than a year of experience. The visualizations presented below depict the ratings assigned to each feature by participants within each experience group, with the y-axis representing the number of rankings received for each feature within that particular group.

For participants new to dating apps, there is limited variability due to the small sample size. Their preferences include voice messaging, user-friendly interface, messaging and communication, matching algorithms, and location-based discovery. They show less interest in add-on features like gamification, premium offerings, and compatibility quizzes. Motivations for app usage and user reviews receive less emphasis. New users prioritize essential features over supplementary add-ons.

Likes and Dislikes Count for Dating App Features
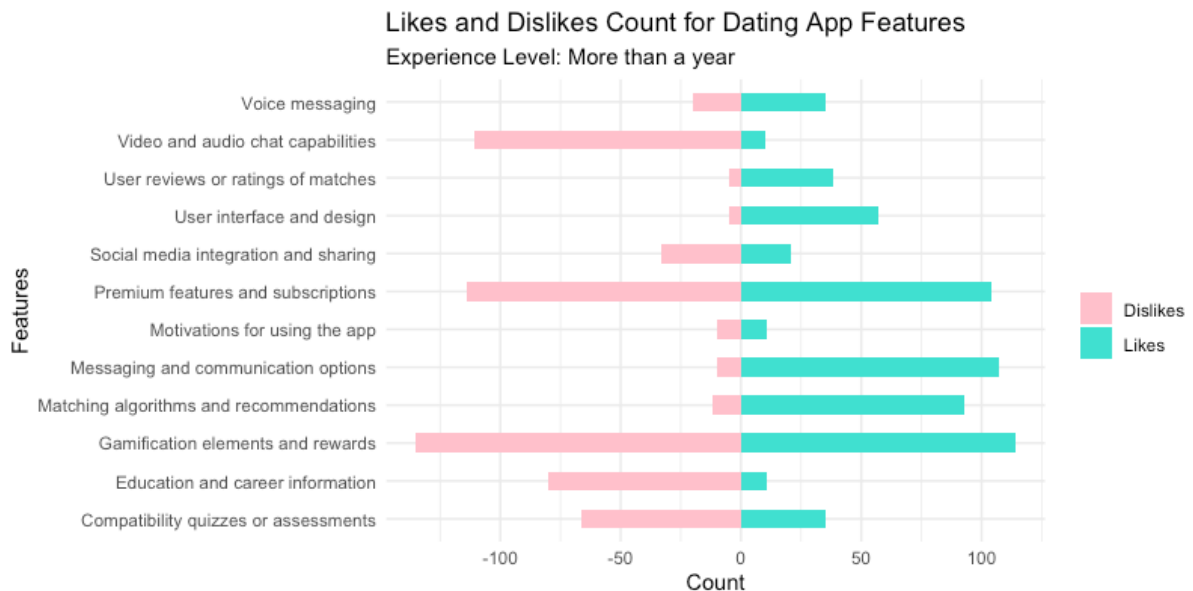Experience Level: New to Dating Apps
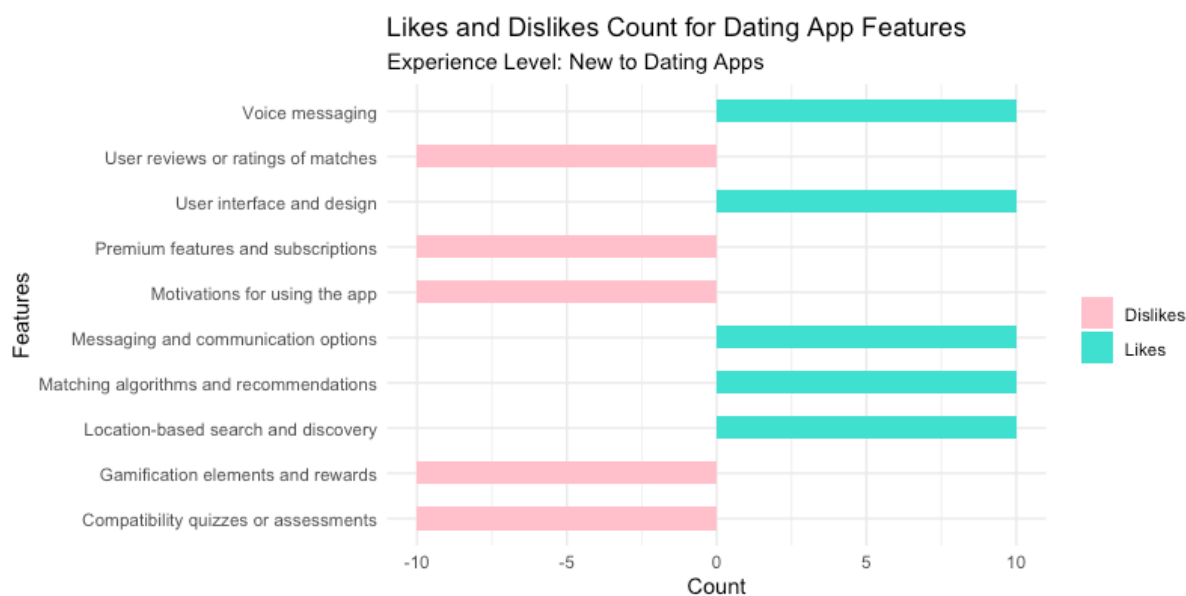
The <u>6 months or less group</u> of participants exhibits noticeable variability in their preferences. Profile creation and customization, messaging and communication options, social media integration, matching algorithms, and user interface and design are highly rated liked features, which align with typical dating app functionalities. In contrast, motivations for app usage, voice messaging, gamification, and video and audio chat capabilities are ranked lower or considered less important. It is noteworthy that understanding users' motivations for app usage is essential, despite their lower emphasis in this group. Overall, these users also prioritize core features of dating apps over add-ons.

Likes and Dislikes Count for Dating App Features
Experience Level: 6 months or less
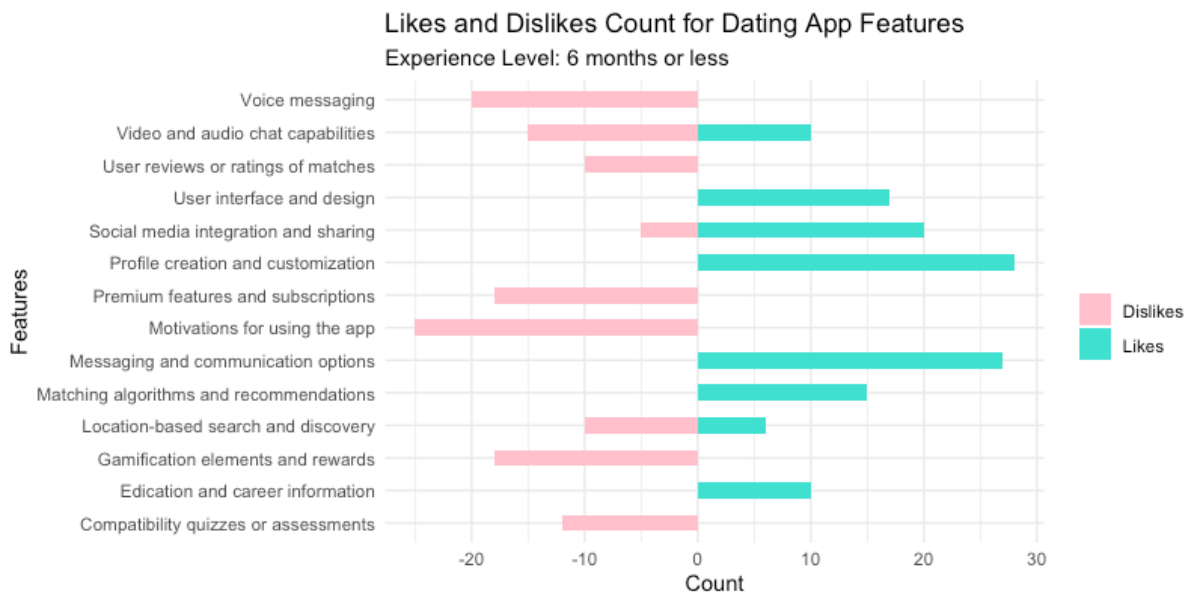
Among participants who have been using dating apps for <u>six months to a year</u>, the most liked features include matching algorithms, user interface and design, profile creation, location-based search, and messaging and communication options. These features align with typical expectations for dating apps, and it is notable that participants appreciate the user interface after using the app for an extended period. On the other hand, user reviews, social media integration, motivations for app usage, and compatibility quizzes are among the dislikes for this group. Overall, these users also prioritize core features over additional ones.

Likes and Dislikes Count for Dating App Features
Experience Level: Six months to a year
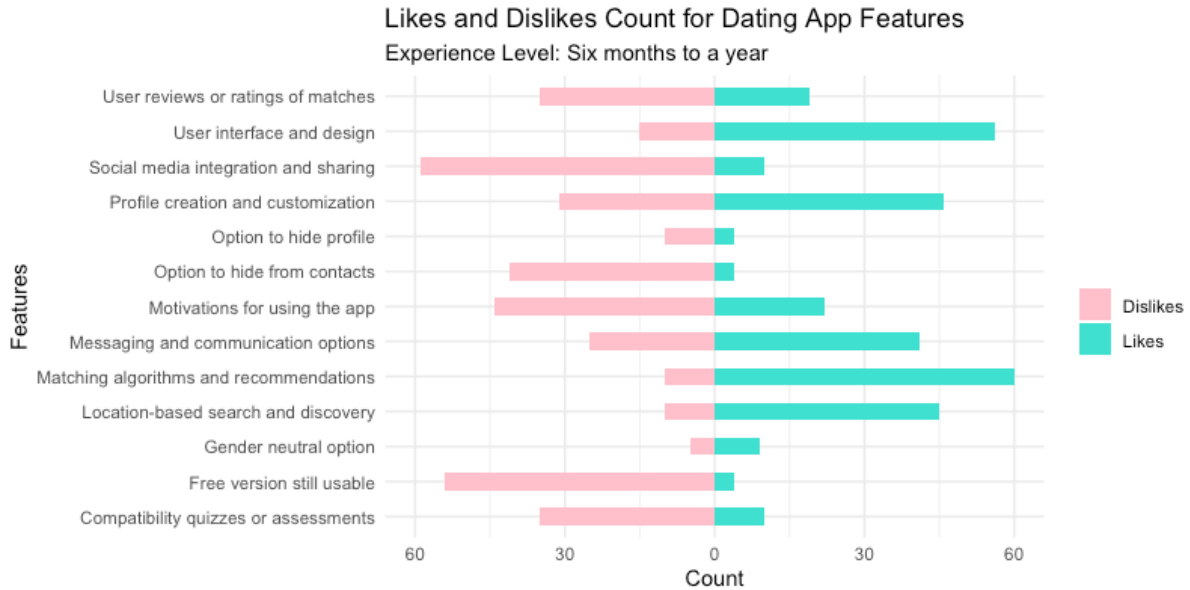
Analyzing participants who have used dating apps for <u>over a year</u> reveals distinct patterns in their likes and dislikes. Notably, premium features, gamification elements, matching algorithms, and messaging and communication options received the highest number of likes. However, it is worth mentioning that some participants expressed dislikes towards premium features and gamification. Additionally, video and audio chat capabilities were also met with dislikes. Interestingly, these users showed less interest in education and career information and had little enthusiasm for compatibility quizzes. These findings suggest that while core features remain important, some users also appreciate the presence of add-ons in their dating app experience.

Likes and Dislikes Count for Dating App Features
Experience Level: More than a year

In conclusion, the correlation between the experience level of dating app usage and user preferences for functionalities reveals interesting insights. New users prioritize essential features such as messaging, user interface, and matching algorithms while showing less interest in add-ons. Participants with 6 months to a year of experience emphasize core features, with profile customization and communication options being highly regarded. Users who have used dating apps for over a year display a preference for both core features and add-ons like premium offerings and gamification, while showing less interest in certain supplementary features. Overall, understanding user preferences at different experience levels can inform the design and development of dating apps to better meet their expectations and enhance the user experience.

5.2.3 RQ3: How can attachment styles be used to predict the experiences of dating app users and their communication regarding these experiences?

The research question seeks to explore the utilization of attachment styles in predicting the experiences and communication patterns of dating app users. To examine this, sentiment analysis data from semi-structured interviews was analyzed, with a specific focus on the correlation between attachment styles and the expressed sentiments. The provided data consists of percentages representing various combinations of attachment styles and sentiments (positive or negative). The following analysis presents the findings:

Attachment Style	Positive Sentiment	Negative Sentiment
Dismissing	80.21%	19.79%
Fearful	86.67%	13.33%
Preoccupied	72.63%	27.37%
Secure	72.52%	27.48%

Figure 4: Table presenting Positive and Negative sentiment for each Attachment Style.
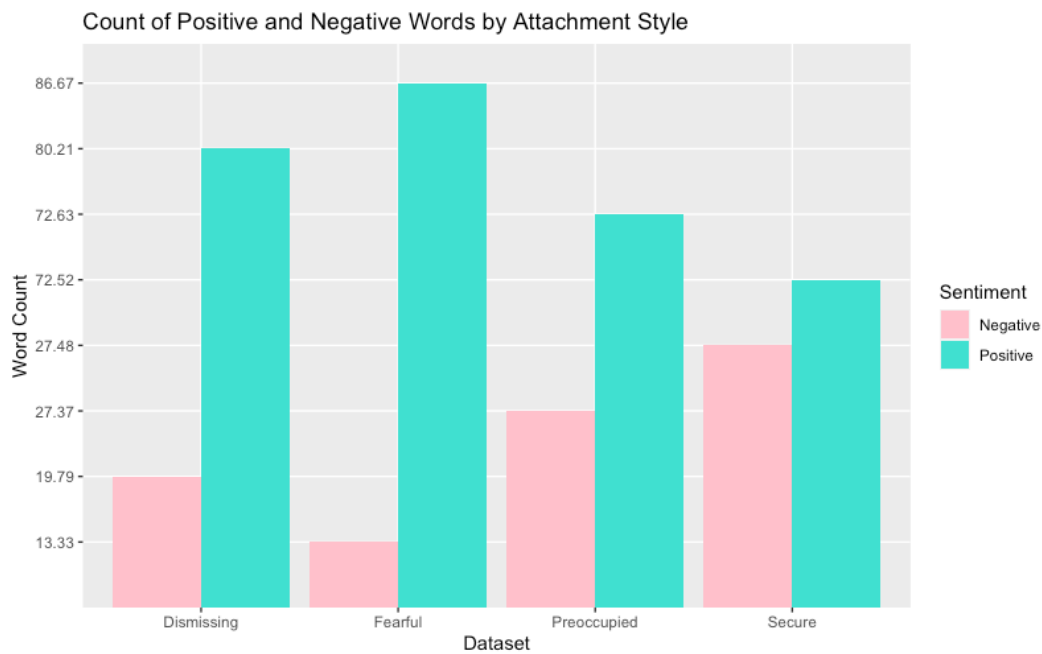
Upon reviewing the data, it is evident that the <u>fearful</u> attachment style exhibits the highest percentage of positive sentiments among the participants during the semi-structured interviews. <u>Dismissing</u> attachment style follows closely in second place regarding positive sentiments. <u>Preoccupied</u> attachment style ranks third, while the <u>secure</u> attachment style ranks last.

Initially, this finding might appear counterintuitive, as one might expect individuals with a secure attachment style to employ positive language when describing their online dating experiences. However, upon delving deeper, it becomes apparent that individuals with a secure attachment style feel more at ease expressing a range of emotions, both positive and negative, when recounting their experiences. This aligns with the notion that securely attached individuals tend to exhibit greater comfort in sharing and utilizing diverse emotional expressions.

A similar understanding applies to individuals with a preoccupied attachment style, as discussed in the theoretical framework. These individuals tend to score higher in self-disclosure and emotional expressiveness, which explains their propensity to express both positive and negative sentiments when discussing their dating app experiences.

Regarding the fearful and dismissing attachment styles, the high levels of positive sentiment may suggest that due to their pronounced avoidance tendencies, these individuals may not fully express the entirety of their emotions. Despite the data seemingly indicating more positive experiences than negative ones, it can be concluded that their high levels of avoidance inhibit them from fully articulating their sentiments.

In conclusion, the analysis reveals that the fearful and dismissing attachment styles exhibit the highest percentage of positive sentiments during the interviews. This may be attributed to their avoidance tendencies, which inhibit the full expression of emotions. The preoccupied attachment style displays a mix of positive and negative sentiments, while the secure attachment style ranks lowest in terms of positive sentiments. These findings challenge initial expectations and emphasize the complex relationship between attachment styles and emotional expressions in online dating experiences.

6. Discussion

The discussion section of this thesis will delve into various aspects related to the research, including the examination of quality criteria and exploration of potential avenues for future work. By delving into these elements, the discussion section aims to provide a comprehensive analysis of the research and lay the groundwork for further exploration and development in the future.

6.1 Quality Criteria

One of the important factors to acknowledge in this discussion is the fact that this thesis took a more explorative approach and did not aim to draw definitive conclusions. At the outset, the introduction section clearly states the motivation for this thesis, which is to raise awareness and shed light on the significant role dating apps play in our society and their impact on shaping our dating culture. While the emphasis was on exploration rather than making conclusive statements, it is still essential to consider factors such as validity and reliability in the interpretation of the findings (Bryman, 2016, p. 41). By adhering to rigorous research practices and maintaining transparency in data collection and analysis, this study sought to ensure that the insights gained from the exploration are grounded in solid methodological foundations.

6.1.1 Reliability

When examining research reliability, it is important to note that reliability primarily applies to quantitative research and focuses on the consistency and repeatability of study results. It assesses whether the measures used in the study are stable over time (Bryman, 2016, p. 41). In the case of this study, which had a relatively small sample size of 27 survey participants and 20 interview participants, establishing the reliability of the findings becomes challenging. However, it is worth considering that the study exhibits a commendable level of transparency in its methodology and processes, which enhances its external reliability. This thesis has described the methodology, including data collection procedures, analysis techniques, and any potential limitations. This transparency not only fosters trust and credibility in the research but

also enables other researchers to assess the reliability and validity of the findings. By promoting transparency, this study contributes to the overall reliability of the research outcomes and encourages future replication and validation efforts.

In addition, some of the analysis of related work and the findings of this thesis reveal consistencies in the positive association between agreeableness, conscientiousness and extraversion and meeting/dating/being intimate with potential partners and experiencing greater satisfaction in relationships. While not identical, there is a discernible positive trend in relation to the question. This thesis expands on various personality dimensions in the context of relationships and dating, highlighting how personality traits can be used to understand individual differences and diverse experiences. Additionally, the alignment between the findings of this thesis and the related work supports the notion that individuals with anxious attachment styles may struggle to fully express their feelings and address underlying issues, contributing to reduced relationship satisfaction. These insights contribute to the existing knowledge on the complexities of human relationships and the role of personality in shaping dating experiences.

6.1.2 Validity

In this section, the discussion will focus on the concept of validity and its significance in the research conducted. Validity refers to the extent to which a study accurately measures what it intends to measure and provides trustworthy and meaningful results. It is a fundamental aspect of research quality, ensuring that the findings are robust, reliable, and applicable to the research context. Several types of validity will be explored to evaluate different dimensions of the study. These include internal validity, external validity, content validity, ecological validity, and the use of multiple measures to enhance validity. By examining these various aspects, we aim to critically assess the validity of the research findings and provide insights into the strengths and limitations of the study. (Bryman, 2016, p. 41)

In this study, the key constructs examined revolved around understanding users' interactions with dating apps. The research took an explorative approach, employing both surveys and semi-structured interviews to gather information and gain insights into the topic.

To establish *content* validity, pilot testing was conducted for both the survey and interview instruments, incorporating participant feedback, and making necessary adjustments.

While efforts were made to enhance the validity of the findings, challenges in ensuring *internal* validity were encountered, and the study did not employ techniques such as randomization or control groups.

In terms of *external* validity, it is acknowledged that the generalizability of the findings may be limited due to the relatively small sample size and the explorative nature of the study.

Furthermore, *ecological* validity was considered, but there were limitations in capturing real-time experiences as participants were asked to recall their experiences rather than maintaining a diary or sharing actual data from their dating apps.

To enhance the validity of the findings, multiple measures were employed, combining survey and interview data from distinct participant groups.

Additionally, *reflexivity* was emphasized throughout the research process, acknowledging the researcher's values and biases, and aiming for an ethical and respectful approach. By valuing participants' diverse experiences and promoting transparency, this study seeks to maintain trustworthiness in its findings.

6.2 Future Work

Several potential avenues for future research emerged from this study, highlighting the need for further exploration in the domain of dating app usage and improvement. One notable area is the examination of the impact of excessive options and the resulting rejection culture within dating apps. Understanding users' behaviors and decision-making processes in the face of numerous choices could shed light on how to address this issue and enhance users' experiences.

Additionally, the transparency and addressability of dating apps, both from the perspective of app creators and users, present intriguing areas for further investigation. Exploring how dating apps can foster more transparent intentions and promote respectful user interactions could contribute to a healthier and more fulfilling dating app environment.

Furthermore, advancements in technology, particularly the utilization of AI and language processing, hold potential for transforming dating apps and their matching algorithms. Future research could examine how AI-driven approaches could enhance the quality of matches by analyzing users' profiles and preferences in greater detail. However, ethical considerations regarding privacy and data usage should also be carefully addressed in these technological advancements.

The practical implications of this study suggest the importance of focusing on quality rather than quantity in matching algorithms. Future research could explore interventions or strategies that prioritize more personalized and meaningful matches, incorporating extensive personality assessments and questionnaires to provide users with a curated selection of potential matches. By designing interventions aimed at improving users' experiences, dating apps can move beyond surface-level connections and facilitate more compatible and fulfilling relationships.

To refine and strengthen the methodology used in this study, future research could address certain methodological considerations and trade-offs encountered. For example, incorporating a larger sample size, employing more diverse data collection methods, or examining specific aspects of the topic that were not fully explored could enhance the validity and reliability of the findings.

Lastly, incorporating a more diverse range of participants, including underrepresented population groups and demographics, could contribute to a more comprehensive understanding of the topic. By involving individuals from diverse backgrounds, experiences, and perspectives, future research can provide a more nuanced exploration of the implications of dating apps on various populations, uncovering potential differences or similarities that may exist.

7. Conclusion

In conclusion, this thesis aimed to explore the culture and dynamics of dating apps, with a particular focus on the influence of personality traits and attachment styles. While the research questions could have been refined for greater depth, the study has provided valuable insights into the topic.

The key findings highlight the role of attachment styles in shaping individuals' experiences with dating apps. It is evident that different levels of experience with dating apps impact users' preferences, with long-term users valuing additional features beyond the primary functionalities. Regarding personality traits, the limited number of participants hindered definitive conclusions. However, agreeableness showed a positive association with meeting potential partners and exhibited a positive trend in terms of dating and intimacy, albeit with some inconsistencies. Openness displayed complex relationships, with no strong prediction for meeting potential partners, but a correlation between higher openness scores and a greater number of intimate partners. Conscientiousness exhibited a negative association with the number of potential matches and dates, except for participants scoring between 3.5 and 4, who had a higher number of intimate partners.

Although this study did not uncover unexpected or novel results, it brings together various topics for future discussion and research. It contributes to the existing knowledge by emphasizing the importance of understanding attachment styles and personality traits in the context of dating app usage.

The practical implications of this research lie in inspiring further studies on dating apps. With the evolution of dating culture and the increasing reliance on technology, a stable structure that facilitates meaningful connections is crucial. The findings can inform the design and improvement of dating app features, ensuring a more tailored and satisfying user experience.

Acknowledging the limitations, the small number of participants stands out as a notable constraint. A larger sample size would provide more robust patterns and enhance the generalizability of the results.

In the broader sense, this research contributes to the field of study by shedding light on the evolving landscape of dating apps and the factors that shape users' experiences. It underscores the need for ongoing investigation into this rapidly evolving domain and its implications for individuals and society at large.

Overall, this thesis provides valuable insights into the culture and dynamics of dating apps, highlighting the significance of attachment styles and personality traits. It lays the foundation for further research, aiming to enhance the understanding and effectiveness of dating apps in facilitating meaningful connections in the modern dating landscape.

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8.1 Reference Approval from Supervisor

Lone Dirckinck-Holmfeld

to me ▾

Hello Trina,

Hereby I approve your reference list for your thesis.

•••

Best Lone

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