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DFG Deutsche Forschungsgemeinschaft

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Chapter 1. Unfriending and Becoming Unfriended on Facebook

Abstract: When using social networking services, such as Facebook, it is easy to become friends with other users. Unfriending (or defriending) is easy as well, requiring only that a user click on Facebook's "Unfriend" button. This chapter highlights the types of friends who are most often unfriended on Facebook, the role of unfriending in connection with emotions, reasons for unfriending others, and being unfriended by someone. Furthermore, we concentrate on avoiding contact after the act of unfriending. Additionally, we investigate whether hiding and blocking can be interpreted as options for discontinuing contact, as well as why people might choose an alternative to unfriending. We conducted our research using unfriending applications, which demonstrate to the user he or she has been unfriended. The empirical basis of our research consists of 2,201 questionnaires, completed by individuals with Facebook accounts.

Keywords: Unfriending, Facebook, Emotions, Reasons for unfriending, Hiding, Blocking, Unfriending apps, Friend, Friendship, Contact avoidance, Unfriending memory

Introduction

Social networking services (SNSs) have become an inherent part of modern life (Boyd & Ellison, 2007). Behind Google, which is the most visited website, Facebook is the second most visited service in the world with 1.39 billion monthly active users as of the fourth quarter, 2014 (Statista, 2015). On Facebook, users can maintain individual profile pages, connect with others who use Facebook, and visit other users' pages. On SNSs, it is easy to make new "friends." One need only one click (and receive a positive response from the user to whom you sent the friend request) to befriend someone. Equally easy as befriending (friending) someone is the act of unfriending (or defriending). To unfriend someone, all you have to do is go to his or her private page and click the "friends" button followed

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by the "unfriend" option. In this way, you cancel contact with this Facebook friend. In past years, the website displayed the unfriend button further down the screen, causing the user to scroll to find it, but in the most recent version, the unfriend button is at the top of the page (see Figure 1). Because the button is now readily available, it may result in an increase in unfriending behavior.

Mass unfriending (unfriending more than one Facebook friend via one command or click) is still impossible. Yet this shifting of the "unfriend" option toward in the top of Facebook profile pages suggests that Facebook can be used to support the separation between individuals according to research of Fox, Osborn, and Walter (Fox, Osborn, & Warber, 2014). Unfriending can be a sudden disengagement (Bevan, Ang, & Fearns, 2014). Unfriending is becoming a frequently used function, with comparisons between 2009 and 2011 revealing more users plying the unfriend button and thus disengaging with some of their Facebook friends (Madden, 2012).

The term *unfriend* originated about 2005, and in 2009, unfriend became word of the year according to the Oxford University Press. The *New Oxford American Dictionary* defines the word as follows: "To remove (someone) from a list of friends or contacts on a social networking website" (Oxford University Press, 2009).

The social and physical attractiveness of Facebook friends may influence the unfriending act (Peña & Brody, 2014). Unfriending is considered harsh and impolite. Gutierrez, Lopez, and Ovaska (2013) define unfriending as a hard, unsociable activity, a failure of friendship. People unfriend some of their friends on an SNS to establish distance between them. Being unfriended is akin to one person deescalating a relationship (Bevan, Ang, & Fearns, 2014). A user needs permission if to befriend someone, but unfriending is unilateral; no permission is needed to unfriend another. People do not always notice, at least immediately, they have been unfriended by a former SNS friend. However, if they follow the number of friends they have, they may notice that number has decreased. Alternatively, individuals may search their friendship list for additions or absences and do not find a former contact (Sibona, 2014a). Finally, the user who initiated the friend request is more likely to be unfriended than the one who received and accepted the friendship request (Sibona & Walczak, 2011).

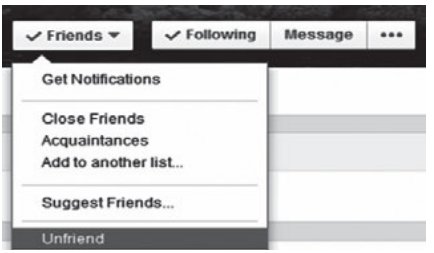


Figure 1: Unfriend Button on Facebook.

After being unfriended, users tend to avoid future contact with the person who unfriended them (Sibona, 2013). Our study differentiates among reasons for unfriending arising in the digital world ("online reasons") and those emerging from the physical world ("offline reasons"). The main initiators to unfriend someone on Facebook include posting about unimportant topics, categorized as online reasons (Gashi & Knautz, 2015). Reasons someone might be unfriended include, for example, a user dislikes an individual's behavior in the physical world. Users who unfriend others for offline reasons appear to dislike them more than people who unfriend others for online reasons (Sibona & Walczak, 2011). Thus, one can be unfriended for reasons unconnected with online behavior.

The main motivation for conducting our study was the absence of empirical findings in the literature (especially on Sibona's studies) concerning the behavior and emotions of users who unfriend others. A secondary motivation was to gather quantitative results on the varieties of unfriending behavior to compare them with Sibona's findings (Sibona, 2013; Sibona, 2014a; Sibona, 2014b; Sibona & Walczak, 2011). We will examine whether Facebook users also apply other features to disengage with someone, such as hiding a person from a News Feed or blocking, instead of unfriending. Furthermore, this investigation examines the factors that predict both offline and online reasons for Facebook users to unfriend their friends on Facebook, the factors that predict the emotional response Facebook users display after being unfriended, and the emotions exhibited when they unfriend others. In addition, we identified the types of friends (e.g., friend of a friend, high school friends, etc.) who are more likely to be unfriended. Finally, we examine unfriending application usage. The cognitive, emotional, and social causes and effects of unfriending are not yet clear, for research is insufficient. Sibona's surveys indicate some reasons for users to unfriend their friends on SNSs, but still other reasons may constitute an impulse for one user to unfriend another. We have found no mention whatsoever that answers how users who actively unfriended some of their friends actually feel afterward.

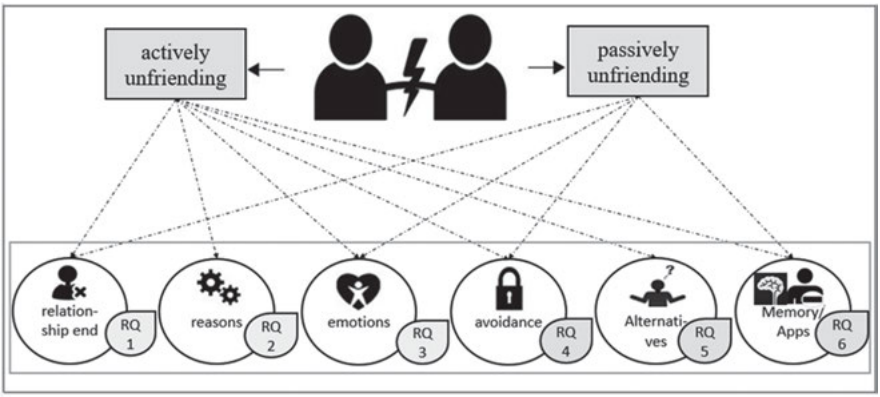


Figure 2: Research Model of Unfriending and Becoming Unfriended on Facebook (Source: Modified from Gashi & Knautz, 2015).

To explore these research questions (RQs), an online survey was developed and distributed among German-speaking Facebook users. The questionnaire consists of 23 questions in total. There were 2,201 test subjects who completed the whole questionnaire.

Literature Review and Background

People form friendships with other individuals because they are rewarding (Wright, 1984). There seems to be a difference between making friends and building friendships in the physical world, however, compared with doing so in the digital sphere (e.g., Facebook). Friendships on Facebook, or in general on SNSs, often represent weak ties between individuals. Strong ties are more likely to be formed in the physical world (West, Lewis, & Currie, 2009). One reason most relationships on SNSs tend to be weak is many people accept friendship requests because it is easier to say "yes" rather than "no" (Boyd, 2006). Young users tend to unfriend Facebook friends more frequently than older Facebook users do (Madden, 2009). Many users consider unfriending to be a harsh act and for this reason, prefer to use the option of hiding other users' posts from being displayed on the news wall rather than unfriending or blocking them (Gutierrez, Lopez, & Ovaska, 2013). Sibona guess that the social etiquette of unfriending is uncertain and for this reason would some user rather hide others' posts from being displayed than unfriend them (Sibona, 2014); furthermore, users who initiated the

friend request seem to be unfriended more often than those who accepted the request (Sibona, 2013).

Reasons for ending a relationship in the digital world differ from those experienced in the physical world (Quercia, Bogaghi, & Crowcroft, 2012). We found that relationships embedded in different social circles are more likely to end if friends differ too much in age or if one of them is neurotic or introverted. Women tend to unfriend their SNS friends more than men do. Of women, 67 % said they have deleted someone from their network, compared with 58 % of men. Furthermore, more women use privacy settings to protect their private information (Madden, 2012). Social attractiveness is a main predictor of the intent to unfriend someone. This means that people who possess high levels of social attractiveness are less likely to be unfriended than those with low social attractiveness. Thus, the intent to unfriend is a perceptual and behavioral process (Peña & Brody, 2014). When Facebook users are unfriended by someone, they tend to interpret the unfriending act as negative (Bevan, Pfyl, & Barclay, 2012) and as an expectancy violation (Bevan, Ang, & Fearns, 2014).

Friendship Dissolution

SNSs support individuals in both maintaining existing social ties and in forming new connections. Individuals mostly use Facebook to keep in touch with old friends (mainly high school friends and acquaintances) and to establish or pursue new connections (Ellison et al., 2007).

The process of online friendships is similar to forming friendships in the real world, with the difference that Facebook keeps a record of who initially reached out to whom, such as the visible request (Sibona & Walczak, 2011). Sibona and Walczak presumed the links between users on Facebook, which are visible, make it difficult to end a relationship online. This explains why unfriending on Facebook may signal to other users that the relationship between the dyad is over (Sibona & Walczak, 2011). When a user unfriends someone (actively) on their SNS, the two people will be more certain who initiated the friendship request. In the case of being unfriended by someone Facebook friend, the unfriended person will be insecure who initiated the friendship request. Those who initiates the request are being more unfriended than those who accepted it. Individuals who are on the receiving end of a friendship request are more likely to unfriend others (Sibona & Walczak, 2011).

Young people who use Facebook have on average, 300 Facebook friends, mostly people they know from school, family members, friends who attend a different school, brothers and sisters, and parents. People whom users never meet

in person, teachers, coaches, and famous personages are not very likely to be friended (Madden, 2013). The end of Facebook relationships often can be predicted by whether dyads are embedded in the same circle of friends, whether there is an age difference, or whether one of them is introverted or neurotic. Dyads sharing a common female friend are not so likely to be desolate over the unfriended, compared with those who have a common male friend (Quercia et al., 2012).

Sibona was able to categorize the types of friends who are unfriended by individuals, as well as those types who do the unfriending. The majority of unfriending affects the following categories: friends from high school (18.6 %), others (12.5 %), friends of a friend (11.7 %), and work (10.5 %). Individuals are mostly unfriended by high school friends (16.3 %), common interest friends (13.5 %), college (11.7), and coworkers (11.2 %). These categories of friend types are those most likely to either be unfriended or unfriend others. In both cases, the high school friend is the one who tends to be unfriended the most and who unfriends others the most (Sibona, 2014a).

These observations lead to our first research question (RQ):

RQ1a: *Which kind(s) of friends do you unfriend mostly?*

RQ1b: *Is the termination of a friendship on Facebook also the end of the friendship in the real world?*

RQ1c: *Are offline friends more important to you than online friends?*

Reasons for Unfriending

Facebook postings that put a strain on the relationship, or messages that cast a shadow on the receiver or reveal contempt for other users are associated with the intent to unfriend a sender. In addition, when someone sends status updates threatening the receiver's concept of self and beliefs, the latter's intent to unfriend the sender grows stronger (Peña & Brody, 2014). Yet the act of unfriending can be caused by real world events as well as those in the digital world. Sibona and Walczak (2011) discuss different reasons, categorized as *online* and *offline*. The largest number of survey respondents (55 %) noted they unfriended former friends for online reasons. Among the highest scores of online reasons for unfriending are unimportant topics (62 %), inappropriate topics (36 %), and posting frequency (33 %).

Sibona and Walczak (2011) found that 28 % of survey respondents unfriended some SNSs friends in response to offline behaviors. Offline reasons for unfriending included personality (70 %), behavior (62 %), and misdeeds (57 %). Individuals who stated they unfriended another user for offline reasons indicated they

disliked a friend's behavior or had experienced a change in the relationship, meaning a geographic relocation or a romantic relationship's end. In contrast to individuals who have known each other briefly, people who have known each other for a long time are more likely to unfriend each other due to excessive posting on often polarizing topics. As the length of a dyadic friendship increases, the likelihood for citing offline reasons as causes for unfriending (e.g., misdeeds, dislikes, etc.) increases as well.

From this observation, our second RQ arises:
RQ2a: *For which online reasons do Facebook users unfriend some friends?*
RQ2b: *For which offline reasons do Facebook users unfriend some friends?*

Emotional Response

For users who have been unfriended, the event may have actual negative emotional consequences (Bevan, Pfyl, & Barclay, 2012). If the unfriended party can identify the user who did the unfriending, the one unfriended may ponder the act more deeply and experience a feeling of rejection or sadness. If unfriended, individuals who spend a significant amount of time on Facebook often will feel more negatively affected and tend to ruminate longer over the experience. Furthermore, they will reflect on how they present themselves and how others online are perceived them. In addition, results from a 2012 study by Pfyl and Barclay demonstrate that being unfriended by a close friend – such as former friends from the physical world, for example, family members or romantic partners – carries more cognitive weight than being unfriended by distant friends. Rumination and negative emotional responses can also occur when users are unfriended by someone to whom they initially sent the friendship request, because it causes them to wonder why the other person accepted the request at all.

In his study, Sibona investigated factors predicting the presence and nature of a user's emotional response to being unfriended on Facebook. Sibona's research suggests individuals' emotions (for example, botheration, sadness, surprise, or amusement) after losing a connection depend on four factors.

The first factor is how highly a person valued the peak of the relationship – individuals who had a high peak in their relationship tend to be more negatively affected by its loss. The second factor is the level of network vigilance – users who spend more time online are more likely to be negatively affected when they are unfriended by someone. The third factor is the discussion within the dyad prior to the event – users who discuss the unfriending act before it occurs are less likely to be negatively affected by it. Finally, the fourth factor is any discussion occurring

after the act of unfriending – users who discuss the unfriending act afterward to each other are less likely to be negatively affected by it.

Surprise is the most common emotion users experience by the act of unfriending. According to Sibona's research results, 73 % of users react in a surprised manner when they see they have been unfriended. Slightly more than half (51.7 %) expressed they were saddened by being unfriended, and 64.6 % were amused they had been unfriended (Sibona, 2014b).

From this observation, we formulate our third RQ:

RQ3a: *What is the user's emotional response after being (passively) unfriended on Facebook?*

RQ3b: *What is the user's emotional response after (actively) unfriending others on Facebook?*

Avoiding Contact

The study by McEwan, Gallagher, and Farinelli (2008) found the main reason for friendship dissolution is purposeful avoidance; meaning, people reduce their communications with a former friend and seek to avoid further contact.

Some Facebook users do not like to meet other users who have unfriended them. More than 40 % of respondents in Sibona's (2013) survey want to avoid future contact with those who unfriended them because seeing the person after having been unfriended would be uncomfortable (Sibona, 2013).

Avoiding contact after being unfriended depends on different factors. Sibona's (2013) research results present six factors that can predict whether a user will want to avoid future contact with those who have unfriended them on Facebook. The first factor is the discussion that occurs after unfriending (similar to the factors of emotional response). The second is the emotional bond experienced with the unfriending person. The third is the offline behavior of the one being unfriended. The fourth concerns the perceived geographical distance between the two people. The fifth is any discussion that occurred between the two people prior to the unfriending event. The six is the evaluation of the relationship's strength.

From these factors, we formulate a fourth RQ:

RQ4a: *Do users avoid real-life contact after being (passively) unfriended on Facebook?*

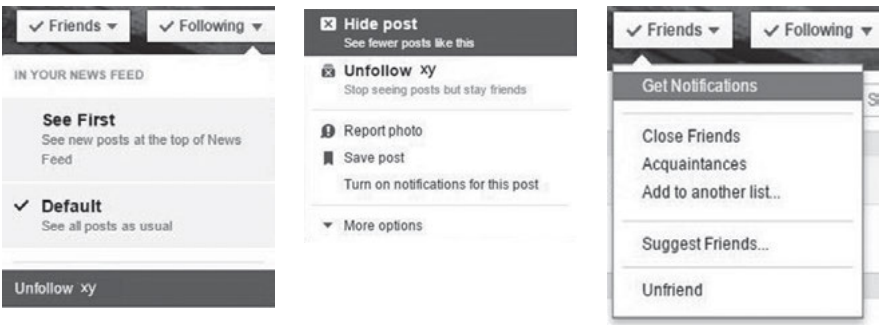
RQ4b: *Do users avoid real-life contact with those they have (actively) unfriended on Facebook?*

Blocking and Hiding Options for Unfriending

Hiding, or unfollowing, along with unfriending, is an online strategy employed to avoid contact with others and move toward dissolving relations (Peña & Brody, 2014). Hiding on Facebook is as easy as unfriending. A user can hide all stories from another user, a page, or a group, which means unfriending is not the only method to exclude one's information from others. When one user hides another, the latter will not be notified about being unfriended. It may be less hurtful to be hidden, in contrast to being unfriended.

To hide (unfollow) someone, imagine User One (a girl) elects to hide away her information from User Two (a boy). She navigates to his individual page, and clicks the "Follow" button, followed by the "Unfollow" button (see Figure 3a), which unfollowing User Two (him) from User One's (her) news wall. The button for hiding (unfollowing) is found at the top of the page, next to the Unfriend button. In addition, a user can hide a single post appearing in her or his news wall (see Figure 3b). Unfollowing a post, a Facebook group, or a specific person is one method to hide away one's information or one's online self.

It is also possible to cease contact with another user without the finality implied by unfriending or unfollowing. Again, imagine User One (a girl) wants to deactivate notifications received from User Two (a boy). User One navigates to User Two's page, clicks on the "Friends" button, then clicks on the "Get Notifications" button. This process requires no additional confirmation from User One. User Two's notifications will no longer appear on her timeline whenever he posts something new; however, his icon will continue to appear in her newsfeed. A user also can hide certain posts, which is another option to block information being transmitted other users (see Figure 3c).



a) Unfollowing b) Hide a Post c) Deactivating Notifications

Figure 3: Unfollowing and Hiding Buttons on Facebook.

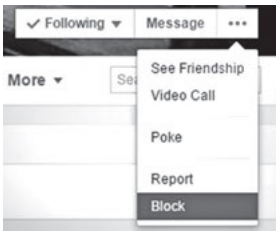


Figure 4: Blocking Button on Facebook.

Another option is blocking information transmission between users. Blocking is not as simple as unfriending or unfollowing. To block someone, the user must take several steps, and the button to do so is not easily accessed (see Figure 4). Once again, imagine our users: Two (a boy) and Three (a second boy). User Two navigates to the right side of User Three's page, clicks the "Block" button, and when a new window appears (see Figure 5), confirms his choice to block. In the future, while User Two will receive information about things User Three can no longer do on Two's page, Three will no longer be able to start a conversation with Two, add him as a friend, and so forth (see Figure 5). He is effectively blocked.

Figure 5: Confirm Button for Blocking on Facebook.

A study by Madden et al. found that 74 % of teen Facebook users have deleted people from their friend list, and 58 % have blocked friends from their SNS. Girls tend to delete or block users more than boys do. People with a large number of friends on SNSs display a greater tendency to block or delete their friends from SNSs (Madden et al., 2013). Additionally, we investigated whether the use of friending, unfriending, and blocking serves as a set of essential privacy management techniques for controlling who sees which content and when. People with a large number of SNSs friends are more likely to block and delete their friends,

compared with those who have a smaller network. Deleting friends from SNSs is becoming a frequently used function, as between 2009 and 2011, more users deleted some portion of their Facebook friends (Madden, 2012).

People who make the receiver look bad by posting face-threatening acts (FTA) are likely to be hidden on Facebook by the receiver. FTAs that damage the relationship are disrespectful, tactless, and insensitive messages that induce people to hide contacts on Facebook. People who are physically und socially unattractive tend to get hidden by the receiver of a message on Facebook. Hiding is not considered as extreme as unfriending. Users tend to hide others when receiving a face-threatening SNS update rather than to unfriend this user on Facebook (Peña & Brody, 2014).

This leads to our formulating a fifth RQ:

RQ5a: *Do people use the hide and block application as an alternative to unfriending?*

RQ5b: *Why are individuals using hiding and blocking instead of unfriending?*

Unfriending Memory

Normally, users do not notice they have been unfriended by a former SNS friend. If they keep track of the number of friends they have, however, they may see that figure has declined. Alternatively, individuals search their friendship list for additions or abstinences and do not find a former contact (Sibona, 2014a).

This leads to our formulating a sixth RQ:

RQ6a: Do users remember more those friends they have unfriended actively on Facebook, or those who have unfriended them?

RQ6b: How do users notice that they have been unfriended?

RQ6c: Unfriending applications (apps): How many people use such apps?

Study Design and Data Collection

This study was conducted using a German-language survey to investigate respondents' opinions, behavior, reasons, and emotions concerning unfriending and being unfriended on Facebook. The survey was distributed online, mainly using Facebook groups from different universities or other communities in Germany, Austria, and Switzerland. The questionnaires were active between July 5 and July

31, 2014 (i.e., for a total of 26 days). In total, 2,517 surveys were started. Of the participants, 88 indicated they have never unfriended someone or been unfriended. A total of 2,201 individuals completed the survey, meaning, they answered all of our obligatory questions.

The items of our survey are a blend of Sibona's questions (Sibona, 2013; Sibona, 2014a; Sibona, 2014b; Sibona & Walczak, 2011) and new questions. The study was designed to take about 25 minutes to complete. All questions were obligatory, but everyone had the opportunity to abstain from answering a question by choosing the option "Not Applicable." The raw data were collected via a commercially available survey tool (Umfrage-Online) and analyzed with IMB SPSS Statistics 21.

Our survey used methods of descriptive statistics, such as percentages to find differences and communalities among the answers. In addition, the study applies factor analysis to investigate factors among the questions. Factor analysis was used to partition questions into meaningful groups. Constructs were generated, based on factor analysis and interpretation of the results.

Results

Demographic Data

The questionnaire was answered by Facebook users only. Those who stated they had never been unfriended or had unfriended someone else were excluded from the survey. On average, the students were 23 years old. The survey was started by 2,517 respondents and completed by 2,201 respondents, $N = 632$ male, $N = 1{,}557$ female, and 12 respondents who did not specify gender. This study considers only those who finished the questionnaire. Expressed in percentages, the majority of respondents (70.7 %) was female, and close to one-third (28.7 %) was male; only a small proportion of the survey respondents (0.5 %) did not specify their gender. The majority of survey respondents (71.2 %) have a high school diploma, and 25.9 % have a graduate degree. Of respondents, 1.8 % have a general certificate of secondary education, only 0.5 % have a certificate of secondary education. 0.1 % have no degree, and 0.5 % did not specify whether they have graduated.

To assess the two-sided statistical significance between genders, we performed a chi-square test, based on Pearson's. Our study distinguishes four levels of statistical significance: the 95 % level (marked by one asterisk "*"), the 99 % level (marked by "**"), and the 99.9 % level (marked by three "***"). All other cases less than the 95 % level are "not significant" and are labeled "*ns*."

Table 1: Time Users Spend on Internet and Facebook.

	Women Mean (Median)	SD	Men Mean (Median)	SD	Sig
Internet	165.02 (120)	137.407	228.59 (180)	174.704	***
Facebook	63.97 (40)	77.577	67.11 (30)	99.981	Ns

Women $N = 1{,}557$, **Men** $N = 632$; **Not Applicable** $N = 12$; *SD*: Standard Deviation; Unit: Minutes per Day.

On average, respondents spent 183.5 minutes a day on the Internet and 64.86 minutes of this period on Facebook. Our study ascertained men spend more time than women on the Internet and on Facebook (see Table 1).

Slightly more than half of the participants (58.1 %) stated they befriended some of their friends only because they could not say "No" to them. The other 41.9 % did not accept someone's friend request because they did not want to be friends with them. More women than men tended to accept friendship requests on Facebook because they felt they could not say "No" (women = 60.3 %, men = 52.7 %).

For the majority (86.3 %) of respondents, gender is irrelevant in making an unfriending decision: only 7.9 % unfriends more male friends than female, and 5.8 % stated they unfriend more female Facebook friends than male. Both female and male respondents seem to unfriend minimally more male friends on Facebook than female friends. Female friends are unfriended by 4.3 % of male users and by 6.4 % of female users, while male friends are unfriended by 6 % of the same gender and by 8.7 % of female friends. Compared with men, women distinguish more often between genders when unfriending another user (women = 15.1 %, men = 11 %).

Factor Analysis

Factor analysis was performed by the questions with many answering options in order to determine how many dimensions are in the set of variables among the different questions. Factor analysis is a means to identify clusters or groups of related items or factors. Factors are formed relatively independent of one another. The principal component analysis was used to determine whether there are distinct factors that can transform a number of original variables into a smaller set of factors. To determine factor loadings, the Varimax rotations function was used. Component groupings were then analyzed and named according to the questions in the group.

Friendship Dissolution

Types of Unfriended Friends

Which type of friend do you mostly unfriend on Facebook? To answer this question, we allowed multiple items to be selected. The answering options were adopted from the 2014 study by Sibona and Walczak (2014a).

Table 2: Types of Friends Unfriended by Survey Respondents (in Percent).

Type of friend	All %	Female %	Male %	Significance
Friend of a Friend	40.1	42.2	35.0	*
Internet	37.0	38.5	33.4	*
Other school Friend	23.3	25.1	18.7	**
High School Friend	20.5	20.2	21.0	ns
Grade School	15.3	16.2	13.1	ns
Not Applicable	14.3	12.5	18.8	***
Romantic Partner	14.3	15.1	12.2	ns
College	10.6	10.3	11.1	ns
Different Interests	8.4	7.5	10.6	*
Other	7.8	5.6	2	ns
Work	4.9	4.6	5.7	ns
Friend Through Parent	4.9	5.3	3.8	ns
Neighbor	3.4	4.0	1.9	*
Family Member	2.6	2.3	3.5	ns
Friend Through Partner	2.6	2.8	2.2	ns
Church	1.1	0.9	1.7	ns
Common Interests Friend	0.5	0.5	0.6	ns
Friend Through Child	0.4	0.3	0.6	ns

***N* = 2,201:** Women *N* = 1,557, Men *N* = 632, Not Applicable *N* = 12

Sibona's study (2014a) indicated that high school friends (18.6 %) are mostly unfriended by survey respondents, followed by the category "other" (12.5 %). Other friends are all those types not included among the answer options. The third type of friend unfriended most often is friend of a friend (11.7 %), work (10.9 %), and friends with common interests (10.5 %). The other friend types are unfriended by less than 10 % of our participants. This study showed the majority of unfriending occurs with friends of a friend (40.1 %), followed by Internet friends (37 %). In addition, friends from a different school, which was not listed among the given answers, tend to be unfriended often, for example, other school friends (23.3 %), high school friends (20.5 %), grade school friends (15.3 %), and college friends (10.6 %). The answer option "Not Applicable" was chosen by 14.3 %, meaning 14.3 % chose not to specify the type of friends they unfriend most often. Romantic partners are unfriended by 14.3 % of respondents. Friends with different interests (8.4 %), other (7.8 %), work (4.9 %), friend through parent (4.9 %), neighbor (3.4 %), family member (2.6 %), friends through partner (2.6 %), church (1.1 %), friends with common interests (0.5 %), and friends through child (0.4 %) are unfriended by a minority of our respondents. We observe some differences between our study and Sibona's study (2014a), which found that high school friends are the type of friend unfriended most often. In contrast, with our sample, high school friends are the fourth most common type of friend to be unfriended, while a friend of a friend is the type unfriended most often.

There are statistically significant differences between female and male participants. The most unfriended type of friend, namely, "Friend of a Friend" (40.1 %), is unfriended by 42.2 % of all female participants and 35 % of all male respondents. Internet friends also are more often unfriended by women (38.5 %) than by men (33.4 %). Unlike other school friends, who are unfriended more by women than by men (women = 25.1 %, men = 18.7 %), and high school friends are unfriended more often by men (21 %) than by women (20.2 %). The only friend type unfriended much more often by men than by women is friends with different interests (men = 10.6 %, women = 7.5 %). Men choose "Not Applicable" more often than women did, which we understand because male respondents mostly want to abstain from answering which type of friends they unfriend (men = 18.8 %, women = 12.5 %) to a greater extent than female respondents do. This is the result with the highest significance level in this category. All friend types unfriended by more than 10 % of all respondents (either men or women) are unfriended more often by women than by men, with the exception of "High School Friend," "College," and "Not Applicable" (see Table 2).

Unfriending: End of the Relationship?

To learn how unfriending relates to a relationship in real life, we asked the following question: "Is the end of the relationship on Facebook also the end of the relationship in real life?" This question was answered by 2,201 respondents – 1557 women, 632 men, and 12 respondents who did not specify their gender.

Sibona estimated that the visible link on Facebook, which shows that a Facebook relationship is over, could also be a signal for the real-life relationship having ended as well (Sibona & Walczak, 2011). Our study revealed that indeed for 30.2 %, unfriending on Facebook also terminated the real-life relationship. For 47.8 % of the survey respondents, however, terminating the friendship on Facebook did not end the friendship in real life. The other 22.0 % did not specify whether the end of the relationship on Facebook also led to the end of the real-life relationship.

Exactly 32 % of women and 25.8 % of men stated the end of a relationship on Facebook was also the end of the relationship in real life. More men than women stated that unfriending does not represent the end of the relationship in real life (men = 51.1 %, women = 46.4 %). About 20 % of both men and women did not specify whether unfriending was also the end of the relationship in real life (men = 23.1 %, women = 21.6 %).

Real-Life Friends Versus Virtual Friends

We asked, "Which friends are more important to you, those in real life or virtual friends?" This question was based on a 1–7 point Likert-type scale. Additionally, the option to withhold the answer was an option.

Real-life friends are more important for the respondents of this study than virtual friends are. The median for real-life friends is 1 (very important), while the median for virtual friends is 5 (slightly important). The standard deviation is 1.507 for virtual friends and 0.840 for real-life friends. Participants with more than 500 friends on Facebook also indicated their real-life friends are more important to them than their Internet friends are, as did the participants who indicated they have fewer than 50. The number of friends on Facebook does not play a role in the decision concerning which type of friend is more important. This means that even if someone has more than 500 friends on Facebook, real-life friends will be more important to this person than the virtual ones. The same result was found for those with fewer than 50 Facebook friends. All results in this area are extremely significant.

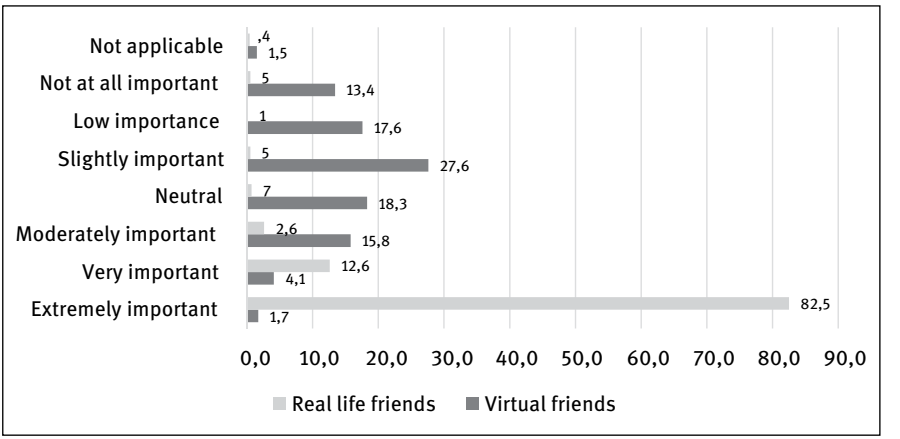


Figure 6: Importance of Virtual Friends Versus Real-Life Friends. (N = 2,201)

In Figure 6, we can clearly observe that real-life friends, compared with virtual friends, are more important to survey respondents. The majority of participants (82.5 %) stated real-life friends are extremely important. Just 1.7 % stated virtual friends are more important. For 27.6 %, virtual friends are only slightly important, in contrast to a minority (0.5 %) for whom real-life friends are only slightly important to them. A scant 0.5 % stated real-life friends are not important at all, while 13.4 % stated virtual friends are not important at all (see Figure 6).

Number of Friends

Another question in this area asked about the amount of Facebook friends. To answer this question, survey respondents chose from among 12 options. Their answers were thus unique. This question was answered by 2,201 participants.

Quercia's survey revealed young adults have an average of 300 Facebook friends (Quercia et al., 2012). Our survey showed that Facebook users (on average 23 years old) are mostly befriended by 100 to 200 friends on the site. A minor share (3.9 %) indicated they have fewer than 50 Facebook friends. An additional minor share (3.6 %) stated they have 450 to 500 Facebook friends. A larger share (11 %) indicated they have more than 500 Facebook friends. Participants are thus likely to have 100 to 350 friends on Facebook (see Figure 7).

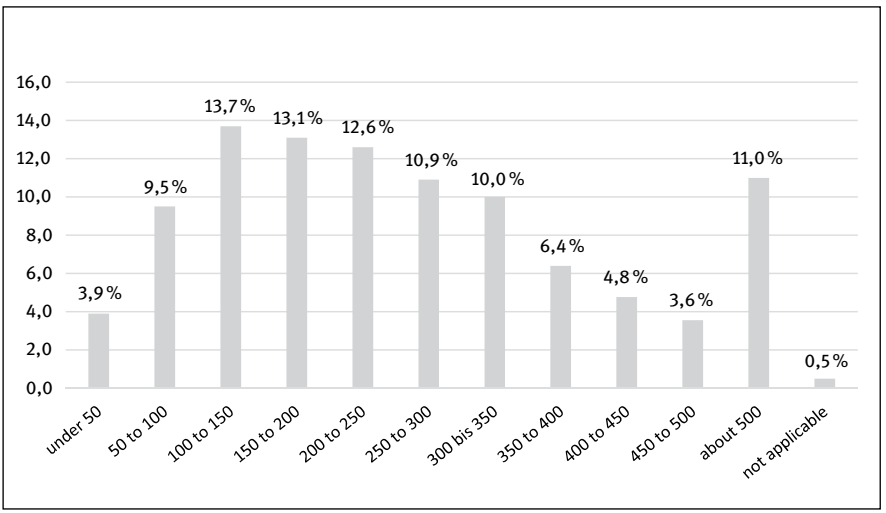


Figure 7: Number of Friends Users Have on Facebook. (N = 2,201)

There do not seem to be any significant differences between the genders regarding the amount of friends they have on Facebook. The only significant difference is for the category "more than 500." More men than women stated that they are have more than 500 Facebook friends (men = 14.7 %, women = 9.6 %).

Reasons for Unfriending

Online Reasons for Unfriending

What prompts Facebook users to unfriend some of their friends? To answer this question, we allowed multiple items to be selected. We differentiated between reasons in the digital world ("online reasons," 28 options) and reasons rooted in the physical world ("offline reasons," 16 options). Most answering options were adopted from a study by Sibona and Walczak (2011). A distinction is made here between men and women, as well as "Not Applicable" respondents.

Table 3: Online Reasons Prompting Facebook Users to Unfriend Some Friends.

	All %	Women %	Men %	Sig
Posting Frequently	50.6	52.4	46.4	**
Game Requests	34.5	34.3	35.4	ns
Unimportant	33.4	33.2	33.7	ns
Others	28.7	30.9	22.9	**
Inappropriate	25.9	26.0	25.6	ns
Racist	18.4	18.6	18.0	ns
Promotion	16.8	14.6	22.3	***
Politics	15.3	13.9	18.4	*
Insulting	12.0	12.3	11.6	ns
Sexist	11.9	12.1	10.9	ns
Not Applicable	10.8	9.8	13.3	*
Religion	10.1	8.6	13.9	***
No Response to my Messages	5.9	5.8	6.2	ns
Spouse	5.7	6.1	4.9	ns
Eating	5.1	4.9	5.5	ns
Swaggering	4.9	5.1	4.4	ns
Purchases	4.5	4.0	5.7	ns
Low Activity	3.8	3.6	4.3	ns
Exercise	3.5	3.6	3.2	ns
Swear	2.9	3.0	2.7	ns
Celebrities	2.2	1.3	4.1	***
Child	2.1	2.3	1.7	ns
Sex	1.6	1.8	1.1	ns
Pets	1.8	1.3	2.7	*
Sports Scores	1.8	1.7	1.7	ns
Job	1.3	0.9	2.4	*
Hobbies	1.0	0.8	1.3	ns
Sports Activities	0.8	0.6	1.1	ns

N = 2,201: Women *N* = 1,557, Men *N* = 632, Not Applicable *N* = 12

Sibona and Walczak (2011) demonstrated the main online reasons that people unfriend others are for posts on unimportant and inappropriate topics, and the number of posts. Our study confirms the importance of posting frequency for unfriending. For 50.6 % of our respondents, too many posts are the triggering incident to unfriend someone. By the way, too little posting activity hardly ever (3.8 %) provokes unfriending. Furthermore, too many game requests (34.5 %), unimportant posts (33.4 %), inappropriate posts (25.9 %), and racist posts (18.4 %) are also reasons for unfriending. Politics (15.2 %), sexist posts (11.7 %), and religion (10.0 %) play minor roles in unfriending.

We observed some differences between the genders in online reasons for unfriending others. The largest difference between men and women in unfriending someone occurs when a Facebook friend posts too many promotional posts on Facebook (men = 22.3 %, women = 14.6 %). There is also a difference is in how each group tolerates "Posting Frequently." When someone posts too frequently on Facebook, we discovered they are unfriended more by female rather than by male friends (women = 52.4 %, men = 46.4 %). Men tend, more than women, to unfriend their Facebook friends when they post on topics about religion (men = 13.9 %, women = 8.6 %). This difference is extremely significant. Girls seem to have a wider variety of reasons than boys do (which are not listed on the table) for unfriending, and choose the category "Others" more frequently than boys (girls: 30.9 % vs. boys: 22.9 %). The difference among the other reasons is less than 5 % (see Table 3).

Offline Reasons for Unfriending

Table 4: Offline Reasons Prompting Facebook Users to Unfriend Some Friends.

	All %	Women %	Men %	Significance
Alienation	52.3	54.5	46.7	**
Personality	51.4	54.9	43.0	***
Trust	44.4	48.4	35.0	***
Behavior	43.5	46.4	36.6	***
Dislike	28.5	27.9	30.1	ns
Romantic End	28.4	29.7	25.2	*
Quarrel	26.8	30.3	18.4	***

Tab. 4 (continued)

	All %	Women %	Men %	Significance
Geographical Distance	21.5	20.9	23.4	ns
New Information	20.1	21.0	18.0	ns
Betrayal	17.9	18.3	17.4	ns
Incompatible Friends	17.0	16.3	19.1	ns
Comitted Misdeed	6.5	6.7	6.2	ns
Not Applicable	4.5	2.8	8.9	***
Broke Rule	4.2	3.7	5.4	ns
Other	3.7	3.5	4.1	ns
Divorce	1.2	1.2	1.1	ns

N = 2,201: Women *N* = 1,557, Men *N* = 632, Not Applicable *N* = 12

In Sibona's and Walczak's (2011) research, the top three offline reasons for unfriending were misdeeds (95 %), personality (88 %), and dislike (87 %). Our study confirms the importance of personality (51.4 %) and – to a minor degree – of dislike (28.5 %), but by no means the offline reason of misdeeds (in our study, only 6.5 % of all respondents reported this reason).

The most important offline reasons for unfriending are alienation (52.3 %), reasons concerning the personality of the friend (51.4 %), (loss of) trust (44.4 %), and the behavior of the friend in real life (43.5 %). In addition, the end of a romantic relationship (28.4 %) or divorce (1.2 %) can result in unfriending on Facebook. Sometimes, geographical distance is a reason for unfriending (21.5 %).

We offered a list of 16 offline reasons, and only six were chosen by men as why they would be more likely to unfriend their friends than women do: dislike (men = 30.1 %, women = 27.9 %), geographical distance (men = 23.4 %, women = 20.9 %), incompatible friends (men = 19.1 %, women = 16.3 %), and rule breaking (men = 5.4 %, women = 3.7 %). Not Applicable and Other are also selected more frequently by men than by women. Not Applicable (men = 9.8 %, women = 2.8 %) and Other (men = 4.1 %, women = 3.5 %) are also reasons selected more often by male respondents than by females (see Table 4). Compared with online reasons, offline ones are more often significant.

We found extremely significant difference between the genders. "Trust" is more important to women (48.4 %) than to men (35.0 %), with women being more likely to unfriend a user when trust has been broken. Women also have a

greater tendency to unfriend someone if they do not like a Facebook friend's personality (women = 54.9 %, men 43.0 %). Another extremely significant reason is "Quarrel," with women more likely to unfriend a user after a quarrel (women = 30.3 %, men = 18.4 %). If a user does not behave well in real life, then he or she is more likely to be unfriended by girls than by boys. Almost half of our female respondents (46.4 %) indicated that they unfriend another user because of his/her real-life behavior, while only 36.6 % of male participants stated they do so.

In general, offline reasons seem to be a bigger initiator for women when unfriending others on Facebook (see Table 4).

Online and Offline Reason Factors for Unfriending

Because of the great number of reasons, a factor analysis was performed to find common factors among the different reasons. The factor analysis sums up the 28 variables/online reasons to 8 reasonable factors for online and offline reasons.

Table 5: Online Factors Prompting Facebook Users to Unfriend Some Friends.

Online Reasons for Unfriending Others		
Factors	**Reasons**	**Factor Loadings**
Factor 1	Sexist	.771
Negative Posts	Racist	.678
	Insulting	.673
	Swear	.547
	Inappropriate	.517
Factor 2	Eating	.743
Showing-off	Purchases	.715
	Swaggering	.599
	Exercise	.545
Factor 3	Posting Frequently	.757
Unimportant	Unimportant	.697
	Game Requests	.592
	Promotion	.503
Factor 4	Sports Activities	.769
Hobbies	Sports Scores	.679
	Hobbies	.667
Factor 5	Politics	.813
Ideology	Religion	.769

Tab. 5 (continued)

Online Reasons for Unfriending Others		
Factors	**Reasons**	**Factor Loadings**
Factor 6	Pets	.612
Favorites	Celebrities	.530
	Children	.480
Factor 7	Low Activity	.737
Lack of virtual activity	No Response to my Messages	.560
Factor 8	Sex	.713
Gender	Spouse	.649

N = 2,201. Excluded from the calculation: Not Applicable

Table 6: Offline Factors Prompting Facebook Users to Unfriend Some Friends.

Offline Reasons		
Factor 1	Trust	.651
Breakup	Behavior	.630
	Quarrel	.598
	Romantic End	.528
	Personality	.484
	Betrayal	.401
Factor 2	Committed Misdeed	.742
Bad Behavior	Broke Rule	.688
	Betrayal	.505
Factor 3	Incompatible Friends	.742
Distance	Geographical Distance	.717
	Alienation	.514
Factor 4	New Information	.654
Bad Discoveries	Dislike	.636
	Personality	.405

***N* = 2,201. Excluded from the calculation:** Not Applicable

We present the rotated factor loadings, which represent both how the variables are weighted for each factor and also the correlation between the two (see Table 5). Because these are correlations, possible values range from –1 to +1. On the format subcommand, the option blank (.40) was used, which commands SPSS to only print the correlations that are .4 or greater than .4. This makes the output

easier to read and to interpret by removing the values of low correlations that do not have any great importance.

The principal components analysis (PCA) reveals a total of 12 factors, 8 for online reasons and 4 for offline reasons. These factors predict for which of the summarized reasons people unfriend their friends on Facebook.

We divided the factor analysis into two parts: online reasons, which lead users to unfriend their Facebook friends, as well as offline reasons. For the online reasons, the factor analysis collected 25 online reasons, divided into 8 factors.

The first factor was named **Negative Posts** because the items "Exist," "Racist," "Insulting," "Swear," and "Inappropriate" load highly in this factor. These items describe posts with negative content, which prompt Facebook users to unfriend their friends.

The factor **Showing off** collects items, demonstrating people's wealth and material possessions. Items in this factor are "Eating," "Purchases," "Swaggering," and "Exercise." We found that people who show off their material goods and who gloat on Facebook tend to be unfriended.

The third factor collects **Unimportant** topics. It contains items that hint at the amount of posts the receiver finds uninteresting, such as frequent game requests and inappropriate postings.

The **Hobbies** factor sums up the items in posts that describe activities and hobbies the sender enjoys for fun.

Ideology summarizes statements representing political and religious ideals, meaning people who post political or religious content that does not represent the receiver's opinions tend to be unfriended by the receiver.

Favorites are posts about pets, celebrities, and children categorized in one factor. We see this factor represents people who unfriend those users who post about their favorites or idols.

Lack of Virtual Activity is the factor representing low activity on Facebook.

Gender. This factor summarizes items that are connected to gender, meaning that people unfriend others because of their gender and often because the partner disagrees about contact on Facebook with other men or women.

For offline reasons, which include 15 variables/offline reasons, 4 factors were found.

Breakup. This factor sums up the items that hint at reasons prompting someone to cancel contact with a person or that represent the end of a relationship. The offline items bundled in this factor suggest the two people involved were in a relationship that has been terminated due to betrayal, which led the unfriending user to no longer trust the other.

Bad Behavior items are bundled into one factor. It is obvious these items are evidence for people's bad actions, such as breaking a rule, committing a misdeed, or betrayal.

Distance represents items indicating a dyad is separated by geographical or social distance.

Bad Discoveries was chosen for the fourth and final factor, which summarizes new information prompting people to dislike and unfriend others on Facebook.

Emotional Response

Sibona's (2014b) research indicated that being unfriended triggers an emotional response. For users who have been (passively) unfriended, emotional effects consist mainly of surprise, amusement, or sadness. Prior to our work, we found no studies on the emotional states of the (actively) unfriending users. Therefore, we asked two questions: 1) What is the emotional response after being (passively) unfriended on Facebook? 2) What is the emotional response after (actively) unfriending others on Facebook? For the passive aspect, additionally, we asked respondents to estimate the unfriending user's importance (is someone important/unimportant to me). We worked with 15 answering options, some of them adopted from Sibona (2014b).

Table 7: Users' Emotional Response After Being (Passively) Unfriended on Facebook.

By an important Person					By an unimportant Person			
Sig	**%**	**%**	**%**	**Emotion**	**%**	**%**	**%**	**Sig**
ns	50.6	47.3	49.5	Surprised	3.4	3.8	2.4	ns
***	47.9	39.6	45.3	Disappointed	2.0	1.9	2.1	ns
**	44.8	37.8	42.6	Bothered	2.2	2.4	1.7	ns
***	45.0	30.2	40.8	Sad	1.5	1.2	2.5	*
**	26.8	21.2	25.0	Offended	3.2	3.6	2.1	ns
ns	13.5	13.4	13.4	Frustrated	0.8	0.6	1.3	ns
**	14.8	10.1	13.4	Angry	0.5	0.4	0.8	ns
ns	6.7	4.6	6.0	Ashamed	0.8	0.9	0.3	ns
ns	4.1	5.1	4.4	Amused	1.0	1.2	0.8	ns

Tab. 7 (continued)

By an important Person					By an unimportant Person			
Sig	**%**	**%**	**%**	**Emotion**	**%**	**%**	**%**	**Sig**
ns	3.3	1.9	2.9	Fearful	0.2	0.3	0.2	ns
ns	1.6	1.7	1.8	Other	0.0	0.0	0.0	ns
ns	1.3	1.6	1.4	Neutral	0.6	0.5	0.8	ns
ns	0.8	1.7	1.1	Not Applicable	0.3	0.2	0.5	ns
ns	0.6	0.0	0.4	Unburdened	0	0.1	0.0	ns
ns	0.1	0.0	0.1	Happy	0	0.0	0.2	ns
	85.2	79.0	83.4	Emotional Response	6.8	7.0	6.2	
	12.1	18.4	13.9	No Emotional Response	91.5	91.3	92.1	

N = 2,201: Women *N* = 1,557, Men *N* = 632, Not Applicable *N* = 12

Only 6.8 % of our survey respondents indicated they mind if they are unfriended by someone unimportant. Of respondents, 85.2 % specified they mind if an important friend unfriends them on Facebook. Table seven shows the emotional response of those who stated they mind if someone important or important unfriends them. Only a few respondents are surprised (3.4 %), offended (3.2 %), bothered (2.2 %), disappointed, (2.0 %), or sad (1.5 %) if they are unfriended by an unimportant person. If someone important unfriends a user, however, the picture changes dramatically. If that occurs, then about half of all unfriended persons feel surprised (49.5 %), disappointed (45.3 %), sad (40.8 %), bothered (42.6 %), offended (25.0 %), frustrated (13.4 %), or angry (13.4 %). Not every unfriending act is experienced negatively, only that by someone important to the user.

Our survey shows the experience of being unfriended by important people can trigger negative emotions. Participants were asked whether their emotions depend on other factors, such as the length of the friendship, the number of friends, and the strength of the friendship. Of participants, 87.5 % expressed their emotions depend on the strength of the friendship, and 47 % stated their emotions are determined by the length of the friendship, but only 1.5 % agreed their emotions depend on the number of their Facebook friends.

We observed some differences between women and men in the emotional response to being unfriended by someone important, the most significant differences being marked with "*," depending on the level of significance. Nearly 15 %

(14.8 %) more women than men stated they feel sad when they are unfriended by someone important on Facebook (women = 45.0 % vs. men = 30.2 %). Women and men differ also in the emotion "disappointment." Compared with men, women seem to be more disappointed when they have been unfriended by someone important on Facebook (women = 47.9 %, men = 39.6 %). Women are also more bothered than men when they learn someone important has unfriended them (women = 44.8 %, men = 37.8 %). Offended also occurs more from female respondents (25.0 %) than males (21.2 %). The other emotional responses do not indicate significant differences between the genders, with approximately the same occurrence in both women and men.

Gender differences in emotional responses to being unfriended by someone unimportant are not significant with one exception, namely, the emotional response "sad." Contrary to being unfriended by someone important (when more women than men stated they feel sad after having been unfriended), more male respondents (men = 2.5 % vs. women = 1.2 %) stated they feel sad when someone unimportant unfriends them (see Table 7).

Emotional Response to Actively Unfriending

Based on the emotional response to being unfriended by either someone important or unimportant, we designed a new question concerning the emotional response to unfriending others. The multiple responses are a selection of Sibona's former studies, completed by our own items (2014b).

Table 8: Users' Emotional Response After (Actively) Unfriending Others on Facebook.

Emotion	All %	Women %	Men %	Sig
Neutral	41.9	41.2	44.0	ns
Privacy Protected	37.5	42.1	26.3	***
Free	31.3	32.8	27.5	*
Unburdened	31.3	34.0	24.4	***
Remorse	10.0	11.1	7.4	**
Amused	5.7	4.3	9.2	***
Not Applicable	4.3	3.2	7.0	***
Happy	4.0	4.1	3.6	ns

Tab. 8 (continued)

Emotion	All %	Women %	Men %	Sig
Disappointed	2.7	2.0	4.4	***
Sad	2.5	2.4	2.5	ns
Angry	2.4	1.8	3.8	**
Other	1.6	1.3	2.2	ns
Ashamed	1.2	1.4	0.6	ns
Frustrated	1.1	1.0	1.4	ns
Surprised	0.7	0.5	1.3	ns
Bothered	0.7	0.5	1.1	ns
Fearful	0.4	0.5	0.2	ns

N = 2,201: Women *N* = 1,557, Men *N* = 632, Not Applicable *N* = 12

For many of the active unfrienders, the act of unfriending is emotionally neutral (41.9 %). Some people feel their privacy has been protected after unfriending another user (37.5 %) or simply feel "free" (31.3 %) and unburdened (31.3 %). Emotions are seldom connected to an unfriending act. Sometimes, we observe positive emotions such as amusement (5.7 %) and happiness (4.0 %), and to a lesser degree, negative emotions, such as sadness (2.5 %) and anger (2.4 %).

Here, there are some gender differences as well, for example, the emotional response "unburdened." Nearly 10 % more women (34.0 %) than men (24.4 %) feel unburdened when they unfriend someone on Facebook. Roughly twice as many men feel disappointed when they unfriend others. Amusement is an emotion that occurs statistically significantly more in men than in women (men = 9.2 % vs. women = 4.3 %).

Factors for Online Reasons Offered for Unfriending Others on Facebook

We also conducted a principal component analysis (PCA) to indicate which emotions can be summarized into factors so we can find similarities between emotion items.

Table 9: Factor Analysis of Emotional Response to Being Unfriended by Someone Important.

Factors	Emotions	Factor Loadings
Factor 1	Neutral	.-747
Unencumbered	Unburdened	.656
	Free	.656
	Privacy Protected	.560
Factor 2	Disappointment	.738
Unlucky	Sad	.633
	Angry	.579
	Frustrated	.418
Factor 3	Ashamed	.725
Awkward	Fearful	.649
	Remorse	.552
Factor 4	Amused	.725
Lucky	Happy	.669
Factor 5	Bothered	.720
Astonished	Surprised	.676
Factor 6	Neutral	.419
Neutral		

Excluded from the calculation: Not Applicable

Table 10: Factor Analysis of Emotional Response to Being Unfriended by Someone Unimportant.

Being unfriended by an unimportant person		
Factor 1	Sad	.745
Desperate	Disappointed	.691
	Offended	.635
	Angry	.627
	Surprised	.574
	Bothered	.561
	Ashamed	.476
Factor 2	Happy	.848
Pent-Up	Fearful	.785
	Frustrated	.440
Factor 3	Amused	.748
Released	Unburdened	.745
Factor 4	Neutral	.829
Unexpectedly	Surprised	.493

Excluded from the calculation: Not Applicable

Table 11: Factor Analysis of Emotional Response to Unfriending Others on Facebook.

Factors	Emotions	Factor Loadings
Factor 1 Disgruntled	Angry	.700
	Frustrated	.655
	Sad	.621
	Offended	.601
	Disappointed	.595
Factor 2 Astonished	Surprised	.818
	Bothered	.691
Factor 3 Awed	Fearful	.766
	Ashamed	.731
Factor 4 Unperturbed	Unburdened	.774
	Neutral	.648
Factor 5 Amused	Amused	.845
Factor 6 Happy	Happy	.956

Excluded from the calculation: Not Applicable

Tables 9, 10, and 11: The rotated factor loadings are presented, which represent both the emotion variables weighted for each factor and the correlation between those variables and the factor. Here, the option blank .4 is also used, so only correlations that are .4 or greater are indicated.

The principal component analysis revealed a total of 16 factors, including every emotion: those felt when being unfriended by some important Facebook friend by friends who are not so important as well as the emotion of unfriending other users. For each of the three categories, five factors have been determined. This part of the investigation examines those factors that predict the emotional response a Facebook user may experience when he or she is unfriended by Facebook friends.

We present 6 factors collected from the 14 items representing the emotional response to being unfriended by someone important on Facebook (see Table 9). Next, we present the 4 factors, also collected from items similar to those in Table 9, that predict the emotional response of being unfriended by someone unimportant (see Table 10). Finally, 6 factors representing the emotional response to unfriending others on Facebook are presented (see Table 11). Those 6 factors were collected from 15 items similar to those in Tables 9 and 10, with the addition of the item "Privacy Protected." The items "Other" and "Not Applicable" are not consid-

ered in any of the tables of the factor analysis because those two emotions are not important for analyzing emotional response.

Disgruntled is the first factor, obviously representing negative emotions only, such as angry, frustrated, and so forth. Therefore, we can state if a user has been unfriended by someone important and feels angry about it, they will also feel disappointed, offended, sad, and frustrated.

Astonished occurs in all three categories: when users are unfriended by someone important, by someone unimportant (passive unfriending), and when users unfriend (actively) others on Facebook. This factor collects two variables, "surprised" and "bothered." These are two emotions people do not expect to feel, rendering them astonished.

The **Awed** factor collects two variables that can be interpreted as awed, since both of them suggest negative emotions, a kind of indisposition.

This factor is called **Unperturbed** because this term includes positive feelings, such as unburdened or neutral, which are neither positive nor negative, and because the combination of a positive emotion such as unburdened or neutral results in an emotion that is balanced or unperturbed.

Amused, Happy, and Neutral are the only factors that do not have communality with other items. This is why these three factors are simply named analogously to the respective item.

The **Desperate** factor collects the majority of negative emotional responses. This factor represents the worst feelings. Sadness, disappointment and frustration, anger, and offending are emotions that make people feel desperate.

The **Pent-up** factor includes one positive emotion "Happy" and two negative emotions "Fearful" and "Frustrated." This combination of these three emotions results in feelings that are not released but rather repressed.

Released is the opposite of the factor **Pent-up**. In this factor are collected two positive emotions, "Amused" and "Unburdened." This factor describes a positive emotional response that in a combination, results in emotions, such as easy-going, untroubled, or simply released.

Unexpectedly collects the emotions "Neutral" and "Surprised." This description is used because "Neutral" is neither positive nor negative. "Surprised" suggests something unexpected.

The **Lucky** factor sums up the most positive emotions. Amused and happy are emotions that express happiness and a feeling of being lucky.

The **Unlucky** factor is the opposite of the factor above. Here, only negative emotional responses are collected, meaning this factor solely presents emotions that make people feel unlucky (such as "sad," "disappointed," "angry," or "frustrated").

Unencumbered collects variables representing such emotions as "Neutral," "Unburdened," "Free," and "Privacy Protected." This factor represents emotions of feeling safe as well as emotions of feeling happy, which, when combined, result in feeling carefree or, as the name of this factor suggests, unencumbered. The item "Neutral" has a negative charge. This means that this item correlates negatively with the "Unencumbered" or the other items in this factor.

The **Awkward** factor represents the items "ashamed," "fearful," and "remorse." These emotions result in feeling uncomfortable or awkward when combined.

Our research investigated 15 factors that can be caused by passive and active unfriending. We investigated 6 factors relating to being unfriended by someone important as well as by unfriending others actively on Facebook, and 4 factors for being unfriended by someone unimportant. The factor analysis found similarities among the variables and indicted similarities may exist between being unfriended by someone important and by unfriending others on Facebook.

Astonished occurs two times as well, in both categories of being passively unfriended as well as in actively unfriending. This means that when a user is amused about unfriending, this individual will also feel happy when being unfriended by someone unimportant or when unfriending others. There are no other common factors among the three different categories (being unfriended by someone important, being unfriended by someone unimportant, and by unfriending others).

The first factors sum up the largest amount on items. Two first factors by being passively unfriended describe negative emotional response, while the first factor of actively unfriending describes positives emotional responses. Three factors were found that do not have communality with any other items (see Tables 9, 10, and 11).

Avoiding Contact

In order to explore contact avoidance, we posed two questions: "Do you want to see former Facebook friends you actively unfriended?" and "Do you want to see former Facebook friends who unfriended you?"

Sibona (2013) found discomfort to be an emotion reported and that some study respondents did not want to see the person again after being unfriended. Additionally, it was revealed that survey respondents also did not want to see a user they have unfriended on an SNS in real life or that they would avoid future contact (Sibona, 2013).

For our German-speaking test participants, avoiding contact is not common. Three-quarters (75.1 %) of all unfrienders do not care if they meet the person whom they unfriended. Similarly, 63.8 % of those who were unfriended have no problem seeing their unfrienders in real life. Exceptions were some 21.8 % of those unfriended avoid seeing their unfrienders in real life. In contrast, only 10.2 % of active unfrienders avoid meeting people they have unfriended.

There are no significant differences between the genders. Only two result in statistically significant in actively as well as passively unfriending, namely, "Want to see" and "Not Applicable." For passively unfriending, more men than women stated they want to see the person in the future (men = 22.6 % vs. women = 17.8 %). Active unfriending shows similar results to passive unfriending. More men than women stated they want to see the person after they have unfriended them (men = 23.1 % vs. women = 17.8 %). Not applicable was selected by 4.6 % of male respondents for active contact avoidance and by 2.1 % of female respondents. Men (5.4 %) and women (2.2 %) abstain from answering if they would avoid future contact with those who unfriended them (passively unfriending). The "Not Applicable" results are extremely significant.

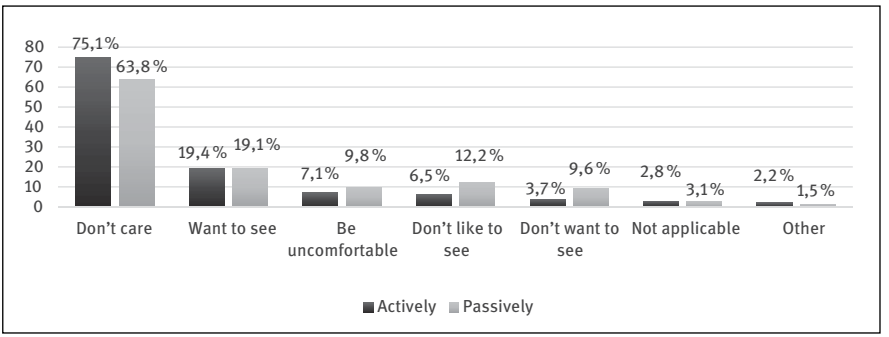


Figure 8: Do people avoid real-life contact after being (passively) unfriended? Do people avoid real-life contact with users they have (actively) unfriended on Facebook? (*N* = 2,201)

Blocking and Hiding as Alternatives to Unfriending

Hiding

To explore whether hiding is used as an alternative to unfriending, the following question was designed: "Do you use hiding as an alternative to unfriending?" If respondents stated they do not use hiding on Facebook as an alternative to unfriending, they could simply omit the next question, which asked why they used hiding instead of unfriending. For the following question, we offered five supplied answers (as well as "Other" and "Not Applicable").

Table 12: Reasons Prompting Users to Hide Friends on Facebook.

Reasons	All %	Female %	Male %	Sig
Not to Hurt	39.2	39.8	38.2	ns
Impolite	37.6	38.5	35.9	ns
No Discussion	35.8	38.3	41.5	ns
Other	21.5	26.6	22.6	ns
Not Applicable	15.3	16.5	12.6	ns
Don't Dare	6.8	7.6	5.3	ns
Relationship Could be Over	4.4	3.5	6.2	ns

N = 1,088. Women *N* = 741, Men *N* = 340, Not Applicable *N* = 7

Unfriending is often considered as too harsh, which is why some users decide to hide someone from their news wall instead of unfriending them (Peña & Brody, 2014). Sibona presumes that because of social etiquette, some users would elect to hide their friends on Facebook rather than unfriending them (Sibona, 2014a). We discovered that for nearly half of the respondents (49.4 %), hiding friends from their news wall on Facebook serves as an alternative to unfriending, meaning that those 49.4 % would rather hide than unfriend their friends on Facebook. For 39.1 %, however, hiding is not an alternative to unfriending. These users would rather unfriend Facebook friends than hide them. Only 9 % did not want to specify whether they would hide their friends instead of unfriending them. The 49.4 % who stated they use hiding as an alternative to unfriending were asked to justify their selection by using one of the given answers displayed in Table 12. About 39.2 % stated they hide their friends on Facebook because they do not want to hurt them. Another 37.6 % would rather hide their friends on Facebook

than unfriend them because they considered unfriending rude. An additional 35.8 % would hide their friends from Facebook because they want to avoid discussion. Another 16.3 % did not specify their opinion and chose "Not Applicable." A minority (6.8 %) hide their friends on Facebook because they do not dare to unfriend them, and 4.4 % hide their friends on Facebook because they think that the relationship will end if they chose to unfriend instead. Sibona and Walczak (2011) estimated the visible link on Facebook, which shows a relationship on Facebook has ended, could be a signal for the real-life relationship to end as well. Our study indicated that only 4.4 % of respondents choose hiding because they fear that the relationship will end through the unfriending act.

Compared with women, more men stated they would hide someone on Facebook instead of unfriending them because they want to avoid discussion with the user (men = 41.5 % vs. women = 38.3 %). Men also use hiding information from the news wall because they are afraid the relationship could be over if they unfriend the user (men = 6.2 %, women = 3.5 %). Generally, hiding seems to be more frequently used by men than by women (men = 33.7 % vs. women = 15.4 %).

Blocking

To find out whether blocking is used instead of unfriending, we asked: "Do you use blocking as an alternative to unfriending?" The respondent had to select that he or she blocks friends before answering the next question, which asked why block rather instead of unfriending. The sub-question offered three given responses with the options to abstain from answering or to select other.

Table 13: Reasons Prompting Users to Block Friends on Facebook.

Reasons	%	Women	Men	Sig
Not to be Harassed	74.8	80.3	62.6	**
Not to be Found on Facebook	69.1	73.7	58.8	*
No Requests Anymore	67.7	72.3	59.5	**
Not Applicable	10.0	6.9	15.3	*
Other	5.0	3.1	7.6	ns

N = 421: Women *N* = 289, Men *N* = 131, Not Applicable *N* = 1

A study by Madden et al. shows that 74 % of teen Facebook users have deleted people from their friend list, and 58 % have blocked friends on their SNSs. Our study revealed that just 19.1 % block friends when they no longer want to be friends with them. The majority (66.2 %) stated that they would rather unfriend others than block them. "Not Applicable" was selected by 10.7 % of survey respondents, and 3.9 % selected "Other."

Participants who selected they would block their friends on Facebook answered the succeeding questions as follows: 74.8 % block someone on Facebook because they do not want to be harassed by this user anymore. The second reason a user blocks someone on Facebook is users do not want to be found by the one whom they have blocked. This option was selected by 69.1 % of respondents.

The third reason why (67.7 %) people use blocking is they do not want to get friendship requests from the blocked user anymore (when a user block someone on Facebook, the blocked one can no longer send the one blocking further friendship requests or to find his or her account). Of respondents, 5 % stated other reasons for blocking people on Facebook. Blocking seems to be used more or less equally by men and women, yet there seems to be little difference among the reasons for doing so. Contrary to hiding (which more men than women use), however, more women use blocking.

Unfriending Memory

Sibona and Walczack (2011) found users are more certain of who sent them a friend request when they unfriend the person compared with those who were being unfriended. Our study investigates whether respondents generally tend to remember those they have unfriended or those who have unfriended them. To explore this idea, we asked two questions: "How many users whom you have unfriended do you remember?" and "How many friends who unfriended you do you remember?" These questions were based on a 10-point Likert-type scale, with the additional option of refraining from answering this question.

Our research shows people tend to remember those they have unfriended rather than those who have unfriended them (see Figure 8). The median for actively unfriending is 5 and for passively unfriending (being unfriended from Facebook friends) is 3. The average for unfriending others is 5.51 and for being unfriended by a friend, 3.94.

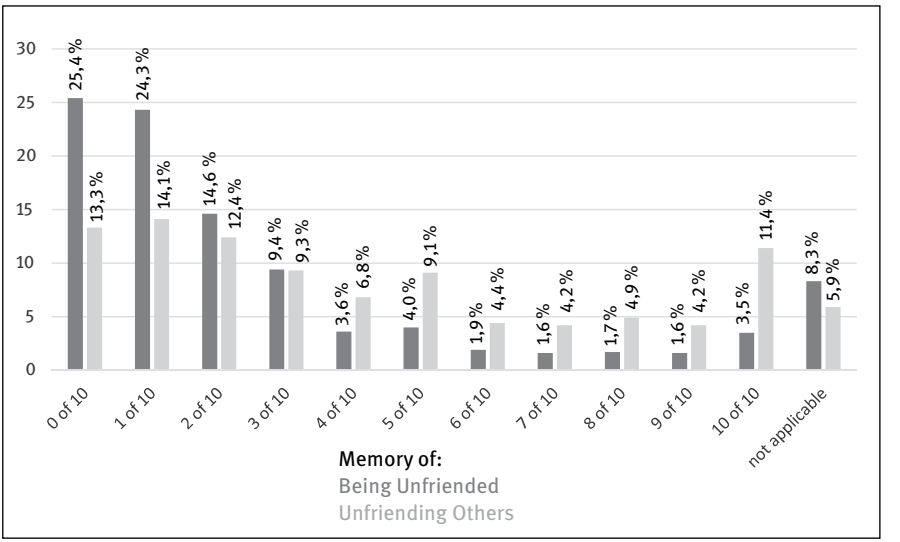


Figure 9: Memory of Being Unfriended and Unfriending Others on Facebook (N = 2,201).

Unfriending Notifications

To learn whether respondents realize when they have been unfriended and how they find out that someone has unfriended them, we asked two questions: "Do you notice when someone unfriends you?" and "How do you learn you have been unfriended?" For the second question, we offered three answering options "I look at my friend list," "I use an app that shows me I've been unfriended," and "By chance. "Additionally, the options to abstain from answering ("Not Applicable") and "Other" were offered.

Facebook users mostly do not notice they have been unfriended (Sibona, 2014a). This questionnaire allowed us to determine more than half (59.1 %) of the respondents indeed do not notice they have been unfriended on Facebook, compared with 40.9 % who stated they did notice when they have been unfriended. The following table (see Table 14) considers those who stated they notice when someone unfriends them.

Table 14: Discovery of Having Been Unfriended.

	All %	Women %	Men %	Significance
By chance	85.8	87.2	82.3	ns
Friend list	23.2	21.6	27.8	ns
Other	7.8	7.4	8.3	ns
App	3.3	2.1	6.4	**
Not applicable	1.0	1.1	0.8	ns

N = 901: Women *N* = 634, Men *N* = 265, Not applicable = 12

Concerning being unfriended, the majority of respondents, 85.8 %, stated they find out by chance; 23.2 % look at their friend lists; a small minority, 3.3 %, use unfriending applications; and 7.8 % use other methods.

There are no significant differences between female and male respondents concerning "By Chance," but more men than women apply an app to monitor unfriending. Male respondents also look more often in their friends list, to see if some friend has unfriended them (men: 27.8 %, women: 21.6 %). In other words, more men than women look actively to learn if they have been unfriended. The answer option "Other" selected by 8.3 % of male respondents and by 7.4 female respondents is another indication for the idea that more men look actively to learn if someone has unfriended them. Women tend more often to learn about the occurrence passively (by chance).

Unfriending Applications

It has always been possible to find out if someone has been unfriended on Facebook: a user could visit a friend's profile and see whether it is still marked that the two of them are friends. In addition, Facebook users can use third-party applications (apps) to be notified in the event of unfriending (Sibona 2014a).

Some apps display to the user others who have unfriended them. Unfriending applications could be attractive for Facebook users because there is no need to click on the profile of every friend to check whether you are still friends. Regardless, Facebook does not allow the use of unfriending apps because this goes against the conditions of the usage agreement, which is why Facebook deletes every unfriending app (Kruse, 2013). At the present moment (early 2016), "Who Deleted Me" is used as a download extension for the Internet browsers Google

Chrome, Firefox, and Opera, and can be downloaded as a free application for iOS and Android devices. Other applications are "Unfriend Finder," "Unfriend Checker," and "Who Unfriended Me."

For our research, the application "Who Deleted Me" was analyzed. At first, no information is displayed, until someone unfriends you. A user can select to see who have unfriended him or her within the last 30 days, throughout the last week, or just yesterday. This app not only displays those doing the unfriending, but also those who *added* the user within the last month, the last week, or the day before. After installing this app, the user will receive notifications if someone unfriends him or her, if friends closed their Facebook accounts, and if friends reactivated their accounts. Furthermore, users receive a notification if they befriend someone new (see Figure 10).

There are a few drawbacks, for example, if one user unfriends another, the first user might receive a notification if or when the one unfriended decides to delete the first user.

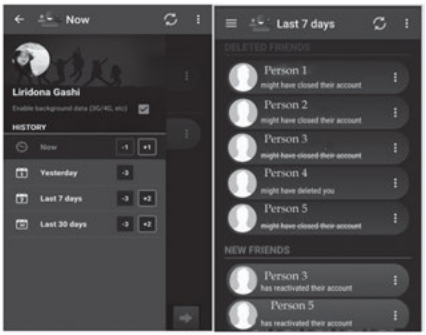


Figure 10: "Who Deleted Me" Application.

Limitation

Although many people answered the questionnaire (to our knowledge, resulting in our having compiled the largest number of respondents for all surveys conducted on unfriending on Facebook), the sampling was not random; therefore, it is difficult to estimate how the general population perceives unfriending on Facebook. Whoever wanted to fill out the questionnaire was allowed to do so on the condition that he or she is a Facebook user and has unfriended someone or have been unfriended by someone. If a respondent said that he or she had

never unfriended anyone, they would skip that section and continue to the demographic questions.

Participants in the present study were contacted via Facebook. The survey link was posted in different Facebook groups. Most of the groups we chose were from different universities because of their high numbers of members. It is thus possible the age distribution was uneven, meaning the majority consisted of college students who were roughly the same age; thus, some statements such as the least unfriended friend type "Friend through Child," which was unfriended by only 0.4 % of respondents, may not be representative of a broader population sample. For example, it is likely if more of the respondents had been older, they would have stated they had unfriended a friend of a child more often. Another critical point could be that the survey was conducted in German-speaking countries. Therefore, the results only reflect the unfriending behavior of German-speaking people; therefore, we cannot draw a conclusion for other countries. A strong possibility exists that unfriending also depends on cultural aspects. Additionally, twice as many women as men answered the questionnaire, and this too could lead to biased results.

Conclusion

The research model of this study included six dimensions: relationship end, reasons, emotions, avoidance, alternatives, or applications for unfriending. This research model provided us with the possibility to research unfriending behavior, opinions, emotions and reasons. The focus was on passive as well as active unfriending behavior, in other words, on those who had experienced unfriending. All dimensions were analyzed, both in total as well as by gender.

Our study revealed:

RQ1: Relationship end

- Friend types who are mostly unfriended are friend of a friend, Internet friend, other school friend, and high school friend.
- Real-life friends are more important (to both male and female respondents) than virtual friends. The number of friends on Facebook does not play a role in the importance of real-life friends. Even for those with more than 500 friends on Facebook, real-life friends take precedence over virtual ones on Facebook.
- For the majority of participants (nearly 50 %), unfriending on Facebook does not end the relationship in real life. Yet for almost 30 %, unfriending does

signal the end of the relationship in real life. Women are more likely to state that unfriending indeed represents the end of the relationship in real life. In contrast to women, more men are likely to state that unfriending does not represent the end of the relationship in real life.
– Users are mainly befriended by 100–300 individuals on Facebook. Men are more likely to be befriended by more than 500 friends on Facebook.

RQ2: Reasons
– Too many posts, the number of game requests, and posting on unimportant topics are the main online reasons for unfriending someone. Men's tendency to unfriend is more likely due to promotional posts and frequent posting. Other reasons are more likely selected by women.
– Alienation, personality, and trust are the most important offline reasons. The only reasons more responsible for unfriending among men are dislike, geographical distance, incompatible friends, and rule breaking. All other reasons are more likely selected by women.

RQ3: Emotions
– Being unfriended triggers more negative emotions among those who have been unfriended by someone important than among those who have been unfriended by someone unimportant. Being unfriended by someone important triggers surprise, disappointment, and sadness. Women are more likely to be more surprised, saddened, and disappointed than men are in the event of being unfriended by someone important, while men compared with women are more likely to be saddened and disappointed by being unfriended by someone unimportant. Being unfriended by someone unimportant seems to sadden more men compared with women.
– Unfriending others on Facebook seems to trigger either no emotions or (to a lesser extent) positive emotions, such as believing one's privacy is protected by feeling free or unburdened. For men, the majority feels neutral when unfriending others, while women feel their privacy is better protected.

RQ4: Avoiding contact
– Unlike Sibona's (2013) study, which proposed it would be uncomfortable for someone to meet the user who unfriended them (Sibona, 2013), our study revealed most individuals do not mind seeing the former friend in real life. Both men and women display the same behavior in avoiding contact. The only difference is men tend to state they are willing to meet the user they have unfriended or who has unfriended them.

RQ5: Alternatives: Hiding and blocking

- Hiding is used as an alternative to unfriending. Individuals use hiding because they do not want to hurt the other user by unfriending them, they think unfriending is impolite, or they want to avoid the discussion they think will ensue if they unfriend someone. Based on those who stated they use hiding as an alternative to unfriending, men are more likely to hide than women are.
- Blocking is used because individuals do not want to be harassed, to be found on Facebook, or to receive friendship requests from someone. Based on those who selected blocking as an alternative to unfriending, men rely on blocking more than women.

RQ6: Unfriending memory

- People remember those they have actively unfriended more than they do those who unfriended them.
- Unfriending is discovered purely by chance or by taking a look into one's friend list. Individuals mostly find out by chance they have been unfriended. Men and women seem to have the same habit of finding out about having been unfriended. Men check to learn whether they have been unfriended on a more active basis than women do.
- There are applications that show users they have been unfriended by someone, such as the "Who Deleted Me" application. These applications are used rarely but more men than women use unfriending apps.

We believe the field is wide open for future research, for example, what roles do a person's age and educational background play? Does the amount of time a user spends online affect his or her unfriending behavior? Why do individuals accept (or send) friendship requests, and what does this mean for later unfriending? When or with whom do users prefer to use unfriending as opposed to blocking and just the strict filtering of messages? Are there cultural differences in unfriending behavior? All of these questions will provide fertile soil in which to cultivate further study.

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