

Talk Tinder to me

A content analysis of successful Tinder conversations

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Master's Thesis
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Specialization Business Communication and Digital Media

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Abstract

Online dating has become the second most common way to meet a partner. With more than one billion swipes per day, the online dating application Tinder contains uncountable initial conversations that might lead to a face-to-face date. However, little is known about how initial interactions progress through online dating. Therefore, this study aims to investigate the content of initial Tinder conversations in terms of intimacy, length, similarity, and reciprocity, and how they relate to relationship progression. Hypotheses were tested by means of a content analysis in which respondents ($N = 49$) shared the content of their Tinder conversations ($N = 198$). Intimacy, reciprocity, and similarity were found to have a positive effect on the chance of a successful outcome of the conversation in terms of further relationship development through WhatsApp conversations or a face-to-face date. This study showed that initial Tinder conversations mirror offline relationship development, but that a certain stage of relationship development in terms of intimacy, reciprocity, and similarity has to be met before Tinder matches can meet face-to-face.

Introduction

Since the rise of the Internet, people have been using the Internet to keep in touch with family and friends, but also to find new friends and to search for romantic relationships. The Internet also gives us the opportunity to develop relationships online. It has become the second most common way to meet a partner, only behind meeting through friends (Rosenfeld & Thomas, 2010). Nowadays, around 50% of people know someone who has an online dating profile or who has met a romantic partner via online dating (Smith & Anderson, 2016).

Online dating platforms can be divided into three generations. Firstly, online personal advertisement sites appeared, where people posted advertisements in which they would state their preferences for a romantic partner. Subsequently, there were algorithm-based matching sites. These websites matched one profile to another with the use of a specific algorithm. Then, smartphone-based dating applications appeared (Finkel et al., 2012).

Tinder is an example of a smartphone-based dating application. Similar to other dating sites, Tinder users can create their own profile where they can upload photos and write a short description of themselves. Next, they can filter through profiles (called swiping on Tinder) and select potential partners. When there is mutual interest, indicated by a match, people can start a conversation using the Tinder app. This conversation, in turn, may result in further relationship development, such as a face-to-face date (Colao, 2014). Nowadays, Tinder has become the most popular dating application with more than ten million active daily users and more than one billion swipes per day (Smith, 2017).

Previous research about online dating has mostly focused on dating profiles themselves, specifically on self-presentation and impression formation (Ellison et al., 2006). Less research has focused on the next stages of online dating, which is the initial interaction after a match has been established. Initial interactions in romantic relationships develop through a set of stages, where a relationship progressively deepens. It is still unclear if and

how these stages are also observable in online dating and which of these stages have to be reached online, before the relationship can progress to an offline relationship (Ramirez, 2015).

Moreover, research suggests (Kallis, 2017) that initial interactions online develop differently than face-to-face. Online daters create mental constructs of their potential partners by reading the online dating profile of their potential partner. They use that information to fill in the blanks of who this person is in the offline world. Therefore, online daters create different, often idealized perceptions of online dating partners (Ramirez, 2015). Therefore, individuals should not wait too long with their first meeting, because their potential partner might not suit their idealized expectations. On the contrary, when people meet face-to-face with very little online interaction, they are likely to lack the basic background information which would provide a solid base for developing the relationship (Ramirez, 2015).

Whilst some research has been carried out on online dating, no studies have been found that address online conversations that lead to face-to-face meetings with the focus on Tinder. There is a very limited understanding of how conversations develop and progress on Tinder, and which conversations are likely to progress in the next phase of relationship development. Because a lot of people use Tinder to chat with their matches and eventually want to arrange dates, it is necessary to investigate how people develop conversations and relationships on Tinder. Therefore, the following research question is posed:

RQ: *What is the content of initial Tinder conversations in terms of intimacy, length, similarity, and reciprocity, and how do these relate to relationship progression?*

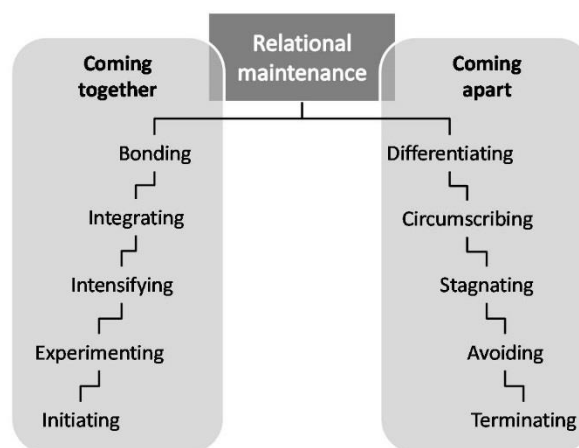
This study begins by laying out the theoretical dimensions of the research and will be followed by the methodology used for this study. Subsequently, the findings of the research will be presented, followed by a discussion.

Theoretical framework

Relationships

Online dating gives us the opportunity to develop relationships online. Before we take a look at online relationships, it is necessary to know how offline relationships grow and how they end. Knapp's (1978) relationship model will be used to explain this process.

Knapp's (1978) model proposes a life cycle of relationships with five stages of coming together (escalation) and five stages of coming apart (de-escalation), which is shown in Figure 1. The escalation process has five stages. The first stage, initiating, is the first interaction between two individuals. It involves the meeting and making a first impression. Experimenting is the next stage, where people seek more information about each other and determine if the other person is a potential romantic partner. In the next stage, intensifying, the relationship becomes less scripted and the relational commitment begins to manifest. The integrating stage occurs when couples form a sense of shared, public relational identity. Finally, when couples publicly announce their relationship, they have reached the bonding stage (Fox et al., 2013).



Knapp's Relationship Model

Figure 1. Knapp's Relationship Model

Knapp's model also includes stages of de-escalation, starting with differentiating. Couples start to use 'I' more instead of 'we' and differences begin to show. The next stage is

circumscribing, with a decrease in the amount and quality of communication. In the stagnating stage, the communication is still ineffective and not progressing. The fourth stage, avoiding, is where couples do not communicate anymore. The final stage is termination, where the relationship comes to an end (Knapp, 1978).

However, not every relationship goes through this process in the same order and via the same way. There are other aspects that can have an influence on this process. Taylor and Altman (1987) state that relationships can be conceptualized in terms of rewards and costs. Rewards are events or behaviours that stimulate satisfaction. If a relationship has more rewards than costs, a person is more likely to stay in that relationship. On the contrary, when there are more costs than rewards, it is likely that a person will end the relationship. Rewards and costs have a greater impact in the beginning of a relationship than later in a relationship. In the early stages of a relationship, there are few interpersonal experiences, which is why individuals focus more on a single reward or a single cost (West & Turner, 2006). In Knapp's model (1978), evaluations of relational rewards and costs result in decisions about where the relationship will go and how fast it will get there.

Knapp's model (1978) shows a complete possible progression of a relationship. However, not every relationship develops in the same way. Knapp's model (1978) shows how two people behave in the certain stages, but does not specify the exact content of the stages in terms of conversations. That is, it does not show which topics people talk about during the different relationship stages. Avtgis et al. (1998) provides a more comprehensive understanding of the content of relationship development. The study shows that people generally report different conversation topics in each stage of Knapp's model (1978). Table 1 shows which topics are mostly talked about during the relationship stages of Knapp's model (1978), according to Avtgis et al. (1998).

Table 1

Conversation topics

Stage name	Conversation topics
Initiating	Talk about relaxing things. Inquire about demographics and commonalities, jobs. General information exchange.
Experimenting	Talk about past relationships. Brag, try to make a good impression. Talk about family or hobbies. Still a focus on commonalities.
Intensifying	Probe about moral values.
Integrating	Share intimate feelings. Talk about the future together. Reflect about common experience, things done together.
Bonding	Make plans for the future. Pledge love for the other person. Make agreements about the future. Make promises. Talk about birth control and children. Financial and career issues.

The conversation topics in the first stage show the first interaction where people try to impress the other person. The intimacy of the conversation topics increase in each following stage. Intimacy refers to the breadth and depth of the conversation. Breadth refers to the number of topics that are discussed in a relationship. Depth refers to the degree of intimacy that guides the topic discussion (West & Turner, 2006). Each time when people reach a next stage in the relationship, the conversation topics become more intimate. The Social Penetration Theory (Altman & Taylor, 1973) proposes that conversations have narrow breadth and shallow depth in the initial stages. As relationships move toward following relationship stages, there is an expectation of more breadth and depth in the conversation, which can also be observed in the model of Avtgis et al. (1998) in Table 1.

Nonintimate relationships progress to intimate relationships because of self-disclosure (Altman & Taylor, 1973). Self-disclosure is the process of revealing information about yourself to others. This process allows people to get to know each other in a relationship (West & Turner, 2006). As a relationship progresses, so does the breadth and depth of information a person discloses.

However, Altman and Taylor (1973) and Avtgis et al. (1998) have not specified which conversation topics are mostly talked about in the relationship stages. Jourard (1971) has developed a list of subjects that increase in intimacy of self-disclosure. Based on this list, we can specify the model of Avtgis et al. (1998), as can be seen in Table 2.

Table 2

The intimacy of conversation topics

Stage name	Conversation topics according to Avtgis et al. (1998)	Conversation topics according to Jourard (1971)
1. Initiating	Talk about relaxing things. Inquire about demographics and commonalities, jobs. General information exchange.	1. Hobbies, pastime 2. Music, films, series 3. Politics 4. Work, study
2. Experimenting	Talk about past relationships. Brag, try to make a good impression. Talk about family or hobbies. Still a focus on commonalities.	5. Religious views 6. Personal goals
3. Intensifying	Probe about moral values.	7. How marriage/relationship works 8. Happiest occasions in life 9. Habits of others that bother you
4. Integrating	Share intimate feelings. Talk about the future together. Reflect about common experiences, things done together.	10. How to deal with depression, anxiety, anger 11. Chars of self cause pride 12. What makes you depressed and makes your feelings hurt 13. Unhappiest moments 14. Most immature or maladjusted 15. Who you resent most 16. Strain and dissatisfaction in your marriage 17. Regretted most
5. Bonding	Make plans for the future. Pledge love for the other person. Make agreements about the future. Make promises. Talk about birth control and children. Financial and career issues.	18. Sexual fantasies 19. Erotic play and lovemaking 20. Guiltiest secrets 21. Sexlife with whom

Online dating

The model of Finkel et al. (2012) in Figure 2 shows the nine steps in the prototypical, idealized online dating process. The solid arrow shows the logical order of the dating process. The user starts with seeking information about one or more online dating sites and decides to register for one or more sites. The user creates a profile and browses through other profiles to find a good match. When the user finds a match, he initiates contact via the online dating site. It is also possible that the user receives a message via the dating site without initiating the contact first. After the first contact, users engage in mutual mediated communication. Users can decide to meet face-to-face and develop an offline relationship. A user can be at different steps in this process with multiple other users simultaneously.

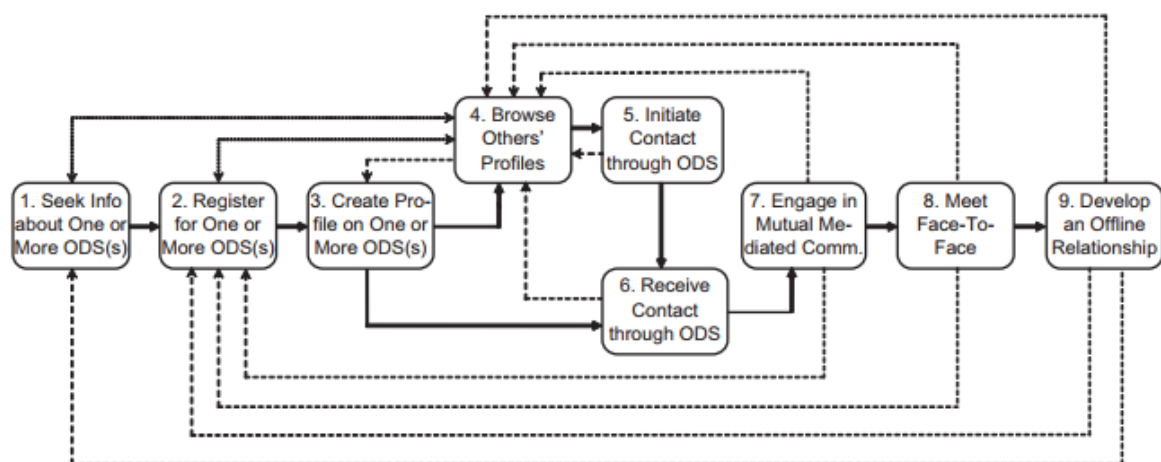


Figure 2. The nine steps in the prototypical, idealized online dating process

Finkel et al. (2012) points out that dating sites provide a combination of three services to support the online dating process: access, communication, and matching. Access refers to the opportunity of users to evaluate potential partners which they otherwise never had met. Online dating sites offer access to a large number of potential partners than anybody could have access to in the offline world. Communication refers to the ways in which partners can interact with potential partners before meeting face-to-face. There are many opportunities to talk to each other through computer-mediated communication, such as live instant-message

chat and live interaction. Matching is the mathematical algorithm on a dating site to identify potential partners. These matches are presented to the user as potential partners with whom the user will be likely to experience romantic outcomes with.

Online relationship development

When people are searching for a romantic relationship, they want to reach the bonding stage of Knapp's model (1978). People that search for a potential partner online want to develop an offline relationship and do not want to experience stages of de-escalation. Relationships that are formed online might have a different process than Knapp's relationship escalation model. Tinder users described their relationships similar to Knapp's classic model (1978), but the stages of de-escalation occurred more quickly with online dating (Kallis, 2017). Next to that, there are additional steps before initial interaction: building an online profile and swiping other users. When partners have a match on Tinder, the initiating stage begins. Most participants indicated that they talk to about half of their matches. After the initial communication, Tinder users would continue the conversation and move to another medium, such as WhatsApp or Snapchat (Kallis, 2017).

However, not every conversation reaches the point of switching to another medium. The goal of the majority (84%) of Tinder users is to meet their Tinder match in person (Whitty & Carr, 2006), but Ligtenberg (2015) has shown that casual sex, entertainment, passing time, and relaxing were also important motivations for using the app Tinder. When people are chatting on Tinder out of boredom, it is expected that the chance is lower that they switch to another medium, because they do not intend meeting face-to-face.

Figure 3 shows how escalation and de-escalation via Tinder has modified the relational stage model (Kallis, 2017).

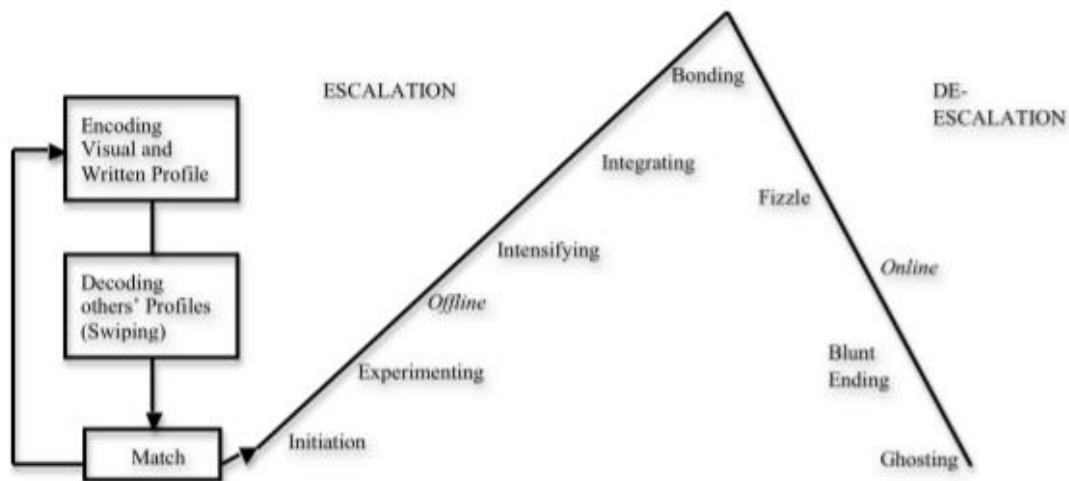


Figure 3. Escalation and de-escalation via Tinder

According to the model by Kallis (2017), in online dating, the first two escalation stages (initiation and experimenting) are mostly done online. After the experimenting stage, the relationship goes from online to offline after which the relationship develops further along the remaining stages. The first two stages of Knapp's model (1978) happen generally slow on Tinder, because users want to be sure they have a grasp on the other person's identity. Just as traditional relationships, online relationships often do not follow all stages of Knapp's (1978) relationship model. Online relationships are more likely to de-escalate quickly. Moreover, another stage is added to the de-escalation phase: ghosting. The stage ghosting skips all four original de-escalation stages and ends all communication without a reason (Kallis, 2017).

Online dating has important advantages over conventional offline dating. Firstly, the convenient access to potential partners, which has been discussed before, can be useful for singles who otherwise might lack success. Next to that, it allows online daters to get a first impression of their potential partner before they decide to meet face-to-face. However, because there are no non-verbal cues available in online dating, people form an impression of the other person based on limited available information (Finkel et al., 2012), of which the consequences will be discussed in the next section.

From online conversations to offline meetings

The Hyperpersonal perspective by Walther (1996) discusses features of computer-mediated communication that might increase the probability that people will form positive online impressions in comparison to face-to-face interactions. In online interactions, there are usually less cues available than when people interact face-to-face. Therefore, when people are chatting online, the receiver has to build impressions on the cues that are available. The receiver then fills in ‘the gaps’ in the impression formed of the other person by using the available information. Next to that, people have more freedom to present themselves selectively online. Because people usually want to convey a positive impression in online dating, this means that they might assume that their partner is a ‘better person’ than they actually are. The sender has the opportunity to optimize his self-presentation in online conversations. There is more time to think about the message and less stress about the ongoing interaction. The sender can decide which information he would like to share and which information not. Consequently, the receivers in computer-mediated communication create an idealized perception of the message sender.

The timing of modality switching

Based on the Hyperpersonal perspective (Walther, 1996), Ramirez et al. (2015) investigated when switching from online to offline interaction would be the most beneficial for the relationship. Ramirez et al. (2015) suggests that online daters create mental constructs of their potential partners by reading the online dating profile of their potential partner. They use that information to fill in the blanks of who this person is in the offline world, similar to the predictions of the Hyperpersonal perspective (Walther, 1996).

Online daters who meet relatively early in their relationship might be able to accept minor differences in online versus offline impressions, as no full impression has formed yet. However, when people meet face-to-face with very little online interaction, they are likely to

lack the basic background information which would provide a solid base for developing the relationship (Ramirez et al., 2015). When people wait too long to meet their date face-to-face, they might have trouble accepting contradictions about the other person, because of the idealized impression they have formed in their head. When the other person fails to meet their expectations, they may experience increased uncertainty and reduced liking (Ramirez & Wang, 2008).

The study of Ramirez and Zhang (2007) suggests that switching after three weeks is the most beneficial for the relationship, and that relational outcomes are dampened when people meet after six weeks. Thus, the timing of switching from online to offline can improve or dampen the relational outcome. However, the timing of switching is not related to duration per se, but is also related to the intimacy of the relationship. As a relationship progresses, online daters discuss broader and deeper topics. The best timing to switch from online to offline is related to the intimacy of the topics discussed and the resulting stage of relationship development (Kallis, 2017; Knapp, 1978).

In initial online dating interactions, when people have a very short conversation with a low degree of intimacy, people are likely to lack the basic background information which would provide a solid base for developing the relationship (Ramirez et al., 2015). This means that there would not be a high chance on a successful outcome of the conversation. For Tinder users, a successful outcome of a conversation is when Tinder users switch to another medium, for example by continuing the conversations via WhatsApp or by having a face-to-face date.

On the contrary, when people have a very long conversation with a high degree of intimacy, this is not the most beneficial timing for a successful outcome. Because people have formed idealized expectations about the other person during the online conversation, they might have trouble with accepting contradictions about the other person when they meet face-to-face (Ramirez & Wang, 2008). Therefore, the expectation is that the ideal moment to

switch from Tinder to another medium, such as exchanging numbers or a face-to-face date, is when people have talked to each other to provide a solid base for the relationship, but have not too much idealized impressions of each other.

Kallis (2017) shows that people switch from online to offline in the second stage (experimenting) of Knapp's model (1978). When people switch from online to offline in the first stage (initiating), it is expected that there is a lower chance on a successful outcome of the relationship. When people switch in the third stage (intensifying) or even in a next stage, there will also be a lower chance on a successful outcome. Therefore, a relationship in the form of an inverted-U shape is expected between the intimacy of a Tinder conversation and a successful outcome of the conversation. The expectation is that the peak of the inverted-U relationship is when online daters switch from online to offline in the second stage (experimenting) of Knapp's model (1978). Therefore, the following hypothesis is posed:

H1: *The intimacy of a Tinder conversation will be curvilinearly associated with a successful outcome of the conversation.*

Next to the intimacy of a Tinder conversation, an inverted-U relationship is expected between the length of a Tinder conversation and a successful outcome of the conversation. This means that people with a very short Tinder conversation do not have the time to provide the basic background to further develop the relationship, because they do not take the time to get to know each other. When people have a long Tinder conversation, they might have trouble with accepting contradictions about the other person when they meet face-to-face. The following hypothesis is posed:

H2: *The length of a Tinder conversation will be curvilinearly associated with a successful outcome of the conversation.*

Reciprocity and similarity as predictors of online dating success

As discussed before, self-disclosure is the process of revealing information about yourself to others. This process allows people to get to know each other in a relationship. Reciprocity is a main component of self-disclosure. It is the process whereby one person's openness leads to the other's openness. In other words, it is the return of openness from one person to another (West & Turner, 2006). Rosenfeld & Bowen (1991) found that marital satisfaction was the highest when spouses reciprocated the same levels of self-disclosure (West & Turner, 2006). Next to that, Altman and Taylor (1973) believe that intimacy cannot be achieved without reciprocity.

Reciprocity is a form of 'I tell you where I am from and you tell me where you are from' (West & Turner, 2006). This kind of reciprocity is characteristic of initial communication. Tinder users start in the initiating stage of Knapp's model (1978), which is based on initial communication.

When people are chatting online, there are less cues available than in a face-to-face conversation. The receiver builds impressions on the cues that are available (Walther, 1996). Because there are less cues available, reciprocity is needed for people to get to know each other in a relationship. Therefore, reciprocity is an important factor in a Tinder conversation to progress to an intimate relationship. Thus, a positive relationship between reciprocity and a successful outcome of a Tinder conversation is expected:

H3: *The more reciprocity a Tinder conversation includes, the higher the chance that the relationship will be successful.*

Finally, we believe that similarity is positively related to relationship success on Tinder. Next to reciprocity, similarity is an important factor in successful relationship development. The study of Berscheid and Walster (1978) showed that similarity leads to attraction. In addition, Montoya et al. (2008) investigated the question if actual similarity is

necessary for attraction, which also showed a significant effect between interpersonal attraction and similarity. As a relationship progresses through Knapp's stages (1978), people uncover similarities between each other and this, in turn, is positively related to attraction. Therefore, it is expected that similar Tinder users have more chance to develop a successful relationship than dissimilar Tinder users:

H4: *The more similarity Tinder users show, the higher the chance that the relationship will be successful.*

Method

Overview

In order to answer the research question of this thesis, we conducted a content analysis of Tinder conversations. We recorded and analyzed each Tinder conversation, and for each conversation we asked participants about the outcome of the conversation in terms of WhatsApp conversations, dating, kissing, sex, and a relationship. For each conversation, we assessed the intimacy, length, reciprocity, and similarity.

Participants

A total of 55 heterosexual Dutch people participated in this study, resulting in 448 conversations. Participants who were students of Tilburg University could sign up for the study in exchange for course credit. Participants were also gathered via the personal network of the researchers. The sample consisted of 39 women (71%) and 16 men, between the age of 18 and 44 years old ($M = 22.76$, $SD = 3.7$). The majority of the participants (76%) was highly educated (university level).

As this study focuses on the content of Tinder conversations, we could only use conversations to which both people contributed. Therefore, those conversations in which there was no reply from one of the conversation partners (i.e., when there was only an opening sentence but no reply), were excluded from the sample. Next to that, there were two major outliers in the dataset. The length of Tinder conversations in this dataset ($M = 32.61$, $SD = 44.62$) was highly effected by the two conversations with a length of 495 and 795 turns. This would have a major effect on the statistical analyses. Therefore, these two conversations were excluded.

Therefore, the final sample consisted of 198 conversations from 49 participants, with a distribution of 33 women (67.3%) and 16 men, with an age between 18 and 44 years old ($M =$

22.78, $SD = 3.89$). The majority of the participants (75.5%) was highly educated (university level).

Procedure

The participants of this study were invited to an office, where they were orally briefed about the study and then were asked to read and sign the consent form. The consent form can be seen in Appendix A. The researchers explained that the data would be stored anonymously and could not be traced back to them personally. If a participant was feeling uncomfortable with sharing Tinder conversations, they could (a) choose not to participate in the study or (b) quit at any time during the study. None of the participants refused participation. Subsequently, the participants were asked to log in into their Tinder account on a desktop. One of the researchers started a video screen recording with the program 'Apowersoft Screen Recorder' in order to log the chats. The participants were asked to read their last ten chats. For each conversation, the participant indicated the extent of relationship success (i.e., none, WhatsApp contact, date, kissing, sex, a relationship). This questionnaire can be found in Appendix B. After the participants were finished, the chat conversations were stored as text files and anonymized. The video recording was immediately deleted. The participants were debriefed about the goal of the study and were asked if they would like to have a summary of the research results. Their email address was written down, but could not be connected to their data.

Measures

Outcome variables. The respondents were asked to indicate the extent to which the conversation led to a subsequent step in the dating process for each conversation. Specifically, the participant indicated whether the conversation led to further contact via WhatsApp, a date, kissing, sex, and a relationship. All measures were coded as 0 (no) or 1 (yes). If participants indicated that they ended up in a relationship, this was measured in months.

Content analysis.

Length. The length of each conversation was measured as the number of turns in the Tinder conversation. Thus, when one of the conversation partners sent three separate texts before the other replied, this was counted as one turn.

Intimacy. Each of the topics defined by Avgis et al. (1998) and Jourard (1975) were matched to the stages of Knapp’s relationship model (1978), which can be seen in Table 3. Next, we calculated an intimacy score for each conversation as follows. Every conversation topic was linked to a relationship stage. When a topic was discussed in a conversation, it got the value that belongs to the stage. An example: when a conversation included topics about hobbies (initiating stage), music (initiating stage), and the happiest occasions in life (intensifying stage), the intimacy score is: 1 (hobbies) + 1 (music) + 3 (happiest occasions in life) = a total score of 5.

Table 3

The intimacy of conversation topics

Stage name	Conversation topics according to Avgis et al. (1998)	Conversation topics according to Jourard (1971)
1. Initiating	Talk about relaxing things. Inquire about demographics and commonalities, jobs. General information exchange.	1. Hobbies, pastime 2. Music, films, series 3. Politics 4. Work, study
2. Experimenting	Talk about past relationships. Brag, try to make a good impression. Talk about family or hobbies. Still a focus on commonalities.	5. Religious views 6. Personal goals
3. Intensifying	Probe about moral values.	7. How marriage/relationship works 8. Happiest occasions in life 9. Habits of others that bother you
4. Integrating	Share intimate feelings. Talk about the future together. Reflect about common experiences, things done together.	10. How to deal with depression, anxiety, anger 11. Chars of self cause pride 12. What makes you depressed and makes your feelings hurt 13. Unhappiest moments

		<p>14. Most immature or maladjusted</p> <p>15. Who you resent most</p> <p>16. Strain and dissatisfaction in your marriage</p> <p>17. Regretted most</p>
5. Bonding	<p>Make plans for the future. Pledge love for the other person. Make agreements about the future. Make promises. Talk about birth control and children. Financial and career issues.</p>	<p>18. Sexual fantasies</p> <p>19. Erotic play and lovemaking</p> <p>20. Guiltiest secrets</p> <p>21. Sexlife with whom</p>

Reciprocity. Reciprocity is the frequency of openness from one person to another (West & Turner, 2006). It is a form of communication where Tinder users tend to mirror each other’s communication behaviour. This kind of reciprocity is characteristic of initial communication. It is a form of ‘I tell you where I am from and you tell me where you are from’ (West & Turner, 2006). There does not necessarily have to be a question before the other person opens up to the other person. It is the openness from one person after the other person shares information about himself. The other person opens up after the other person opens up, so they mirror each other’s behaviour.

This variable was measured as the number of sentences that include reciprocity. An example of reciprocity is shown in Figure 4. After one Tinder user shared where she studies, she asked the other person what he does, and he revealed where he works. In this example, it was counted as one sentence with reciprocity, because one person shares information about himself after the other person shared information.



Figure 4. Screenshot of a Tinder conversation

Similarity. This variable was measured as the amount of sentences that include similarity between the Tinder users. Similarity can be something like a similar activity, hobby or interest that the users have in common. An example of similarity is shown in Figure 5. Both Tinder users have visited China. One person was there for traveling, the other person had been studying there. Visiting China is a similar activity that the Tinder users share. In this example, this is counted as one unit of similarity.



Figure 5. Screenshot of a Tinder conversation

When Tinder users said something like ‘me too’, this was measured as both reciprocity and similarity, because the other person opens up after the other person did, but they also have something similar in common.

To clarify, reciprocity is opening up after the other person does, but this does not have to be something similar between the Tinder users. Similarity can be a form of reciprocity, but only when people have something in common. Similarity between two Tinder users can become clear over the duration of a conversation, it does not need to show up immediately. Therefore, not all similarity is reciprocal. Reciprocity needs to follow up on the openness of the conversation partner.

Results

From the 49 participants and 198 conversations, 30 conversations were continued on WhatsApp, 16 conversations turned into a date, 10 of them kissed, 8 of them had sex and 6 of them turned into a relationship, ranging from relationships between 2.5 months to 32 months. The average length of the conversation was 32.61 turns ($SD = 44.62$), with a minimum of 2 turns and a maximum of 258 turns.

Two logistic regression analyses were conducted to test the hypotheses. Two outcome variables were tested: continuing the conversation on WhatsApp, and going on a date. These outcome variables were chosen because they were the most common outcomes of the conversations. For the other outcome variables, the frequency of occurrence was so low that we could not take them into account in the analyses.

There are two hypotheses that predict a curvilinear inverted-U relationship. To test this curvilinear relationship, the variables intimacy and length were first mean-centered and then squared in order to test for a quadratic effect. However, the squared variable measuring intimacy was so skewed that we had to use a LOG10 transformation in order to normalize the variable.

In the first step of each of the two analyses, the four variables (intimacy, length, reciprocity, and similarity) were entered. In the second step, the quadratic variables for length and the logarithm variable for intimacy were added to test the curvilinear relationship.

Hypothesis 1

The first hypothesis predicted a curvilinear inverted-U relationship between the intimacy of the Tinder conversation and a successful outcome of the conversation.

WhatsApp. There was a relationship between the intimacy of a conversation and a higher chance on continuing the conversation on WhatsApp, $b = .47$, Wald's $z = 4.03$, $p = .045$, $\exp(B) = 1.60$. The $\exp(B)$ value indicates that when intimacy increases with one unit in

the conversation, the odds ratio is 1.6 times as large and there is 1.6 more chance of continuing the conversation on WhatsApp, than when intimacy does not increase with one unit in the conversation. There was no curvilinear relationship between the intimacy of the Tinder conversation and continuing the conversation on WhatsApp, $b = -.022$, Wald's $z = .744$, $p = .388$, $\exp(B) = .978$.

Date. There was no relationship between the intimacy of a conversation and a higher chance on a date, $b = -.47$, Wald's $z = 1.85$, $p = .174$, $\exp(B) = .626$. There was also no curvilinear relationship between the intimacy of the Tinder conversation and the chance on a date, although the p -neared significance, $b = -.27$, Wald's $z = 3.66$, $p = .056$, $\exp(B) = 1.08$.

Therefore, the hypothesis that the intimacy of the conversation is curvilinearly associated with a successful outcome of the relationship, was not supported.

Hypothesis 2

The second hypothesis proposed a curvilinear, inverted U-shaped relationship between the length of the Tinder conversation and a successful outcome of the conversation.

WhatsApp. First, the length of the Tinder conversation was not related to the chance of continuing the relationship on WhatsApp, $b = .01$, Wald's $z = 1.64$, $p = .200$, $\exp(B) = .988$. Next to that, there was no curvilinear relationship between the length of the Tinder conversation and continuing the conversation on WhatsApp, $b = -.05$, Wald's $z = .183$, $p = .669$, $\exp(B) = .948$.

Date. There was no relationship between the length of a conversation and a higher chance on a date, $b = .004$, Wald's $z = .19$, $p = .666$, $\exp(B) = 1.004$. There was a small curvilinear relationship between the length of the Tinder conversation and the chance on a date, $b = -.27$, Wald's $z = 3.82$, $p = .051$, $\exp(B) = .763$.

The hypothesis that the length of the conversation is curvilinearly associated with a successful outcome of the relationship, was partly supported.

Hypothesis 3

The third hypothesis predicted a more successful outcome of the relationship when the conversation includes more reciprocity between Tinder users.

WhatsApp. Reciprocity between Tinder users was positively related to continuing the conversation on WhatsApp as an outcome of the Tinder conversation, $b = .44$, Wald's $z = 6.41$, $p = .011$, $\exp(B) = 1.56$. The $\exp(B)$ value indicates that when reciprocity increases with one unit in the conversation, the odds ratio is 1.6 times as large and there is 1.6 more chance of continuing the conversation on WhatsApp than when reciprocity does not increase with one unit in the conversation.

Date. Reciprocity between Tinder users was not related to the chance on a date, $b = .11$, Wald's $z = .452$, $p = .501$, $\exp(B) = 1.12$.

Therefore, the hypothesis that more reciprocity predicts a more successful outcome of the relationship, was partly supported.

Hypothesis 4

The fourth hypothesis predicted a more successful outcome of the relationship when the conversation includes more similarity between Tinder users.

WhatsApp. Similarity between Tinder users was not related to a higher chance of continuing the conversation on WhatsApp as an outcome of the Tinder conversation, $b = .37$, Wald's $z = 2.24$, $p = .135$, $\exp(B) = 1.46$.

Date. Similarity between Tinder users was positively related to a higher chance on a date, $b = .76$, Wald's $z = 6.76$, $p = .009$, $\exp(B) = 2.13$. The $\exp(B)$ value indicates that when similarity increases with one unit in the conversation, the odds ratio is 2.1 times as large and there is 2.1 more chance on a date, than when similarity does not increase with one unit in the conversation.

Therefore, the hypothesis that more similarity predicts a more successful outcome of the relationship, was partly supported.

Discussion

The present study investigated the content of initial Tinder conversations in terms of length, intimacy, similarity, and reciprocity, and how they relate to relationship progression. The hypotheses expected an inverted-U relationship between the intimacy and length of a Tinder conversation and the outcome of the Tinder conversation, and a positive relationship between similarity, reciprocity, and the outcome of the Tinder conversation.

The first hypothesis expected a curvilinear relationship between the intimacy of a Tinder conversation and a successful outcome of the conversation. The results show that there is no curvilinear relationship between the intimacy of the Tinder conversation and continuing the conversation on WhatsApp or a higher chance on a date. However, a relationship has been found between the intimacy of a conversation and a higher chance on continuing the conversation on WhatsApp. This means that when a Tinder conversation includes more intimacy, there is a higher chance that Tinder users continue the conversation on WhatsApp.

The second hypothesis expected a curvilinear relationship between the length of a Tinder conversation and a successful outcome of the conversation. The results only showed a small curvilinear relationship between the length of the Tinder conversation and the chance on a date. This means that a very short or very long conversation does not have the highest chance on a successful outcome, but a conversation with the average length does.

The third hypothesis predicted a more successful outcome of the relationship when the conversation includes more reciprocity between Tinder users. Reciprocity between Tinder users was positively related to continuing the conversation on WhatsApp as an outcome of the Tinder conversation. This result is in line with previous studies, which show that reciprocity is an important factor in initial communication (Altman & Taylor, 1973; Rosenfeld & Bowen, 1991). Reciprocity is important in initial communication, because this is how people get to

know each other. Because there are less cues available in online conversations, it is important that people use reciprocity in the online conversation to develop a relationship.

The fourth hypothesis predicted a more successful outcome of the relationship when the conversation includes more similarity between Tinder users. Similarity between Tinder users was positively related to a higher chance on a date. Similarity has shown to be significant in offline interactions (Berscheid and Walster, 1978; Montoya et al., 2008), and this study shows that similarity also has a positive effect on a successful outcome in online conversations.

Implications

The results of the first hypothesis were not in line with previous research. Ramirez et al. (2015) suggests that the most beneficial timing for switching from online to offline is when people have provided a solid base for the relationship, but before partners have had time to form idealized impressions. Ramirez and Zhang (2007) suggested that meeting after three weeks of chatting is the most beneficial, and meeting after six weeks is too late for a successful outcome of the relationship. However, the studies of Ramirez do not include the content of the online conversations. Our study provides a more complete understanding of the initial content of online conversations, by combining the conversation topics by Avtgis et al. (1988) and Jourard (1971) to Knapp's (1978) model.

The expectation was that there would be an inverted-U relationship between the intimacy of the conversation and a successful outcome. This study found a linear relationship between the intimacy of a Tinder conversation and a successful outcome of the conversation. This means that Tinder users have to reach a certain amount of intimacy in the online conversation to develop the relationship and eventually meet face-to-face. In our study, we did not find a point where more intimacy would diminish the chances of a successful outcome. It could be that the conversations in our study did not reach such a high state of

intimacy to decrease the chance on success in the results. Tinder conversations are based on initial communication, where people casually get to know each other, which is why very intimate conversations are not expected on the dating application.

In addition, an inverted-U relationship was expected between the length of the Tinder conversation and a successful outcome of the relationship. A small curvilinear relationship was found between the length and the outcome of the conversation. This means that a very short Tinder conversation is not the most beneficial for a successful outcome of the relationship, because the Tinder users do not take the time to get to know each other. Very long conversations are also not the most beneficial. Tinder is a dating application where people casually get to know each other. The conversations are based on initial communication, which is why very long conversations are not very common on a dating application.

Reciprocity between Tinder users was positively related to continuing the conversation on WhatsApp as an outcome of the Tinder conversation. Reciprocity is characteristic of initial communication, and is needed for people to get to know each other. Therefore, it makes sense that reciprocity was positively related in Tinder conversations. However, reciprocity between Tinder users was not related to a higher chance on a date. This can be explained by the fact that reciprocity is needed to further develop the conversation, but it is not a guarantee that the other person is a potential partner that they are attracted to and want to meet face-to-face.

Similarity between Tinder users was not related to a higher chance of continuing the conversation on WhatsApp as an outcome of the Tinder conversation, but it was positively related to a higher chance on a date. Similarity is not very important in the initial communication, because people are just getting to know each other. When people want to meet face-to-face, they want to find out if the other person is a potential partner. People discover similarities between them during the conversation, which may lead to attraction.

To clarify, reciprocity is needed to further develop the conversation on WhatsApp, but similarity is an important factor when Tinder users want to meet face-to-face, which explains the results of the hypotheses.

Knapp's (1978) model was used to show how offline relationships develop. Kallis (2017) shows that online relationships have a different process than Knapp's (1978) model. This study shows that online conversations follow the online dating process of Kallis (2017), where people start with the initiating stage and meet face-to-face when they have reached the next stage in the relationship. Next to that, this study provides a more complete understanding of the initial content of online conversations, by combining the conversation topics by Avtgis et al. (1988) and Jourard (1971) to Knapp's (1978) model. Linking the conversation topics to Knapp's (1978) model is an important addition to the classic model, because it shows a deeper understanding of the relationship stages.

Next to that, this research investigated the most beneficial timing for switching from an online conversation to a face-to-face meeting, based on the Hyperpersonal perspective (Walther, 1996) and the study of Ramirez and Zhang (2007). This research shows that people have to reach a certain amount of intimacy in the conversation before meeting face-to-face.

To summarize, this research showed that initial Tinder conversations mirror offline relationship development, but a certain stage of relationship development in terms of intimacy, reciprocity, and similarity has to be met before Tinder matches can meet face-to-face.

Limitations

The study of Ligtenberg (2015) has shown that casual sex, entertainment, passing time, and relaxing were important motivations for using Tinder. As this study did not ask for the motivations of the Tinder users, it would be useful to investigate this in further research. To give an example, one participant of this study was using Tinder because she was sitting

sick at home for two weeks. She started conversations out of boredom. None of the conversations ended in exchanging numbers or another successful outcome, because the Tinder user did not have the intention to meet face-to-face with one of her Tinder matches. Therefore, it is suggested that further research asks for the motivation of the Tinder users, so a clear distribution can be made between the motivations of the Tinder users and the outcome of the conversations.

Next to that, sharing Tinder conversations is very personal. Participants were aware that they were sharing the content of their Tinder conversations, so only participants who were willing to share them, participated in this study. Many people in the personal network of the researchers did not want to share their Tinder conversations. Thus, the researchers only had access to conversations that people were willing to share. In addition, the researchers noticed that women were more willing to participate in this study than men. This has consequences for the content of the conversations. In further research, it is suggested that gender is equally divided in the sample.

Moreover, most of the time people first exchange numbers before they arrange a date. This means that the conversation continues, for example, on WhatsApp. The researchers did not have insight in how the conversation and the relationship progresses once people switched from Tinder to another medium. In addition, the results of this study do not mean that meeting offline means that the relationship will be successful. This study ends at the point of the initial meeting and does not have insight in how the conversation and the relationship proceeds after exchanging numbers.

This study focused on Tinder because it is currently the most popular smartphone-based dating application. However, some participants mentioned that they also use other applications for online dating. It could be interesting to investigate if initial communication would be different on other platforms.

Although the current study is based on a small sample of participants, the findings offer valuable insights for future research. It would be interesting to assess the different motivations of Tinder users, important factors in online conversations, and to investigate relationship development on other online dating applications.

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Appendix A

Consentformulier

Onderzoek

Vanuit de afdeling Communicatie- en Informatiewetenschappen van Tilburg University zijn wij momenteel bezig met het onderzoeken van succesvolle strategieën op Tinder. Daarom zijn wij op zoek naar proefpersonen die hun Tinder chats met ons willen delen. Uiteraard zal dit volledig **anoniem en discreet** gebeuren. Het onderzoek zal maximaal 1 uur duren. Het delen van je Tinder chats is misschien wat vreemd en kan wat ongemakkelijk zijn. Houd hier rekening mee bij deelname aan het onderzoek.

Vertrouwelijk

Jouw data wordt uiterst vertrouwelijk en anoniem behandeld. Er wordt enkel naar je leeftijd en geslacht gevraagd, en jouw Tinder chats worden anoniem opgeslagen. Namen en andere identificerende data in de chats worden geanonimiseerd. Op deze manier zijn de Tinder chats niet terug te leiden naar jou of naar iemand anders. Om de gesprekken op te nemen wordt een video-opname gemaakt van het scherm. Deze video-opname wordt omgezet naar tekst en de video zelf wordt niet opgeslagen. De anonieme gespreksdata wordt voor een periode van 5 jaar bewaard op een server van de universiteit waar alleen de onderzoekers toegang toe hebben. Jouw privacy wordt hierdoor volledig gewaarborgd.

Vrijwillig

Het is niet verplicht om deel te nemen aan dit onderzoek. Je kunt op ieder moment de deelname zonder consequenties beëindigen.

Contact

Heb je een vraag of mocht je nieuwsgierig zijn naar de resultaten, dan ben je vrij om contact op te nemen met één van de onderzoekers:

Dico Visser:

Anouk Hoefmans:

Toestemmingsverklaring

Ik verklaar hierbij dat ik alle bovenstaande informatie heb doorgelezen en ik vrijwillig mijn Tinder gesprekken ter beschikking stel. Ik ben me ervan bewust dat mijn Tindergesprekken anoniem zullen worden opgeslagen. Ook ben ik me ervan bewust dat ik daarna nog enkele vragen invul die ik eerlijk zal beantwoorden:

Nummer participant:

Datum:

Handtekening participant:

Handtekening onderzoekers:



Appendix B



Vragenlijst

Nummer: ____

Leeftijd: ____ Geslacht: man / vrouw

Huidig opleidingsniveau: Geen / Voortgezet onderwijs / MBO / HBO / Universiteit

E-mail (bij interesse in resultaten): _____

Vul voor onderstaande tabel van iedere chat de naam in en of je de persoon buiten Tinder om al kende voordat je er een match mee was. Geef daarnaast ook aan waartoe de chat eventueel geleid heeft (WhatsApp, date, zoenen, seks of/en relatie; meerdere antwoorden mogelijk).

Chat nr.	Naam	Oude bekende?	WhatsApp	Date	Zoenen	Seks	Relatie
1		Ja / Nee					___ maanden
2		Ja / Nee					___ maanden
3		Ja / Nee					___ maanden
4		Ja / Nee					___ maanden
5		Ja / Nee					___ maanden
6		Ja / Nee					___ maanden
7		Ja / Nee					___ maanden

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Chat nr.	Naam	Oude bekende?	WhatsApp	Date	Zoenen	Seks	Relatie
8		Ja / Nee					___ maanden
9		Ja / Nee					___ maanden
10		Ja / Nee					___ maanden

Leg hieronder beknopt de openingszinnen uit die de onderzoekers niet zelf kunnen interpreteren:

Chat nr.	Naam	Uitleg