Unfriending on Facebook: Friend Request and Online/Offline Behavior Analysis

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Abstract

Objectives: *Determine the role of the friend request in unfriending decisions. Find factors in unfriending decisions and find differences in the perception of online and offline behaviors that vary depending on the unfriending decision.*
Method: *Survey research conducted online. 690 surveys about unfriending were analyzed using exploratory statistical techniques.*
Results: *The research results show that the initiator of the friend request has more than their expected share of unfriends compared to those who receive the friend request. There are online and offline factors for unfriending decisions; the research identified six constructs to evaluate unfriending decisions. There are 4 components for online behaviors (unimportant/frequent posts, polarizing posts, inappropriate posts and everyday life posts) and 2 offline components (disliked behavior and changes in the relationship). Survey respondents who said they unfriend for online reasons were more likely to agree that the person posted too frequently about unimportant topics, polarizing topics, and inappropriate topics compared to those who unfriended for offline reasons.*

1. Introduction

Facebook has over 400 million active users worldwide and is the most popular website in the U.S. Facebook recently overtook Google as the most visited website on March 15, 2010 according to webtracker Hitwise[21], [2]. Research in social behavior indicates that the Internet is used to maintain existing relationships, form romantic connections, and create new online friendships[26]. These online friendships are fluid; friendships are created and dissolved on social network sites.

The word *unfriend* was named the word of the year by the New Oxford American Dictionary for 2009[12]. The dictionary defined *unfriend* as follows: "unfriend – verb – To remove someone as a 'friend' on a social networking site such as Facebook"[1]. Real-world friendship dissolution has been studied in a variety of contexts such as romantic relationships, marriage and divorce[20], interracial friendships[15], high school and college students[22]. Unfriending on social networks is different in a number of ways than real-world friendships. Facebook has a definite marker when the friendship is dissolved by one member through the unfriend function. On a social network site one member can decide to end the relationship and will publicly remove support by unfriending that person. Friendship dissolution for online friendships (a.k.a. unfriending) is under-researched.

There are two major research questions that this study addresses.

1) What is the role of the friend request in unfriending decisions.
2) Can factors in unfriending decisions be found and do differences in the perception of online and offline behaviors vary depending on the unfriending decision.

1.1. Literature Review and Background

Social Networks: boyd and Ellison defined social network sites based on three system capabilities. The systems: "allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system"[5, p. 1]. After users join a site they are asked to identify others in the network with whom they have an existing relationship. The links that are generated between individuals become visible to others in the local subspace. There are general social network sites (Facebook) and others that are content focused. Social network site MySpace has a large musical component and links musicians and musical groups to their fans, LinkedIn is a network of

professional contacts and YouTube connects people who are interested in video content[5]. Facebook, which is focused on *real* friends [10], is now believed to be the largest social network site [23].

Research on social network sites and on Facebook in particular cover a variety areas. Research interests include identity management[16], trust[9], self-presentation[25], surveillance and privacy concerns[13], social capital[10]. Much of the academic research on Facebook has focused on identity presentation and privacy concerns [10].

Friendship Formation & Dissolution: Friendships are formed and maintained because they are rewarding to individuals[27]. Friendship models have been developed to describe how friendships are created[14]. Friendships tend to be formed by people who share certain similarities (such as values)[18]. Hallinan describes the process of friendship formation as "a sequential process having four elements. First, P must desire to have O as a friend (attraction). Second, P must initiate a move to establish a friendship with O. Third, O must recognize P's overture of friendship. Fourth, O must reciprocate P's offer of friendship"[14, p. 194]. The initiator of the friendship request tends to have lower status than the recipient[14].

Friendship formation in the real world has more nuance than in the online world. The initiator of the friend request may communicate the desire to be friends with varying degrees of directness[14]. Those who initiate the friendship in less direct ways can avoid embarrassment and rejection should the request not be accepted. The online world lacks this nuance and makes it very clear that one person requests the other's friendship through the visible friend request.

On Facebook one person initiates a "friend" request and another person receives the request. The request for friendship is easily identified in the online world because there is a marker for that request. The receiver can choose to accept the friendship request or choose to ignore the request. If the request is accepted the two become "friends" on Facebook. Social network sites use different terms for the relationship; Facebook uses the term "friends" but others use the term "contacts," "fans," or "follower."[5] Visible virtual links are generated between the dyad's online identities. The online friendship process mirrors friendship formation in the real world with the addition of markers like the visible request and visible link connecting the dyad.

Friendship dissolution is not the same process of friendship formation in reverse and is distinctly different[8]. Some friendships end in conflict but most simply fade away[24]. Friendships do not require the other person's permission to end the relationship in either the online or offline world[4]. You need permission to be someone's friend on Facebook; however, no permission is needed to end the relationship. One person can simply choose to "unfriend" the other person. In most cases the person who was unfriended does not receive notification that they have been unfriended. There are applications available on Facebook, such as "unfriend finder," that notify users when they are unfriended[3].

There are both internal and external barriers to friendship dissolution [6]. External barriers are those that originate outside the individual and make the person feel as though the relationship must be maintained. External barriers include social (church, family), financial ties, physical proximity (coworkers, neighbors, etc.). Internal barriers are endogenous and drive the person to maintain the relationship and include religious beliefs, self-identity (sociability) or a sense of commitment.

Online social networks, with their visible links between members, may make it difficult to end a relationship. Unlike real world relationships that may simply fade without either member making a conscious decision about the dissolution, online unfriending is a conscious and public decision. Steve Duck calls the public declaration of the end of a relationship "grave dressing"[8]. In Facebook the unfriending can be a signal to others in the network that the particular relationship is over because the links between members are visible. Others in the network who share links with the dyad can notice that a link previously present has been removed.

2. Instrument Design

The survey was conducted solely on the Internet using a commercially available survey tool. The survey questions are a combination of established questions from previous studies and new questions to examine friendship dissolution in online settings plus demographic questions. The survey opens with a cover letter to introduce the survey using the Total Design Method by Dillman[7]. The survey asks a screening question to determine if the person is over 18 and a Facebook user.

The survey is divided into four sections. Part one of the survey asks whether the survey respondent has unfriended someone on Facebook, and, if so, asks questions about that unfriending. Part two of the survey asks whether the survey respondent has ever been unfriended on Facebook, and, if so, asks questions about that unfriending. Part three of the survey asks questions about Facebook usage, and part four asks demographic questions. The behavioral sections used 7-point Likert-type questions and were presented in a randomized order. Demographic questions and categorical questions were multiple choice. The survey was designed to take approximately fifteen minutes to complete. The path

through the survey depended on answers to the questions. For example, if the respondent said they have never unfriended a person it would skip that section and go to the next section.

The survey was designed through informal interviews with a variety of Facebook users to determine the types of friends who they unfriended and online posting behavior. The survey was pretested by five Facebook users to determine whether there would be difficulty completing the survey, survey length, and completeness.

Part one of the survey asked questions about the type of person unfriended, whether it was for online or offline behavior, questions about the friendship and questions about online and offline behavior. Part two mirrors part one of the survey and asks questions about the type of person who unfriended the survey respondent, their perception of whether it was for online or offline behavior, questions about the friendship and questions about their offline behavior. Part two adds additional questions to part one to determine how the survey respondent was affected by the unfriending. Part three asks questions about how many friends the survey respondent has, how many people they have unfriended, how many people they regularly interact with, and questions about their online posting behavior. Part three also asks questions about satisfaction, perceived usefulness and perceived ease of use of Facebook. Part four asks demographic questions: age, gender, education, the number of years of social network use and whether the person lives in the United States of America.

The questions about online and offline behavior are largely exploratory. Components were not identified during the survey design and cluster analysis would later partition the data into meaningful subgroups.

3. Data Collection

The survey was posted on a variety of Internet based venues to attract a wide variety of opinions. The sample did not seek out expert opinions on social network sites because those responses might be biased. There is not a random sample in this research; a convenience sampling method was used to recruit participants. The sites include Twitter, Facebook, and three internal Oracle company chat sites. Many sites were chosen because of an existing personal relationship with the websites.

Surveys were collected between April 16th and May 21, 2010. A total of 1281 surveys were started and 690 were completed; 54% of those who started the survey completed the survey. The analysis uses all the data collected and is not limited to completed surveys only. Twitter respondents were gathered by screening tweets that had the term "unfriend," "defriend," or "unfriending."

Tweets that met a screening criteria were sent replies inviting the person to take the survey about unfriending. The tweet reply sent was retweeted by many people who received the initial tweet. Forum based recruitment was through a posting to a forum that included a cover letter and a link to the survey. Facebook based recruitment was through several Facebook member pages. Some Facebook members were encouraged to post the link on their own profile to recruit others.

4. Methodology

The raw data was collected from a commercially available survey tool (Survey Monkey) and analyzed with SPSS version 18. The survey is largely exploratory and used methods such as factor analysis to find commonalities among the questions asked. Factor analysis was used to partition questions into meaningful groups. Constructs were then generated based on the factor analysis and interpretation of the results and Cronbach's alpha measure of reliability was calculated. Cross-tabulation techniques that will determine the differences in actual frequencies vs. expected frequencies between different groups (for example those who unfriend for online vs. offline behavior) were used for the first research question. MANCOVA techniques to compare differences in the constructs based on the unfriending decision were used for the second research question.

The constructs *everyday life, unimportant/frequent posts, polarizing posts*, and *inappropriate posts* were generated and used to examine online posting behavior. The constructs *behavior* and *change* were generated and used to examine offline behavior. MANCOVA was used to determine the difference in the online and offline constructs based on the person's unfriending decision (online vs offline).

Statistical tool selection is based on the appropriateness to the model and unit of analysis. MANOVA is used to analyze multiple dependent variables that are correlated with each other in a low to moderate level[19]. Cross-tabulation techniques are used to calculate the expected frequency in a cell and compare the expected cell count to the actual cell count found in the data[17]. MANCOVA is used to adjust for difference between the groups based on another typically interval-level variable called the covariate[19].

The analysis uses unfriending decision (online vs. offline) as an independent variable in this analysis. The data in this analysis is about unfriendings that have occurred and does not try to generate a probability function for a future potential unfriending. That is, this research does not attempt to define a probability function to determine whether the dyad will remain friends in the

future; this research only captures unfriendings that have already occurred. 82.6% of survey respondents could identify whether they unfriended a person for online or offline reasons with the rest unsure. The analysis presumes that the unfriending decision reflects why someone choose to unfriend the person. If differences are seen between the constructs for the online and offline behaviors (dependent variables) and the decision to unfriend (independent variable) then it is likely that those constructs are relevant in actual unfriending decisions and provide a basis of comparison.

The results are most informative when the survey respondent said they unfriended someone for online reasons and differences are seen in the online posting behaviors compared to those who selected offline reasons or in factors where no differences are found. The decision to unfriend is an independent variable in the MANCOVA analysis.

5. Results

5.1. Friend Request

Friend requests were analyzed to determine if there were differences in unfriending behavior based on who initiated the friend request. A total of 901 friend requests were analyzed based on the survey respondent's decision to unfriend someone and the survey respondent's own unfriending. The survey respondent was asked to indicate who initiated the friend request in both their own decision to unfriend a person and an unfriending that happened to them. The survey included three choices, "I asked this person to be my friend," "This person asked me to be their friend," and "I don't remember who asked." The results show that statistically significant differences in the expected and actual cell counts exist. The Chi-square test was 36.439 with 5 degrees of freedom; the two-tailed significance is .0001 which indicates that there are differences in unfriending behavior based on friend requests. The results are show in Table 1. There are three findings:

1) Survey respondents were more certain of who initiated the request when they did the unfriending compared to survey respondents who were being unfriended. The *don't knows* in the table are greater than expected when the survey respondent was unfriended by someone compared to when the survey respondent chose to unfriend someone.

2) Survey respondents who *initiate* the friend request are unfriended more often than expected. The number of *unfriended by* when the survey respondent initiates is greater than the expected count.

3) Survey respondents who *receive* the friend request make more than the expected number of unfriend

Table 1.
FRIEND REQUEST

	I initiated	Other initiated	DK	Total
Unfriend Decision	96	339	170	**605**
Expected	*120*	*298*	*187*	
Unfriended By	83	105	108	**296**
Expected	*59*	*146*	*91*	
				901

decisions. The number of *unfriend decisions* when the other person initiated the friend request is greater than the expected count.

5.2. Individual Factor Differences

The individual factors were analyzed to determine how many people agreed with the statement about the person they unfriended and are shown in descending order by online or offline factors in Table 2. The individual factors for overall agree were analyzed using frequency statistics. The individual factors for online and offline factors were analyzed using cross-tabulations on the questions to determine if there are differences depending on whether an online or offline reason was chosen by the respondent. The significance level shown is whether the difference in response between those who choose online or offline reasons was statistically significant for that question. The number of respondents (N) is shown for the cross-tabulation analysis. For cross-tabulation to be reliable the number of expected responses in a cell should be five or greater[17]. All cells met the minimum expected cell count to be considered acceptable. The analysis groups responses from strongly agree to agree for the agree category and from strongly disagree to disagree for the disagree category. The groups were developed in this manner to compare survey respondents who had a higher level of agreement with the questions.

The mean column represents the 7-point Likert scale mean for the entire dataset. That is, survey responses for *somewhat disagree*, *don't know/not sure*, and *somewhat agree* are included in the mean statistic (unlike the comparative analysis above). The mean indicates the level of agreement the respondents felt when they unfriended a particular person and not how they feel about the appropriateness of any given question. That is, someone may find racist speech abhorrent but the

friend they chose to unfriend did not use racist speech and they were unfriended for some other actual reason and not a theoretical one. The higher mean indicates that the person agreed with that reason to unfriend someone more than those with lower means.

An example of individual factor differences is provided for political posts. Overall, 25% of survey respondents said that the person they unfriended posted too often about politics; *% agree online* shows that survey respondents who said they unfriended for online reasons agreed that the person posted too often about politics 37% of the time. Those who said they unfriended for offline reasons said that the person posted too often about politics 8% of the time. The difference between the level of agreement for political posts for those who indicated they unfriended for online reasons vs. offline reasons is statistically significant at the .001 level.

5.3. Factor Analysis

Factor analysis was performed to determine appropriate clusters for the online and offline questions. Factor analysis provides a method to condense the information from a number of original variables into a smaller set with minimal losses of information[17]. Principal component analysis was used to determine the number of factors for online and offline decisions based on Eigenvalues greater than 1. The factors were rotated using the Varimax function to determine factor loadings. Component groupings were then analyzed and named according to the questions in the group. The constructs for online behavior for unfriending are: everyday life posts, inappropriate posts, polarizing posts, and unimportant/frequent posting. The constructs for offline behavior for unfriending are: disliked behavior and changes in the relationship. Five questions had cross loading scores above .40; unflattering posts about a person, sexist, sex, racist and incompatible friends. Table 3. shows factor loadings above a .4 threshold for the online and offline factors.

The overall model fit was assessed and is considered acceptable. KMO measure of sampling adequacy for the questions is .920 and is considered meritorious by Hair [17]. The six factor loadings explain 64.3% of the variance for the factors. Factor analysis is considered acceptable for social science research where more than 60% of the variance is explained[17]. Bartlett's Test of Sphericity is statistically significant for the factor models at the .001 level.

Table 3.
FACTOR ANALYSIS

Question	C1	C2	C3	C4	C5	C6
exercise	.811					
purchases	.795					
eating	.789					
money	.757					
job	.712					
celebrities	.709					
sport scores	.669					
pets	.658					
promotion	.622					
child	.590					
spouse	.519					
did misdeed		.861				
dislike		.834				
behavior		.814				
personality		.762				
trust		.756				
betray		.754				
broke rule		.741				
new information		.553				
inappropriately			.719			
swear			.699			
sexist	.417		.493	.403		
sex	.464		.470			
unflattering	.414		.470			
politics				.787		
religion				.674		
racist			.482	.588		
divorce					.678	
geographic distance					.600	
romantic end					.583	
incompatible friends		.423			.454	
unimportant						.788
frequency						.658

Table 2.
INDIVIDUAL FACTOR DIFFERENCES

Question	% Overall Agree	Mean	% Disagree online	% Agree online	% Disagree offline	% Agree offline	Sig	N
Online Reasons for Unfriending								
Unimportant	62	4.53	28	72	55	45	.001	413
Inappropriate	36	3.43	51	49	80	20	.001	426
Posting Frequency	33	3.35	56	44	83	17	.001	390
Politics	25	2.98	63	37	92	8	.001	411
Religion	19	2.74	74	26	88	12	.001	405
Job	17	2.59	80	20	85	15	.224	412
Promotion	15	2.45	80	20	91	9	.008	424
Sex	11	2.25	85	14	92	8	.075	425
Spouse	10	2.32	89	11	91	9	.478	391
Swear	10	2.26	87	13	92	8	.170	428
Racist	10	2.21	85	15	95	5	.004	422
Sexist	9	2.23	87	13	97	3	.002	412
Money	9	2.20	89	11	95	5	.060	413
Eating	9	2.20	89	11	93	7	.245	406
Purchases	7	2.18	92	8	92	8	.884	410
Child	7	2.07	92	8	93	7	.602	403
Celebrities	6	2.09	92	8	96	4	.081	415
Exercise	6	2.04	94	6	93	7	.554	413
Pets	5	2.03	94	6	93	7	.606	405
Sport Scores	4	1.90	95	5	97	3	.268	419
Offline Reasons for Unfriending								
Personality	70	4.96	30	70	12	88	.001	398
Behavior	62	4.57	44	56	14	86	.001	381
Did misdeed	57	4.37	59	41	5	95	.001	415
Dislike	57	4.36	53	47	13	87	.001	379
Broke rule	35	3.35	78	22	30	70	.001	381
Trust	34	3.31	85	15	22	78	.001	398
Betray	31	3.23	87	13	24	76	.001	378
New Information	29	3.14	26	74	53	47	.001	364
Geographic Distance	29	3.12	77	23	60	40	.001	345
Incompatible Friends	24	2.99	80	20	62	38	.001	333
Romantic End	17	2.46	94	6	60	40	.001	375
Divorce	5	1.87	97	3	86	14	.001	350

5.4. Construct Creation

Constructs were generated based on the factor analysis results and interpretation of the factors. Two questions were moved to a more appropriate construct. Posting racist statements was moved to the inappropriate construct from the polarizing construct. New information about the relationship was moved to the change construct from the behavior construct. Table 4. shows the resolution.

5.5. Reliability Results

The Cronbach's alpha for the constructs were calculated. The six constructs are considered reliable; Cronbach's alpha measures above .70 are considered acceptable[11]. Table 4. show the reliability of the six constructs and number of questions in the construct.

Table 4.
CONSTRUCT DESCRIPTIVES

Measure	Abbr	Questions	Cronbach's Alpha	Num of Ques- tions	Mean	Std. Dev	N
Online Constructs							
Everyday Life	EL	exercise, purchases, eating, money, job, celebrities, pets, sports scores, promotion, child, spouse	.919	11	2.41	1.51	633
Unimportant/Frequent	UF	unimportant, frequent	.704	2	4.00	2.03	641
Polarizing	PO	politics, religion	.770	2	2.89	1.97	602
Inappropriate	IN	inappropriate, sex, swear, sexist, racist, unflattering	.821	6	2.61	1.62	640
Offline Constructs							
Behavior	BH	did misdeed, dislike, behavior, personality, trust, betray, broke rule	.919	7	4.16	1.94	622
Change	CH	divorce, romantic end, incompatible friends, change in geographic distance, new information	.704	5	2.98	1.67	586
Valid (listwise)							**525**

5.6. A Comparison of Online and Offline Components and the Decision to Unfriend

To compare differences in the means of the six constructs (EL, UF, PO, IN, BH and CH) based on whether a person selected an online or offline reason for unfriending MANCOVA results were analyzed. The covariates for this procedure are the length of the friendship, how often the friend was seen in the last year, how many friends they have in common, age, gender, education, years in social networks and whether the person lives in the US. The number of responses in the MANCOVA are 171 for online reasons for unfriending and 98 for offline reasons. Multivariate test results indicate that no covariates are individually statistically significant at the .10 level.

The analysis uses unfriend decision (online vs. offline) as the independent variable to understand the how online posts and offline behaviors are reflected in the decision to unfriend. Table 2. shows how many people agree that the person posted too often about a topic overall but we do not know if that difference is important in the unfriending decision. The MANOVA results (no covariates) show that EL, UF, PO, IN, BH and CH are statistically significant ($p < =.013$); the only construct that is not statistically significant is EL (p .238). The MANOVA results contain no covariates so

can not vary based on additional interval-level variables. MANCOVA will determine whether a construct mean is statistically different when the person selected an online or offline reasons for unfriending. If differences are seen in the construct means that depend on the reason for unfriending then that difference is likely to be important in the unfriending decision. If we see no differences in the means of the constructs then that construct is not statistically significant.

Table 2. shows how people differ in assessing a person's online posts depends on whether they selected an online or offline reason for unfriending. For example, 62% of people agree that the person they unfriended posted about unimportant topics. The difference between the number of people who agreed that the person posted too often is statistically significantly different by the unfriending decision (online vs. offline). We can consider the baseline for agreement about posting on unimportant topics to be 45% because that is the percentage of those who said their unfriending decision was based on offline reasons. A statistically significant difference is seen between the offline and online reasons for unfriending; 72% of survey respondents who unfriended the person based on the person's online behavior said that the person posted unimportant topics. The MANCOVA analysis is comparing the differences in similar ways

Table 5.
FREQUENCIES

Category	N	Valid %
Age		
18-29	248	35.5
30-39	254	36.4
40-49	139	19.9
50-59	44	6.3
>60	13	1.9
Gender		
M	209	29.9
F	489	70.1
Category	**N**	**Valid %**
Live in the U.S.A.		
Yes	532	76.2
No	166	23.8
Decision to Unfriend by Behavior		
Online	484	54.9
Offline	244	27.7
Don't Know	153	17.4
Perception of Unfriending by Behavior		
Online	78	26.3
Offline	71	24.0
Don't Know	147	49.7

but with the constructs, covariates and in a multivariate manner with multiple dependent variables depending on the independent variable: the unfriending decision.

The results show that there are statistically significant increases in agreement that a person posted too often about unimportant topics, polarizing topics, inappropriate topics when the survey respondent says they unfriended for online reasons compared to those who unfriend for offline reasons. When a person indicates that they unfriended someone for offline reasons they disliked their behavior and experienced a larger change in their relationship compared to those who selected online reasons for unfriending. The only construct that does not show statistically significant differences is everyday life posts (p=.052).

The online constructs all had higher means when the person said they unfriended for online reasons. This indicates that people who select online reasons for the unfriending decision agreed more often that the person posted too often about unimportant topics, polarizing topics and inappropriate topics compared to those who unfriended for offline reasons. The offline constructs all had higher means when when the person said they unfriended for offline reasons. Survey respondents who selected offline reasons for the unfriending decision agreed more often that they disliked the person's behavior or experienced a larger change in the relationship compared to those who unfriended for online reasons. Everyday life posts were not statistically significant; that is, the were not different levels of agreement that the person posted too often about everyday life topics when that depend on the decision to unfriend.

Covariates in the analysis adjust for differences between the groups; in this analysis the covariates adjust for the unfriending decision (online vs offline) and the construct under analysis. Table 6. shows the magnitude and direction of B parameter of the covariate and its effect on the construct mean. The covariates show:

- Those who reside in the U.S. agree less often that the person they unfriended posted too often about everyday life compared to those who live outside the U.S.
- The longer the dyad knew each other the more likely the survey respondent would agree that the person posted too often about polarizing topics compared to those who knew each other for shorter lengths of time.
- The more often the dyad saw each other in the last year the less likely the survey respondent would agree that the person they unfriended posted about polarizing topics.
- Increased length of dyad's friendship increased the survey respondents likelihood of citing behavior (did misdeed, dislike, etc.) as a reason for unfriending compared to those with shorter friendships.
- The more often the dyad saw each other in the last year the more likely the survey respondent would agree that they disliked the behavior of the person they unfriended.
- The longer the survey respondents used social networks the more likely the survey respondent would agree that they disliked the behavior of the person they unfriended.
- The longer the survey respondent used social networks the more likely the survey respondent would agree that they experienced a change in the relationship.
- Women agreed more often that there were changes in the offline relationship compared to their male counterparts.

Table 6.
MANOVA RESULTS

Con-struct	Online mean	Offline mean	Sig.	Mean difference online to offline
EL	2.289	1.912	.052	.377
IN	2.660	2.077	.005	.583
PO	3.419	2.295	.001	1.123
UF	4.372	3.101	.001	1.271
BH	3.791	5.373	.001	-1.582
CH	2.692	3.507	.001	-.815

Construct	Covariates p < .10	
EL	US	p= .060 B=.390
IN	None	
PO	FL	p=.075 B=.108
	FS	p=.081 B=-.112
UF	None	
BH	FL	p=.085 B=.089
	FS	p=.033 B=.117
	Y	p=.086 B=.147
CH	Y	p=.005 B=.233
	G	p=.020 B=.496

Covariates US: Lives in US, FL: friend length, FS: Number of times friend seen in last year, Y: Years in social networks, G: Gender

6. Limitations

Sampling of this study is not random and therefore it would be difficult to say how the general population perceives unfriending on Facebook. The Twitter survey respondents were the majority of survey respondents and they are likely to be different in many ways than the general Facebook population. In particular the Twitter users were screened based on criteria that included the term "unfriend," "defriend," or "unfriending." These users may be more likely to unfriend than others because they were posting about the topic. This recruitment method was used because it showed that the person had an interest in the unfriending phenomenon and may be more willing to take the survey as a result. The

surveys may be biased toward technologically savvy users because of the large recruitment through Twitter. The MANCOVA analysis used age, gender, education, etc. as covariates. Most of the analysis did not find statistically insignificant differences for the covariates when the results were adjusted.

The survey did not assess the role of privacy in unfriending behaviors. Personal privacy may be a factor in unfriending decisions and is not used to evaluate unfriending behavior in this research. Survey respondents were asked to choose whether they unfriended the person for that person's *online* or *offline* behaviors or to choose *don't know*. Some survey respondents said that they did not unfriend the person for their online or offline behavior but for a personal sense of privacy. Some survey respondents abandoned the survey when they did not see options that fit their reason for unfriending.

The survey did not assess the role of identity in unfriending behaviors. Several respondents indicated that they had trouble maintaining a work identity and a personal identity in one user account. Some choose to have two accounts that they manage with different types of friends and different status updates for the different identities. For example, some universities ask instructors to have two accounts, one for students and one for their personal friends.

7. Discussion and Conclusion

There are two major research questions that this study addresses.

1) What is the role of the friend request in unfriending decisions.
2) Can factors in unfriending decisions be found and do differences in the perception of online and offline behaviors vary depending on the unfriending decision.

The research shows that survey respondents who *initiate* the friend request are unfriended more often than expected. Survey respondents who *receive* the friend request make more than the expected number of unfriend decisions. Survey respondents were more certain of who initiated the request when they did the unfriending compared to survey respondents who were being unfriended.

Survey respondents were asked to identify a specific individual who unfriended them and answer the survey questions. Survey respondents could identify who initiated the request 64% of the time when they were unfriended. Survey respondents could identify who initiated the request 72% of the time when they made the decision to unfriend. It appears that survey respondent's memory becomes statistically significantly less certain when they are unfriended compared to when the do the unfriending.

The requests can be summarized as follows:

- Survey Respondents who did the unfriending *initiated* the request 16% of the time. That is, the survey respondent initiated the friend request and later dissolved the friendship.
- Survey Respondents who did the unfriending *received* the request 56% of the time. That is, the survey respondent received the friend request and later dissolved the friendship.

Unfriending decisions are made for both offline and online reasons; more than half (54.9%) of the survey respondents said they unfriended someone for online reasons vs. 27.7% for offline reasons with the remaining *not sure*. Those who unfriended for online reasons agreed more often that the person they unfriended posted too often about unimportant topics. This construct had the highest level of agreement for online post constructs and the largest difference of the online constructs when compared to those who unfriended for offline reasons. The next highest levels of agreement for unfriending for online reasons is posting about polarizing topics followed by inappropriate topics. Everyday life posts had the lowest level of agreement that the person unfriended posted too often about those topics. Posting about everyday life topics did not have a statistically significant difference when the survey respondent said they unfriended for either reason.

Those who unfriended for offline reasons disliked the person's behavior at a high level of agreement compared to those who unfriended for online reasons. This construct had the highest level of agreement of all six constructs and had the largest difference when comparing against the unfriend decision (online vs. offline). That is, many of the survey respondents agreed that they disliked the person's behavior that they unfriended; but those who unfriended for offline reasons disliked the person at a statistically significantly higher level than those who unfriended for online reasons. Survey respondents agreed that changes in the offline relationship (romantic relationship dissolution, geographic change, etc.) occurred more often when they said they unfriended for offline reasons compared to online reasons.

This research shows how the friend request and online and offline behaviors contribute to unfriending decisions.

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