

What's on your mind: Reactivity and Helping Behaviors Towards Depressed Facebook Users

by

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ABSTRACT

Objective: Depression affects people world-wide, but what happens when people express depression online? The current study examined online and offline reactivity as well as likelihood to help depressed Facebook users in the context of Facebook's positivity norm. Online reactivity was measured as the likelihood to engage with a profile using Facebook's communication tools. Offline reactivity was measured through contact such as texting or calling the user and through helping behavior such as taking them to the Emergency Room. Differences in reactivity based on profile gender and expression of depression were evaluated. Knowledge of using Facebook's new suicide reporting option was examined. Other factors impacting a user's tendency to respond to depressed individuals were also considered. **Method:** A sample of 97 female undergraduate students at the University of Michigan-Dearborn participated in this online study. The participants completed the Social Media Use Integration Scale (Jenkins-Guarnieri, Wright, & Johnson, 2013) and the Attitudes to and Stereotypes of Mental Health Measure (Aromaa, Tolvanen, Tuulari, & Wahlbeck, 2011). All participants viewed a fictitious positive Facebook

profile (either male or female), then were randomly assigned to view either a profile where the posts were initially positive but became negative or a profile that was consistently negative. The participants rated the likelihood they would respond online and offline to each profile. **Results:** While people responded to the depressed individuals via online and offline methods, participants were unlikely to help them. Participants responded more offline to the negative than the positive profiles. Participants were more likely to respond in general to the mixed than the depressed profiles. Participants' response to the profile was not impacted by the gender of the individual portrayed in the profile. Participants did not know how to report suicidal content utilizing the newest update. **Conclusion:** Profiles that violate Facebook's positivity norms receive different online reactions from their social network with regard to contacting the individual in a public or private manner. People who violate these norms did not receive offers of help from their social networks. They did receive attention through personal interaction, indicating an effect of online posts affecting people offline.

Keywords: Facebook, positivity, depression, dissociative imagination

CHAPTER I

Introduction

Social networking sites (SNSs) have become a popular way for people to express themselves. Websites such as Facebook, Twitter, and Instagram provide platforms for people to create a profile and broadcast their thoughts to anyone with an Internet connection. As the Internet encroaches into daily life, it becomes increasingly important to understand how online behaviors can carry over into the real world.

Forming Connections on Social Networking Sites

Social networking sites are websites that encourage and allow their users to interact with one another. Popular SNSs include Facebook, Twitter, Google+, Instagram, and Tumblr. These sites encourage users to post information unique to their life experience. Some sites like Twitter require minimal information, while others like Facebook encourage users to create a profile that is more extensive. Once a SNS profile is created, users typically post status updates about what is happening in the moment, photos they have taken, and links to other websites they enjoy. These features are the foundation of the SNS, as users are meant to use these platforms to connect with other people. Facebook has used these mechanics to become one of the most influential social networking sites.

Launched as The Facebook in 2004, Facebook has quickly grown in size and accessibility. In 2006, the website allowed anyone who was at least 13 and had a valid email address to create a profile (Wilson, Gosling, & Graham, 2012). By 2011, there were 750 million active members internationally (Anderson, Fagan, Woodnutt, & Chamorro-Premuzie, 2012).

As of June 2015, 1.49 billion active users visited the site monthly and an average of 968 million users visited the site daily (Facebook newsroom, 2015). On August 24, 2015, Facebook recorded 1 billion users logging into the website in a single day: about 1 out of 7 people on Earth (Wattles, 2015). In addition to the desktop computer version, a mobile app launched for the iPhone in July of 2008 (Facebook newsroom, 2015). As 64% of Americans currently own a smartphone, Facebook is easily accessible to users (Smith, 2015). As of June 2015, Facebook reports that an average of 844 million people use the mobile app daily (Facebook newsroom, 2015). One study found that users on average posted one update every four days (Forest & Wood, 2012). Clearly, Facebook is being used regularly by a large portion of the population.

Both the mobile app and desktop versions of Facebook feature a timeline system: when a user logs onto their Facebook home page they are greeted with their personal Facebook News Feed - the status updates, photographs, and links that their friends have shared. The user has the option to view the updates in chronological order, where their friends' most recent updates are at the top of the website, or in the default "top stories," where updates are presented as a hierarchy where the most popular of their friends' posts appear first and less popular updates are pushed towards the bottom. Popularity is determined by the number of likes and comments that a post receives. Thus, the Facebook timeline highlights important events in the lives of the users such as graduations, career changes, and engagements as well as controversial or salient posts. In this way Facebook has made itself an online combination of a diary and yearbook: each user's Facebook profile is a searchable record of their past. Through its relatively long history, integration of photos, ability to post personal updates, and connectivity with other users, Facebook has secured its spot in the social networking domain.

Users can interact with others on Facebook by “liking,” commenting, and tagging friends. These communication features allow users to build and essentially broadcast relationships and feedback with other users (Eftekhar, Fullwood, & Morris, 2014). The website implies that the more people that a person has connected to their profile, the more rewarding the online experience is; Facebook’s goal is to connect people with their friends and family members (Mosseri, 2016).

Strengthening online friendships may strengthen the relationships that the person has with friends offline as well (Eftekhar et al., 2014). People tend to make connections with people on Facebook that they know in real life (Ellison, Steinfield, & Lampe, 2007). Knowing one’s online friends in real life bridges the gap between the online and offline worlds – people can communicate both online and through face-to-face contact. The liking, commenting, tagging, and photo-sharing features allow people to start adding friends that they know in real life, potentially branch out and add people to their online presence who are simply acquaintances, and possibly add people that they may not know personally at all.

Social networking sites each have varying levels of authenticity. Some, such as Tumblr and Twitter, do not require their users to provide authentic information. This results in the sites being riddled with two forms of profiles: profiles that are run by people who are actually microblogging and profiles that do not reflect an actual individual. Facebook, however, is dogmatic about users uploading accurate information when a profile is initially created. For example, users are asked to provide their first and last name, their gender, and their birthday when first making an account. Users are subsequently asked to provide more information about themselves including hometown, where they currently live, education history, political views, and religious views. The site also provides an optional open space for users to write “about me.”

Finally, users are encouraged to upload a profile picture of themselves directly to their new profiles. This picture is displayed at the top of the screen as well as next to the individual's name on any future post that the person makes. This picture can be updated at any time. Facebook does its best to ensure that every profile reflects a valid user. If the site documents a profile whose name does not seem correct, Facebook will ask the user to upload a form of identification to prove the legitimacy of the profile (Dwyer, 2015). Further, users themselves have the option of reporting a profile that appears to be using a fake name or representing a fake person. All of these conditions “prove” that an online profile reflects a person in the real world and helps users connect to people who are similar to themselves. For example, users can search for people who share the same hometown or enjoy the same sports team. The combination of content and features that promote finding and adding friends on the site allow users to create a web of connections with other users.

The information provided by the profile owner allows potential friends to find the user on Facebook. For the most part people add others they know in real life to their Facebook friend network. This forces users to post accurate information about themselves – inaccurate information would be instantly recognized and possibly commented on, either on Facebook or in the real world. This would result in embarrassment for breaking an online social norm. Facebook cites a genuine, authentic experience as one of its core News Feed Values (Mosseri, 2016). Facebook encourages genuine communication because the company has found that authentic posts resonate the most with users and strengthens the network as a whole. The company, in addition to reviewing profiles to ensure interaction with authentic people, also strives to eliminate posts that are “misleading, sensational, and spammy” (Mosseri, 2016). Authenticity on Facebook is such an accepted fact that courts are beginning to take into account

what an individual posts or “likes” as evidence for crimes (Hagger-Johnson, Egan, & Stillwell, 2011). Facebook’s comparatively strict registration criteria and subsequent policing of profiles forms a norm of authenticity within the website: users are not interacting with artificial intelligence or a persona but are instead interacting with other real people in an online space.

Facebook Norms

As in any society there are unspoken rules that govern the online world. A study done by Bryant & Marmo (2012) asked participants to identify and rank the rules that users should follow when using SNSs, specifically Facebook. The participants identified 36 rules including “I should expect a response from this person if I post on his/her profile,” which was deemed to be the most important, “I should present myself positively but honestly to this person,” and “I should project myself in a manner with which this person would want to be associated.” Other rules included those regarding communication, deception and control, maintaining relationships, and negative consequences for the self and for a friend. While unspoken, this suggests that there are specific ways that users are meant to behave on Facebook (and other SNSs) and that people are aware of these norms.

Although Facebook encourages the creation of authentic profiles and occasionally verifies identities, there is still some speculation regarding the legitimacy of users’ Facebook profiles. Studies have shown that people are selective in the information that they share and tend to upload content to their profiles that is positive in nature, thus creating more ideal selves than they are in real life (Anderson, Fagan, Woodnutt, & Chamorro-Premuzie, 2012). This is not to say that the entire profile is inauthentic, rather, that people have the ability to pick and choose what aspects of their lives they want to portray.

The way Facebook is set up for users to share information, especially photos, also feeds into what tends to be shared or not shared online. People who update a profile with a photo of themselves are more likely to disclose a greater amount of personal information (Hollenbaugh & Everett, 2013) than someone who does not include or update photos. Other personal characteristics, such as age and gender, are also related to online sharing. For example, females are more likely to disclose information than are males and people who are younger are more likely to disclose information than are older people (Hollenbaugh & Everett, 2013). This may relate to more general tendencies as women tend to disclose more information than men (Dindia & Allen, 1992). These aspects of disclosure play into Facebook's evolution as a platform. At its inception, Facebook was open only to people who were affiliated with a college or university (Facebook newsroom, 2015). As Facebook gained popularity among young people, the users in turn played a major role in establishing and shaping the norms associated with disclosure on SNSs.

Facebook has developed a culture of its own in line with its expectation for its users to connect to people online. The average Facebook user has about 300 Facebook friends (Anderson, Fagan, Woodnutt, & Chamorro-Premuzie, 2012). However, the average person has about 125 friends and acquaintances in their real-life social network (Hill & Dunbar, 2003); these include relationships with varying degrees of intimacy, but typically only 5 to 12 of these would be considered to be close relationships (Dunbar, 1998). A large and growing Facebook network makes it nearly impossible for a user to maintain close ties with every individual in their network. Therefore, users who are not connected closely with an individual must rely on the individual's photos and updates to gather information about the individual. This dependence on posts could pose a problem since the typical user posts only positively-skewed information

online due to Facebook's norms. That is, social norms on Facebook potentially oversimplify users' lives in favor of positive, happy posts.

As people get more comfortable online, they tend to disclose more information (Hollenbaugh & Everett, 2013). Young adults who use Facebook find more satisfaction from their Facebook friendships if they feel that they are projecting their thoughts to an audience (Manago, Taylor, & Greenfield, 2012). The online disinhibition effect proposes that people are more likely to disclose personal information to an online audience than an offline audience (Suler, 2004). In his research, Suler (2004) describes the need for only one or two of the six elements identified as components of the online disinhibition effect to be present to create an environment where people are likely to disclose. The six components include dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of status and authority. The way that users are encouraged to communicate on Facebook may promote the online disinhibition effect as several components can be applicable at the same time, thus further promoting communication. Dissociative anonymity is the first aspect of the online disinhibition effect. Whereas Facebook encourages a greater amount of identity than other SNSs, individual users remain able to choose what offline activities to post online, thus contributing to the idea that they are anonymous. Facebook also provides a sense of invisibility, the second aspect of the online disinhibition effect. Interactions between users tend to be confined to textual communication and viewing photos. This does not allow the normal audio and visual cues that people would get from a face-to-face conversation. People also do not necessarily communicate on Facebook in real time as they would in a face-to-face conversation. While posts are time-stamped there is always a delay between posts and responses. Though Facebook does have an instant messaging feature that negates some of the asynchronicity, the

third aspect of the online disinhibition effect, a user could wait days before they replied to a post. Solipsistic introjection is the fourth aspect of the online disinhibition effect. Solipsistic introjection occurs when a user attributes characteristics to a person online that might not be true of that person in real life. This comes into effect due to the limited information that a user has about another person due to the limited contextual nature of online interactions: shared information is confined to text and photo-based posts. According to the online disinhibition effect, these attributions could lead a user to post comments that they may not say to the person otherwise in real life. The fifth aspect is dissociative imagination. This refers to peoples' beliefs that the online and offline worlds are not connected and that comments made online are not ultimately integrated into the offline world. Therefore, they may post comments that they believe would not have real-world consequences. The last aspect is minimization of status and authority. Because Facebook takes away some context of identity (despite its best efforts to preserve it), users may post a comment that they would refrain from saying to a person in real life because of that person's real-life status in society. There is no hierarchy of power ingrained in Facebook. Therefore, people may forget their place in their real-life status hierarchy and write an inappropriate comment. Facebook provides a breeding ground for the online disinhibition effect, allowing people to disclose more information than they normally would in a face-to-face conversation. In this way people potentially write posts online that they would not necessarily say in a face-to-face conversation (Dietz-Uhler & Bishop-Clark, 2002). The online disinhibition effect offers insight as to how people respond to others' posts online and what influences those responses.

Norms Related to Expressions of Depression and Psychological Distress

In the real world, people tend to not want to interact with those who are depressed (Tse & Bond, 2003). People who do interact with a depressed person tend to view the person more negatively than they would someone who is not depressed and, consequently, are less likely to wish to have further interactions with the depressed individual (Tse & Bond, 2003). When a person is depressed, that individual is more likely to be perceived as lacking in motivation, willpower, and conviction (Siegel, Alvaro, Crano, Lienemann, Hohman, & O'Brien, 2012). Depressed individuals are also more likely to be the targets of anger than those who are not depressed (Siegel et al., 2012).

Cook and Wang (2010) found that men had more stigmatizing views about people with depression than did women. In that study, male participants were twice as likely as female participants to believe that a person with depression should be avoided and that the person should just “snap out of it.” Almost 46% of all of the participants said that a person with depression was unpredictable. The outcome of an Australian national survey of mental health recognition and responsive behaviors may help to explain this attitude (Rossetto, Jorm, & Reayley, 2014). Participants were given demographic information for either a male or female and were read a vignette that contained DSM-IV criteria for one of six conditions, two of which was depression (with or without suicidal thoughts). Participants were asked to imagine that they had known the person in the vignette for a long time and cared about them. After going through the vignette the participant was asked what they would do to help the person. Participants were unlikely to report an intention and/or a behavior to help the individual (Rossetto et al., 2014). For the vignette that focused on a person with depression and suicidal intent just less than half (48.9%) reported that they would encourage the person to go get professional help. While the encouragement is positive for the individual in need of psychiatric services, it should be noted

that the respondents were still restricting their involvement with the individual; encouraging someone with words is different from behaviors that would assist the person to seek psychiatric services. A similar trend can be seen in the United States. A study that evaluated the Surgeon General's approach of decreasing the stigma surrounding depression by increasing the public's knowledge about the neurobiological links to depression showed that whereas knowledge of neurological causes increased, the stigma surrounding depression did not decrease but rather increased (Pescosolido et al., 2010). Even with knowledge of theories of depression, people still tend to avoid those with the disorder. People tend to distance themselves from those who are in need of professional mental health services.

This distance may be especially problematic if the people are the close friends and family members of the person with depression. People with depression may not have adequate social support in general from those in their friend and familial networks (Billings, Cronkite, & Moos, 1983; Dobson & Dozois, 2008). The stigma surrounding depression may add to this risk factor in that the stigma may compound a person with depression's friends and family to interact with the individual less on top of them not wanting to interact with the person due to the individual's depression. People who have a friend or family member with depression may act differently towards people that they do not know who have depression due to their more personal connection.

Online Expression

As described earlier, sharing thoughts and opinions with others on Facebook is limited by norms about what is acceptable. Bazarova (2012) examined the likability of people who shared intimate details of their lives on Facebook. Participants judged that there was a hierarchy to sharing information based on how many people were able to see the content. In this hierarchy,

an individual's status updates were considered to not be intimate at all because they were broadcasted to potentially the entire Internet. This also applies to Wall Posts, despite the fact that they are posted directly to another profile. Conversely, personal messages between users were considered much more intimate because the two users were the only ones privy to the information shared in the message. Wall posts, despite being posted on another person's profile, were not considered intimate because, again, depending on privacy settings, people on the Internet were able to see the post. With this information in mind, Bazarova conducted a second study to reactions to disclosing intimate information, normally meant for close friends and family, to a public audience. Such "public intimacies" are normally seen as inappropriate and prompt negative reactions from a public audience. Bazarova included both positive and negative public intimacies in her study. Indeed, public displays of intimate information were considered to be more inappropriate than sharing more general information. Posting public intimacies even influenced participants toward having a negative opinion of the posters. Negative public intimacies were considered to be more intimate than positive public intimacies; those who posted negative intimacies (such as "I just noticed that it's snowing out. Snow reminds me of my childhood, when I wasn't so miserable") were even less socially attractive to the participants than those posting positive public intimacies (e.g., "I just noticed that it's snowing out – I can't wait to go on a romantic walk in the snow with my special someone"). Expanding on the norms that were discussed earlier, this study suggests that "oversharing" personal information, especially negative information prompts a negative reaction from others. Potentially, if a person violates the positivity norm enough times, a Facebook friend's opinion of them could drop substantially. Finally, people who post intimate details about their lives could be at a disadvantage to those who only post more general updates.

Social networking sites such as Facebook provide an opportunity for people who are depressed to express themselves. Forest and Wood (2012) studied 80 participants who reported the degree to which they thought that Facebook allowed them to express themselves, the degree to which Facebook allowed them to connect with others, their perceived degree of safety of self-disclosure on Facebook compared to face-to-face interactions, and their perceived ability to connect with others via Facebook compared to face-to-face interactions. Participants with lower self-esteem were more likely to indicate that Facebook is a safe place to express their thoughts, get social support, and get attention from other people than those with higher self-esteem. Participants who had lower self-esteem were also more likely to post statuses that had sad content. Thus people with depression, who may not feel secure when interacting with others in the real world, may feel more secure when expressing themselves online.

However, the real-life stigma surrounding depression also can be found online. The Facebook positivity norms indicate that people should generally post happy, positive, and upbeat statuses. People who post sad or depressed content to their Facebook page are not likely to receive reactions from their online social network as sad status updates are not liked or commented on as much as those statuses that contain happy content (Reinecke & Trepte, 2014). Statuses that contain negative content do not receive as much attention and, therefore, the posters are essentially punished for posting the updates (both in terms of the non-response, but also in terms of making that person's posts less "popular" and therefore less likely to show up on their Facebook friends' news feeds).

Unfortunately, this is a self-feeding cycle. People who are depressed are not as likely to have positive, happy experiences when compared to their non-depressed counterparts (Reinecke & Trepte, 2014). But they still must function under the same Facebook norms: being positive

and being authentic. Because they do not have the same positive experiences they are unable to post authentic happy posts. People who are depressed may feel as if they are unable to express their feelings authentically because that expression of feeling violates the positivity norm. Therefore, they must compensate by posting inauthentic positive experiences (Reinecke & Trepte, 2014). If a person who normally posts statuses with sad, negative content posts a status that is in line with positive social norms, that person tends to be rewarded by their friend network with “likes” and comments – essentially positively reinforcing the person to post more positive status updates (Forest & Wood, 2012). Those who post consistently negative statuses tend to be disliked as individuals and do not have their experience rewarded by their friend network “liking” their posts. Therefore, people with depression are forced to choose which norm to follow: authenticity or positivity.

Thus, people with depression are less able to express their authentic experience due to social norms. If they do express their negative emotions and experiences, their online audience shows disapproval by not interacting with the posts. This may make it more difficult for depressed individuals to enjoy SNSs and interacting through SNSs may not be as beneficial. Though SNSs theoretically provide a less auditory and visually judgmental zone for people to express themselves, the social norms that have evolved suggest that only people who are authentically happy can benefit. The social isolation that a person who has depression perceives, not only in their real life but also online, could lead the individual to be more depressed (Leary, 1990).

Despite being punished for posting depressed statuses on Facebook, posting such statuses occurs frequently. Moreno and colleagues (2011) evaluated public Facebook profiles and found that users who displayed depression symptoms in their statuses had posted about 3.2 days before

the research team examined all of the profiles included in the study, whereas participants who did not display depression symptoms in status updates had posted about 6.9 days prior to evaluation. This may be a result of violating one of Facebook's social norms: when a person does not receive responses to a status that contains depressed content they may post more, similar statuses to receive a response and potential support. Moreno and colleagues (2012) found a correlation between status updates that matched the DSM-IV's symptoms for a major depressive episode and the individual experiencing a major depressive episode in real life. Similarly, people who had lower self-esteem were more likely to post statuses that expressed sadness, anger, frustration, anxiety, fear, and irritability than those who had higher self-esteem (Forest & Wood, 2012).

This begs the question: at what point do the friends in a depressed person's social network attend to the person posting depressed statuses? People who normally post positive statuses in line with social norms but then suddenly start posting negative statuses, may be met with concern and worry from their Facebook friend network (Forest & Wood, 2012). Unfortunately, this may not be the same for people who post consistently depressed statuses. Because users may tend to already have a negative opinion of the person who consistently posts negative statuses due to violations of social norms related to positivity and avoiding public intimacies, people who are depressed are likely to be generally ignored and considered annoying to their friend network. This is only compounded by society's general inhibition with interacting with people who are depressed. A person who posts consistently depressed statuses eventually may disappear from a user's timeline altogether because of Facebook's algorithms to post the most intriguing, popular content on a user's page.

Gender

As mentioned earlier, there is a difference in the way that viewers perceive men and women who post depressed content. Swami (2012) had participants view case vignettes of a depressed male or female. Participants recognized that the people in the vignette had a mental illness, however, participants identified this in the female condition more often than they did the male condition. In line with these results, participants also believed that the female would be more difficult to treat than the male would. These gender differences may have implications regarding how users interact with their Facebook friends who post depressed statuses. Men who post depressed statuses may receive less interaction from their overall friend network than women who post similar statuses because their friend network is less likely to recognize their depression as a mental illness. The friend network may view men's emotional postings as uncomfortable violations of traditional gender norms.

Thus, the gender of the person posting positive or negative status updates may influence the reactions of friends. Additionally, the gender of the person reading the profile needs to be considered. For example, past research indicates that there are gender differences in empathy (Joiner et al., 2016; Mestre, Sampler, Frias, & Tur, 2009) which may influence reactions to depressed individuals. In a study of adolescents, women tended to be more empathetic and better able to understand another person's situation (Mestre et al., 2009). Women also tend to show higher levels of emotional support towards other females in an online setting than men tend to show to other males (Joiner et al., 2016). Finally, Cleveland, Baumann, Zaske, Janner, Icks, and Gaebel (2013) reported that men tended to be less knowledgeable about the causes of depression and that less knowledge was related to increased social distance and more negative attitudes towards the depressed person. Overall, females may react more to people who post depressed statuses online because of women's tendency to have higher levels of empathy.

Understanding depression and being able to empathize with people may lead females to interact with people who post depressed statuses more often than males do. Simply put, female profiles may receive more reactions than male profiles.

Facebook Suicide Policy

Because a person's depressed statuses may disappear from view due to Facebook's algorithms, does Facebook have methods in place to counteract their own site and help people who need it? In 2011 Facebook created an option for users to report concerning content; this option could be accessed through Facebook's help page. The site first directed the friend of the poster to contact law enforcement or a suicide hotline. The feature then asked for the name of the person who posted the content, a link to the person's profile, and required the user who was reporting the friend to provide the content that they wanted investigated. The friend could provide the content by clicking the time stamp marking when the post was uploaded, copying the URL, and pasting it into the reporting window. There was also an option for the reporter to take a screenshot of the distressing update and upload it to the reporting window ("Report," 2015). While data on how successful this feature is unavailable, clicking back and forth between windows is inefficient and near impossible if the reporter was using Facebook's mobile app. In a situation where time is critical, this would have been very inefficient and problematic.

In February of 2015 Facebook updated this process (Kleinman, 2015). Instead of toggling through screens to report suicidal content, a user now simply clicks on the arrow on the top right of a post and clicks "Report Post." The user must identify that "I think it shouldn't be on Facebook," and then select "It's threatening, violent or suicidal" when asked what is wrong with the post. Other options in this menu include "It's rude, vulgar or uses bad language," "It's sexually explicit," "It's harassment or hate speech," or "Something else." The user then must

“Help [Facebook] Understand What’s Happening” by selecting the form of threat, violence, or self-harm from a list that includes “Credible threat of violence,” “Self-injury or suicide,” “Graphic violence,” “Threat or vandalism,” or “Drug use.” The user will be given options to contact the original poster, contact another friend for support, or to contact a crisis hotline (Kleinman, 2015). After the initial reporting, Facebook will investigate the post. In the event that Facebook deems the post worthy of an intervention, the original poster will see pop ups concerning their post the next time they log in. These pop ups assure the user that their response to the pop ups will be private and then proceeds to take the user through a series of options about getting support and talking to someone such as another friend or a helpline worker. Depending on the individual’s choices they may see suggestions on finding “local self-care experts” and learning “how to deal with suicidal thoughts.” This timely option was made available to 50% of profiles in the United States in February of 2015 and was promised to soon be available to all users. Whereas the old process is still operational, the new process is a faster, more time-sensitive form of reporting concerning content. It is important to note, however, the other options that are available when reporting suicidal content. In order to access the option of reporting the suicidal post a user must acknowledge that the post does not belong on Facebook – essentially the user has to admit that the suicidal post does not follow the positivity norm. It remains to be seen if users will utilize the new process; are users willing to report their friends to a website in addition to – or perhaps instead of – contacting the friend themselves?

Present Study

The online world is expanding rapidly and there is an obvious need to recognize how online behaviors, especially those concerning people who post statuses that are not in line with online norms, can affect offline behavior such as responses by others or suggestions for

interventions. The present study looks at dissociative imagination – if and how people integrate their online and offline worlds, in this case Facebook, with regard to contacting and helping people who post suicidal content. It also examines knowledge of Facebook’s newest suicide reporting process. The study was set up to mimic how participants would view and interact with Facebook profiles. The participants first saw a male or female profile that followed typical SNS/Facebook norms: it was generally positive and the person posted five positive, happy status updates. The participant then saw a second profile (matching the gender of the first profile viewed) that did not follow the positivity norms but followed the authenticity norms. The secondary profile was either a person who posted five negative statuses that mirrored symptoms of Major Depressive Disorder as described by the Diagnostic Statistical Manual-5 (American Psychiatric Association, 2013) or a person who posted three positive statuses followed by two negative statuses. Participants were asked to identify how they would interact with the people in each of the profiles they viewed as well as how they would report suicidal content to Facebook. The gender of the profiles each participant saw were matched. Only females were allowed to participate because sample size was limited and participant gender effects could not be examined.

The following hypotheses were proposed:

1. It is predicted that the way that participants view and respond to the individuals depicted in the positive and negative profiles will differ in the following ways.
 - a. Participants will have a more positive opinion of the individuals who post positive updates than of the individuals who post negative updates.
 - b. Participants will have more online responses (e.g., like, comment, post on the individual’s wall, start an online chat with the individual, or message the person

when they are offline) to the individuals depicted in the positive profiles as compared to the individuals depicted in the negative profiles.

- c. Participants will have more offline responses (e.g., texting, calling, or starting a face-to-face conversation with the person after viewing the profile) to the individuals depicted in the positive profiles as compared to the individuals depicted in the negative profiles.
2. It is predicted that the way participants view and respond to the individuals depicted in the mixed and depressed profiles will differ in the following ways.
 - a. Participants will have a more positive opinion of the individuals depicted in the mixed profiles than of the individuals depicted in the depressed profiles.
 - b. Participants will have more online responses to the individuals depicted in the mixed profiles than the depressed profiles.
 - c. Participants will have more offline responses to the individuals depicted in the mixed profiles than the depressed profiles.
 - d. Participants will suggest more helping behaviors towards the individuals depicted in the mixed profiles than in the depressed profiles.
 - e. Participants will suggest more serious helping behaviors for the individuals depicted in the mixed profiles than in the depressed profiles.
 3. It is predicted that the way participants view and respond to the individuals depicted in the negative profiles will differ based on the gender of the individual depicted in the profile in the following ways.
 - a. Participants will have a more positive opinion of the individuals depicted in the negative female profiles than the negative male profiles.

- b. Participants will have more online responses to the individuals depicted in the negative female profiles than the negative male profiles.
 - c. Participants will have more offline responses to the individuals depicted in the negative female profiles than the negative male profiles.
 - d. Participants will suggest more helping behaviors towards the individuals depicted in the negative female profiles than the negative male profiles.
 - e. Participants will suggest more serious helping behaviors for the individuals depicted in the negative female profiles than in the negative male profiles.
4. Stigma will be related to response to individuals in the depressed profiles such that higher stigma scores will be related to a less positive opinion of the individual depicted in the profile, lower likelihood of online and offline response to the individual depicted in the profile, as well as lower likelihood to help the individual depicted in the profile.
5. Participants will not know how to report depressed or suicidal content to Facebook utilizing Facebook's updated suicide policy.
6. Exploratory analyses will also be conducted to see if the way people use social networking sites in their daily lives influences the way that they interact and connect with the individuals depicted in the profiles. Correlations between emotional connectivity, integration of SNSs into everyday life, and how meaningful people believe that their Facebook relationships with the key response variables (i.e., opinion, online response, offline response, and helping) will be examined. Finally, the response of individuals who have and have not had personal experience with psychopathology (e.g., knowing a friend or family member who had a form of psychopathology) will be compared to the people depicted in the mixed and depressed profiles.

CHAPTER II

Methods

Participants

Participants were 102 female undergraduate students at the University of Michigan-Dearborn who were recruited using the introductory psychology subject pool. A short description of the study, as well as eligibility criteria, was provided to students in SONA (the online system that is used to manage subject pool participation). Students were eligible to participate in the online study if they were at least 18 years of age, female, and had an account with Facebook. Ninety-seven participants were included in data analysis: four participants were excluded from analysis because they filled out less than 20% of the survey and one was excluded for not having a Facebook account. Of these participants 10.3% ($n = 10$) identified as African America/Black, 20.6% ($n = 20$) identified as Arab or Middle Eastern, 7.2% ($n = 7$) identified as Asian or Pacific Islander, 48.5% ($n = 47$) identified as Caucasian/White, 7.2% ($n = 7$) identified as Hispanic, and 6.2% ($n = 6$) identified as a different ethnicity. The participants' average age was 20.94 ($SD = 4.82$).

Measures

Participant Demographics. Participants filled out a brief questionnaire about their background information. They were asked to provide their age, ethnicity, and the gender they identify with. The final question in this section asked “Do your family or friends have mental health issues (like depression, anxiety, hyperactivity or aggression)?” (Moses, 2014).

Participants responded with either *yes*, *no*, or *unsure*.

Social Networking Demographics. Participants were asked about their interactions with SNSs with the main focus being on Facebook. Participants were first asked to select all of the social networking sites that they were actively a member of given the following choices: Facebook, Foursquare, Google+, Instagram, LinkedIn, MySpace, Pinterest, Reddit, Snapchat, Tumblr, Twitter, Vine, Yik Yak, and YouTube. If participants actively used a SNS that was not on the provided list, they were asked to select “other” and write in the alternative site(s) that they used. Participants were next asked to identify which of the SNSs that they selected they used the most. Participants were asked to identify how many Facebook friends they personally had on their profile (and were reminded of the option of opening up a new window or checking another device to give the most accurate answer). Participants were then asked the average number of times they log into Facebook (more than 10 times per day, 5-9 times per day, 2-4 times per day, 1 time per day, once every few days, once a week, once a month, once every 2-3 months) and the average amount of time that they spend on Facebook (1-9 minutes, 10-29 minutes, 30-59 minutes, 1 hour, 2 hours, 3 hours, 4 hours, 5 or more hours). Participants were asked to rate various aspects of their Facebook behavior on a 5-point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*), including how likely they were to: like a Facebook friend’s status update, comment on a Facebook friend’s status update, update their own Facebook status, write a post on a friend’s Facebook wall, start a chat via Facebook with a friend who is online, and send a message via Facebook to a friend who is not currently online. Finally, participants asked to identify the device that they use most often to log onto Facebook: a laptop computer, a desktop computer, a smart phone, a tablet, or another device.

Social Media Use Integration Scale. The Social Media Use Integration Scale (SMUIS) was developed specifically to examine emerging adult engagement on Facebook (Jenkins-

Guarnieri, Wright, & Johnson, 2013). The scale consists of ten questions that measure the emotional connectivity and daily integration a person has with Facebook. The overall score can be separated into two subscales: social integration and emotional connection (6 questions) and integration into social routines (4 questions). Questions on the social integration and emotional connection scale include “I feel disconnected from friends when I have not logged into Facebook” and “Facebook plays an important role in my social relationships.” Questions on the integration into social routines include “I respond to content that others share using Facebook” and “I enjoy checking my Facebook account.” Participants answered each question on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Greater scores on this scale indicate more emotionally engaged and integrated use of Facebook. The measure has demonstrated good reliability for the total scale ($\alpha = .91$), as well as the two sub-scales: social integration and emotional connection ($\alpha = .89$) and integration into social routines ($\alpha = .83$; Jenkins-Guarnieri et al., 2013). In the present study the measures demonstrated adequate reliability (total scale: $\alpha = .86$; social integration and emotional connection scale: $\alpha = .84$; integration into social routines: $\alpha = .73$).

Attitudes to and Stereotypes of Mental Health Measure. The Attitudes to and Stereotypes of Mental Health Measure (ASMHM) quantifies the stigma that people have towards people with depression (Aromaa, Tolvanen, Tuulari, & Wahlbeck, 2011). The measure consists of sixteen statements that are measured on a 5-point Likert scale that varies from 1 (*strongly disagree*) to 5 (*strongly agree*). The overall scale assesses the person’s perceived public stigma and stereotype awareness of depression (3 items) as well as the person’s individual stigma and stereotypes of people with depression (13 items). Questions for the public stigma scale include “If the employer finds out that the employee is suffering from mental illness, the employment

will be in jeopardy” and “If one tells about his/her mental problems, all friends will leave him/her.” The individual stigma scale includes questions such as “Depression can be considered as a shameful and stigmatizing disease” and “People with depression have caused their problems themselves.” In this study the measures had sufficient reliability (total scale $\alpha = .75$, perceived public stigma scale $\alpha = .65$, and the individual stigma and stereotypes scale $\alpha = .67$).

Questionnaire to Follow Consistently Positive Facebook Profile. This questionnaire was developed for the present study. After viewing the Consistently Positive Profile (Matt or Jessica Roberts), the participants were asked to answer a series of questions about the Consistently Positive Profile and the person that it depicted. The Consistently Positive Profile follows Facebook’s norms of positivity and authenticity.

Overall Opinion of Profile. The first question asked participants what their overall opinion of Matt/Jessica Roberts was based on their profile. For this question the participant changed a neutral smiley face to varying degrees of a smiling or frowning face to indicate their answer. The smiling face had 5 points of frowning or smiling, so a frown was scored as a 1, slightly frowning was scored as a 2, a straight line was scored as a 3, a slight smile was scored as a 4, and a smile was scored as a 5. The participant was then asked to select all of the aspects of the profile they viewed that contributed to this opinion (status updates, profile picture, cover photo, and “likes”).

Response to Profile. The participant was asked to indicate on a 5-point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*) the likelihood that they would do each of the following: like one or more of Matt/Jessica’s status updates, comment on one or more of Matt/Jessica’s status updates, write a post on Matt/Jessica’s Facebook profile, start an online chat with

Matt/Jessica, send a private message to Matt/Jessica, unfollow Matt/Jessica's posts, and unfriend Matt/Jessica.

To assess authenticity, the participants selected the extent to which they believed that the posts reflected what was happening in Matt/Jessica's life. This was measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*). The participants were next asked the extent to which they believed that Matt/Jessica was happy on a 5 point Likert-type scale from 1 (*very unhappy*) to 5 (*very happy*). Next, the participants were asked to indicate on a 5-point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*) how likely they were to text, call, or start a face-to-face conversation with Matt/Jessica as soon as possible after viewing Matt/Jessica's profile.

Questionnaires to Follow Depressed Facebook Profile. This questionnaire was also created for this study. Participants were randomly assigned to view one of two Facebook profiles that contained depressive content. The gender of the second profile matched the gender of the first profile that the participant saw. Half of the participants saw a profile where the person (Kayla/Josh Johnson) initially posted three statuses that followed the positivity and authenticity norms but then posted two more recent statuses that were negative and therefore did not follow the positivity norm (Positive Then Depressed Facebook Profile, also referred to as the mixed profile). The remaining participants saw a profile where the person (Rachel/William Jones) has consistently depressed status updates that violate the positivity norms (Depressed Facebook Profile). The questionnaire to assess participants' responses to the profile containing depressed status updates began identically to the one described above for the positive profile: participants were asked their opinion of the person's profile; what contributed to that opinion; how likely they were to like a status update, comment on a status update, write a post on the

person's wall, send a private message to the person if they were offline, unfollow the person's posts, and unfriend the person indicated the extent to which they believed that the posts reflected what was happening in the person's life and if the person was happy; and were asked the likelihood that they would text, call, or start a face-to-face conversation with the person as soon as possible. At this point participants were told to assume the person lives in their town and asked to indicate the likelihood on a 5-point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*) that they would do each of the following: "take the person to the emergency room/hospital," "Take the person to a primary care physician," "Go to and stay with person," "Take the person to a religious official," "Call one of the person's family members," "Call one of the person's friends," "Suggest that the person calls a crisis hotline," "Call a crisis hotline for the person," "Call 911," "Report to Facebook," "Take to a psychology outpatient care center," and "Not contact in any way." The participants were also asked to indicate the extent that they believed that the person is suicidal, on a 5 point Likert-type scale from 1 (*not at all suicidal*) to 5 (*very suicidal*).

Facebook Suicide Policy Questionnaire. This questionnaire was created for use in this study. This questionnaire asks participants about their experience with Facebook's suicide policy. Participants were first asked if they were aware of Facebook's suicide policy by responding yes or no. If yes, they were asked to validate their response by explaining in an open text box how to activate this feature and, once activated, what this feature does. The descriptive response was used as a verification tool to identify the way in which a person knew how to report suicidal content to Facebook.

Facebook Relationships. The final item asked how meaningful the participant finds Facebook relationships. This was evaluated on a 5-point Likert-type scale from 1 (*not at all*

meaningful) to 5 (*extremely meaningful*). This question was used in exploratory analyses to assess how people who believe that Facebook relationships are meaningful or are not meaningful react to statuses that violate Facebook norms.

Materials

Facebook Profiles. Six Facebook profiles were created (sample profiles are provided in Appendix A). The first two profiles represented the Positive Facebook Profile (either Matt or Jessica Roberts). Half of participants received Matt's profile to evaluate; the other half received Jessica's profile to evaluate. These profiles were identical in all ways except for gender (exemplified in their name and profile picture). The second set of profiles represented the Positive Then Depressed Facebook Profile (either Josh or Kayla Johnson). Finally, the third set of profiles represented the Depressed Facebook Profile (either William or Rachel Jones). Each profile depicted a 19-year-old who was born in Dearborn, MI, attended the University of Michigan-Dearborn, and had 334 friends. In addition to personal information each profile identified generic information that they "liked." In order to understand patterns of "likes," 100 randomly selected public Facebook profiles were analyzed. Each profile's "likes" were recorded. The final Facebook profiles for the study included popular "likes" in each of the following areas: sports, music, films, TV programs, books, and "likes."

The profile photos for each of the six profiles were selected from the Glasgow Unfamiliar Face Database (York, 2016). Thirty photographs of neutral, Caucasian faces (15 male and 15 female) were selected and pilot tested in an advanced psychology classes. Each photo was scored for attractiveness, intelligence, friendliness, happiness, sadness, depression, excitement, and likelihood to want to be friends with the individual, each on a 5-point Likert-type scale from 1 (*not at all*) to 5 (*very much*). The three male photos and three female photos that were rated as

neutral in the most categories were selected to be the profile photos. These photos were randomly assigned to each of the conditions. The cover photo for each person's profile was a neutral scene from nature: the Positive Facebook Profile had a beach scene and both the Positive Then Depressed Facebook Profiles as well as the Depressed Facebook Profiles had a forest scene. The cover photo was posted as an update after the person's second status update. No other photos were uploaded to the profiles and the option to view additional photos that is typically shown on the left side of a Facebook profile was hidden.

Each profile included five status updates; all of the status updates can be seen in Table 1. Each status for each profile was posted within a few days of each other at different times of the day in order to add to the authenticity of a user posting status updates over time. None of the statuses had any "likes" or comments from "other users."

Table 1

Profile Status Updates

Profile	Status 1	Status 2	Status 3	Status 4	Status 5)
Positive Facebook Profile (Jessica/Matt Roberts)	After a long day of work it's so nice to be able to come home and just relax.	It's almost unhealthy the amount of love I have for ice cream. Scratch that, it's straight up unhealthy.	TIGERS WIIIIIIIN! Great day at the park!	3 days until classes start... Where the hell did my summer go?	FINALLY was able to watch the season finale of How I Met Your Mother. I thought it was great but...that ending? Seriously?
Positive Then Depressed Facebook Profile (Kayla/Josh Johnson)	I can't take it anymore. There's no point to anything.	I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.	Make sure you donate to the dance marathon! Help me dance all night long and support such a worthy cause!	Beach day!! I had so much fun soaking up the sun and listening to the water.	Nothing better than spending time with my family #familybonding #Johnsonfamilyreunion.
Depressed Facebook Profile (Rachel/William Jones)	I can't take it anymore. There's no point to anything.	I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.	I just feel so alone. No one cares about me anymore.	Can't sleep. Again. #cantsleep.	I don't want to go to class, I don't want to do homework. I don't want to work out. Everything sucks.

Note. In line with Facebook's Timeline format for profiles, the participants saw the more recent statuses first and scrolled down the profile to see older statuses. In this way Status 1 was the most recent status update and Status 5 was the oldest update.

Each of the profiles were created on Facebook. A screenshot was saved and added to the Qualtrics survey to replicate what a Facebook user would see when they visited a friend's Facebook profile. To add to the authenticity and to diminish the look of a new profile, each profile was altered to make the profile look like it had been in existence since 2010. The alternations included extending the timeline on the right hand side of the profile to say "Recent-2015-2014-2013-2012-2011-2010," adding an amount of friends to the "friends" button towards the top of the profile, adding a number of uploaded pictures, and using the average number of sports, music, films, TV programs, books, and "likes" as observed from the 100 public profiles examined previously. Finally, the "Add as Friend" button was replaced with "Friends" to make it seem like the participant was viewing a friend's profile instead of a stranger's profile. The final screenshots of each profile were uploaded to Qualtrics. In this way the participants were able to scroll down and experience a public Facebook profile as they would on Facebook's website but were not able to click on any hyperlinks.

Procedure

Participants first logged in to SONA and clicked on the study to indicate their interest in participating. They were directed to a Qualtrics, an online survey website that is utilized by the University of Michigan, link that took them to the Experimental Subject Pool Participation consent form. After reading the informed consent document that reminded them that they were eligible to participate in the study if they were at least 18 years old, were female, and had an account with Facebook, that they could terminate the study at any time and still receive .5 SONA credits, participants signed their first and last name as their electronic signature. The participants first completed the Social Networking Demographics form, the Social Media Use Integration Scale, the Attitudes to and Stereotypes of Mental Health Measure, and the Participant

Demographics form. The participant then viewed the Positive Facebook Profile. This profile was randomly selected by Qualtrics to be the male or female version; this profile gender was then used for the Positive Then Depressed Facebook Profile or the Depressed Facebook Profile. After viewing the Positive Facebook Profile, the participant filled out the Questionnaire to Follow Consistently Positive Facebook Page. The participant was then randomly assigned by Qualtrics to view either the Positive Then Depressed Facebook Profile or the Depressed Facebook Profile. After viewing this second profile, the participant filled out the Questionnaire to Follow Depressed Facebook Profile. Next, the participant filled out the Facebook Suicide Policy Questionnaire and, finally, the Facebook Relationships item. The participants then read the debriefing statement which included various resources for obtaining help with psychopathology and suicide.

CHAPTER III

Results

The data was exported from Qualtrics to SPSS, cleaned, and basic descriptive statistics were computed. There was minimal missing data and none of the primary variables were significantly skewed.

Social Networking Demographics

Participants reported that Facebook was the most used SNS (25.77%). A full description of SNSs that participants were members of and used the most can be seen in Table 2.

Table 2

Frequency of Social Networking Site Membership and Usage

SNS	Member of SNS	Most used SNS (percentage)
Facebook	97	25.77
Foursquare	0	0
Google+	26	0
Instagram	67	20.62
LinkedIn	9	0
MySpace	3	0
Pinterest	61	4.12
Reddit	3	3.09
Snapchat	69	22.68
Tumblr	35	3.09
Twitter	55	13.40
Vine	20	0
YikYak	8	0
YouTube	61	5.15
Other	4	1.03

Note. With regard to the “Other” category, three participants were a member of Kik and one was a member of GroupMe.

The majority of the participants (76.29%) accessed Facebook via their smartphones.

Participants logged in to Facebook about one to two times a day ($M = 3.66$; $SD = 1.93$ where 3

indicated that the participant logged onto Facebook two to four times per day and a response of 4 indicated that they logged on once per day). Participants reported an average login time of less than ten minutes ($M = 1.86$; $SD = 1.06$ where a response of 1 represented spending 1-9 minutes online and 2 represented 10-29 minutes online). The average number of Facebook friends a participant had was between 300 and 400 ($M = 6.60$; $SD = 3.61$ where a response of 6 indicated that a participant had anywhere between 300-399 friends and a response of 7 indicated that a participant had anywhere between 400-499 friends).

Participants indicated that they were more likely to interact with their friend network via “liking” a friend’s status while using the site than interact with their friends through commenting on their status, posting on a friend’s wall, chatting with a friend while they were online, messaging a friend who was offline, or updating their own status to communicate with other users. A complete breakdown of how likely participants were to use each form of communication is included in Table 3.

Table 3
Participant Likelihood to Interact with Network for General Facebook Use

Likelihood to use form of SNS Interaction	Mean	Standard Deviation	Range
“Like” friend’s status	3.56	1.30	4
Comment on friend’s status	2.72	1.19	4
Update own status	2.30	1.21	4
Post on friend’s wall	2.60	1.28	4
Start chat with online friend	2.63	1.44	4
Start message offline friend	2.43	1.25	4

Note. Participants indicated the likelihood to interact with their friend network on a 5 point Likert-type scale where from 1 (*very unlikely*) to 5 (*very likely*).

Profile Manipulations

All participants viewed a positive profile followed by a negative profile (half received a mixed profile, the other half received a depressed profile). The effectiveness of this manipulation was determined by a question that asked participants to rate the happiness of the

individual depicted in the profile. A repeated measures t-test showed that participants indicated that individuals depicted in the positive profiles ($M = 3.79$, $SD = .68$) were happier than the individuals portrayed in the negative profiles ($M = 1.77$, $SD = .75$), $t(95) = 20.82$, $p < .05$. An ANOVA showed that participants considered the individuals depicted in the mixed profile (the positive then depressed posts; $M = 2.23$, $SD = .69$) to be significantly happier than the individuals portrayed in the depressed profile ($M = 1.35$, $SD = .07$), $F(1,93) = 49.62$, $p < .05$.

Participants also rated their belief that the people portrayed in the mixed and depressed profiles were suicidal. An ANOVA found that there were not any significant differences between the belief that the people in the mixed ($M = 2.52$; $SD = .77$) and depressed profiles ($M = 2.71$; $SD = 1.06$) were suicidal, $F(1,93) = 1.04$, $p > .05$. These scores suggest that on average participants believed that the individual depicted in the negative profile was a little to somewhat suicidal.

Online, Offline, and Helping Scales.

Although multivariate analysis of variance (MANOVA) was used for the primary tests of hypotheses regarding online and offline responses, scales for Overall Online Response and Overall Offline Response were developed for the exploratory analyses described in Hypothesis 6. Two scales, Overall Helping Response and Serious Helping Response were also created for both the primary tests of hypotheses as well as the exploratory analyses.

Overall Online Response. The four types of online responding (i.e., liking, commenting, writing a wall post, starting an online chat, and starting an offline chat) were averaged to create an overall online response scale where higher scores indicate a greater likelihood of responding using Facebook's interaction tools. Thus, participants had separate overall online response scale scores for the positive profile (whether male or female) and negative profile (whether mixed or

depressed, male or female). The overall online response scale for the positive profile had good reliability ($\alpha = .84$). The overall online response scale for the negative profile also had good reliability ($\alpha = .87$).

Overall Offline Response. The three types of online responding (i.e., texting, calling, or starting a face-to-face conversation with the person depicted in the profile) were averaged to create an overall offline response scale where higher scores indicate a greater likelihood of responding to the person depicted in the profile in the real, offline world. Thus, participants had separate overall offline response scale scores for the positive profile (whether male or female) and negative profile (whether mixed or depressed, male or female). The overall offline response scale for the positive profile had good reliability ($\alpha = .82$). The overall offline response scale for the negative profile had good reliability as well ($\alpha = .91$).

Overall Helping Response. All participants viewed one of the negative profiles, either the female or male, mixed or depressed profile, and answered questions about the likelihood they would engage in various acts of helping. The eleven types of helping (i.e. take the person to the emergency room/hospital, take the person to a primary care physician, go and stay with the person, take the person to a religious official, call on of the person's family members, call one of the person's friends, suggest that the person call a crisis hotline, call a crisis hotline for the person, call 911, report the person to Facebook, or take the person to an outpatient care center) were averaged to create an Overall Helping Response that ranges from 1 (*very unlikely*) to 5 (*very likely*); thus higher scores indicate a greater likelihood of helping the individual portrayed in the negative profile. There was good reliability for this scale ($\alpha = .91$).

Serious Helping Response. As above, all participants viewed one of the negative profiles - either the female or male, mixed or depressed - and answered questions about the

likelihood they would engage in various acts of helping. The Serious Helping scale consisted only of those helping behaviors that would lead to the individual to a form of treatment: taking the individual to the ER, to see their primary care physician, or taking them to a psychology outpatient clinic. These scores were averaged together to create the Serious Helping Response scale where scores could range from 1 (*very unlikely*) to 5 (*very likely*). There was also good reliability for this scale ($\alpha = .90$).

Response to Individual Portrayed in Positive and Negative Profiles

The first hypothesis examined differences between the way participants responded to the individuals depicted in the positive and negative profiles. Recall that all participants first saw a positive profile that featured statuses that align with Facebook's positivity norms. Then all participants saw a negative profile, either the mixed condition (positive status updates followed by negative) or the depressed condition (all negative status updates) which did not follow the positivity norm. For the purpose of the analyses that compare responses to positive and negative profiles, the mixed and depressed group were combined to create the negative profile for comparison.

Opinion. Hypothesis 1a postulated that participants would have a more positive opinion of the individuals who posted positive status updates than those individuals who posted negative status updates. A repeated measures t-test was conducted to examine this hypothesis. Participants had significantly more positive opinions of the individuals depicted in the positive profiles ($M = 4.00$; $SD = 0.81$) than they did of the individuals depicted in the negative profiles ($M = 2.21$; $SD = 1.14$), $t(74) = 12.66$, $p < .05$.

Online Response. Hypothesis 1b stated that participants would have more online responses to the individuals depicted in the positive profiles as compared to those depicted in the

negative profiles. An online response included the participants' likelihood to like a status posted by the individual depicted in the profile, comment on a status, post on the individual's wall, start an online chat with the person, or message the individual depicted in the profile when they were offline. A repeated measures Multivariate Analysis of Variance (MANOVA) was completed with the type of profile, either positive or negative, as the repeated measure and the online response items as the dependent variables. The multivariate test for profile type was significant, $F(5,89) = 19.16, p < .001$. Follow-up ANOVAs were conducted for individual online responses. Table 4 presents the means and standard deviations for each form of online response to the positive and negative profiles. There was a significant difference in the likelihood to like a status in that the participants were more likely to like a status posted by the individual in the positive condition than like a status posted by an individual in the negative condition, $F(1,93) = 644.28, p < .001$. There was also a significant difference between the participants' likelihood to message the individual depicted in the positive profile as compared to the individual depicted in the negative condition, $F(1,93) = 12.18, p < .05$. There was a marginally significant difference for likelihood to chat with the individual depicted in the profiles in that participants were more likely to start a chat with a person portrayed in the negative condition than they were likely to start a chat with a person portrayed in the positive condition, $F(1,93) = 3.28, p = .07$. There were not any significant differences for the participants' likelihood to comment on a status or post on the wall of the individual portrayed in the positive and negative conditions.

Table 4
Means and Standard Deviations of Overall Online Reactions to Individuals Depicted in the Profiles

Response to Profile	Positive (<i>n</i> = 97)	Negative (<i>n</i> = 97)
Like Status	3.30 (1.17)	2.28 (1.21)
Comment on Status	2.65 (1.04)	2.75 (1.29)
Post on Wall	2.28 (0.99)	2.29 (1.17)
Online Chat	2.39 (1.11)	2.65 (1.33)
Offline Message	2.25 (1.05)	2.80 (1.41)

Note. All online responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Offline Response. Hypothesis 1c stated that participants would have more offline responses to the individuals depicted in the positive profiles as compared to the individuals depicted in the negative profiles. An offline response includes texting, calling, or starting a face-to-face conversation with the individual depicted in the profile immediately after viewing the profile. A repeated measures MANOVA was conducted where the type of profile, either positive or negative, was the repeated measure and the offline responses were the dependent variables. Results from the multivariate analyses showed that there was a significant difference in likelihood of offline responding to the positive and negative profiles, $F(3, 94) = 5.68, p < .05$. Follow-up univariate tests revealed significant differences between the positive and negative conditions for each type of offline response (see Table 5 for means and standard deviations). Participants were significantly more likely to text the individual depicted in the negative profile than they were to text the individual depicted in the positive profile, $F(1,96) = 14.78, p < .001$. Participants were also significantly more likely to call the person depicted in the negative profile than call the person depicted in the positive profile, $F(1,96) = 11.97, p < .05$. Finally, participants were significantly more likely to start a face-to-face conversation with the person

depicted in the negative profile than they were to start a face-to-face conversation with the person depicted in the positive profile, $F(1,96) = 12.84, p < .05$.

Table 5

Means and Standard Deviations of Offline Response for Negative Profiles

Offline Response	Positive ($n = 97$)	Negative ($n = 97$)
Text	2.63 (1.13)	3.18 (1.41)
Call	2.15 (0.89)	2.61 (1.36)
Face-to-face Conversation	2.33 (1.09)	2.81 (1.39)

Note. Responses were scored from 1 (*very unlikely*) to 5 (*very likely*).

Response to the Individuals Portrayed in the Mixed and Depressed Profiles

The second hypothesis examined the differences between the way participants responded to the individuals depicted in the mixed condition, where the person initially posted three positive statuses and then posted two depressed statuses, and the depressed condition, where the individual posted five depressed statuses. In order to assess hypothesis 2 as well as hypothesis 3 and a series of factorial ANOVAs and MANOVAs were conducted.

Opinion. Hypothesis 2a stated that participants would have a more positive opinion of those individuals depicted in the mixed profiles than of the individuals depicted in the depressed profiles. A 2 X 2 ANOVA was used to measure this hypothesis as well as Hypothesis 3a where the gender and profile condition (either mixed or depressed) were the independent variables and the overall opinion of the person in the profile was the dependent variable. Participants had significantly more positive opinions of the persons portrayed in the mixed profiles ($M = 2.79, SD = 1.20$) than those portrayed in the depressed profiles ($M = 1.80, SD = 0.89$), $F(1,75) = 18.13, p < .001$.

Online Response. Hypothesis 2b examined whether participants would have more online responses to the individuals depicted in the mixed profiles than those depicted in the

depressed profiles. To assess this hypothesis, as well as hypothesis 3b, a 2 X 2 MANOVA was conducted where the gender of the profile and the profile condition (either mixed or depressed) were the independent variables and the online response options were the dependent variables. Overall there was a significant difference in participants' online response to individuals in the mixed and depressed conditions, $F(5,88) = 6.53, p < .05$. Follow-up univariate ANOVAs considered differences in the level of each type of response; means and standard deviations for each response can be seen in Table 6. Participants were significantly more likely to like the statuses posted by a person in the mixed condition than they were to like a status posted by the individual depicted in the depressed condition, $F(1,92) = 17.63, p < .05$. However, there was not a significant difference in response to the individuals depicted in the mixed and depressed profiles for the likelihood to comment on a status, $F(1,92) = .21, p > .05$. There was not a significant difference between the individuals depicted in the mixed and the depressed conditions with regard to the likelihood to post on the individual's wall, $F(1,92) = .19, p > .05$. There was also not a significant difference between the individuals portrayed in the mixed and depressed conditions regarding the likelihood to start an online chat with the individual, $F(1,92) = .05, p > .05$. Finally, there was not a significant difference between the response to the individual depicted in the mixed or depressed condition in likelihood to message the individual while they were offline $F(1,92) = 1.52, p > .05$.

Table 6

Means and Standard Deviations of Overall Online Responses to Individuals Depicted in the Negative Profiles

Response to Profile	Mixed ($n = 48$)	Depressed ($n = 48$)
Like Status	2.77 (1.28)	1.81 (0.91)
Comment on Status	2.83 (1.24)	2.71 (1.34)
Post on Wall	2.25 (1.12)	2.35 (1.23)
Online Chat	2.65 (1.31)	2.69 (1.36)
Offline Message	2.65 (1.31)	3.00 (1.46)

Note. All online responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Offline Response. Hypothesis 2c stated that participants would have more offline responses to the individuals depicted in the mixed profiles than those in the depressed profiles. A 2 X 2 MANOVA was performed with gender of the profile and the profile condition (either mixed or depressed) as the independent variables and the offline response options (texting, calling or starting a face-to-face conversation with the person depicted in the profile) as the dependent variables. Overall, the multivariate analysis showed that there was a marginally significant difference in participants' response to the individuals in the mixed and depressed conditions, $F(3,91) = 2.53, p = .06$. Follow-up univariate ANOVAs considered differences in the level of each type of response; means and standard deviations for each form of response can be seen in Table 7. Participants were significantly more likely to call the person depicted in the mixed condition than call the person in the depressed condition, $F(1,93) = 4.33, p < .05$. However, there was not a significant difference in response to the individuals depicted in the mixed and depressed profiles with regard to the likelihood to text the person after viewing the profile, $F(1,93) = .13, p > .05$. There was also not a significant difference between responding to the individual portrayed in the mixed and depressed profiles by starting a face-to-face conversation with the person, $F(1,93) = 1.33, p > .05$.

Table 7

Means and Standard Deviations of Offline Response for Negative Profiles

Offline Response	Mixed (<i>n</i> = 48)	Depressed (<i>n</i> = 49)
Text	3.23 (1.33)	3.12 (1.51)
Call	2.90 (1.37)	2.33 (1.30)
Face-to-face Conversation	2.98 (1.35)	2.65 (1.42)

Note. All responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Helping. Hypothesis 2d stated that participants would suggest more helping behaviors for those individuals depicted in the mixed profiles than those depicted in the depressed profiles. A 2 X 2 ANOVA was conducted to assess this hypothesis (as well as Hypothesis 3d) with profile type (whether mixed or depressed) and profile gender as the independent variables and the Overall Helping Response Scale was the dependent variable. Overall there was not a significant difference between the level of help offered to people depicted in the mixed profile ($M = 2.50$; $SD = 0.87$) and those depicted in the depressed profile ($M = 2.56$; $SD = 0.87$), $F(1,89) = .12$, $p > .05$.

Although the hypothesis was assessed by comparing the average level of helping offered to individuals in the mixed and depressed conditions, it is also valuable to consider the different types of help that were offered. Means and standard deviations for each type of help separately for the mixed and depressed profiles can be seen in Table 8. Recall that a value of 3 can be interpreted as neither likely nor unlikely to offer that form of help and values below 3 indicate that help is not likely to be offered. An examination of the average likelihood of offering each type of help suggests that participants were not likely to offer any type of help to the individuals portrayed in the negative profile conditions. They were most likely to say that they would call the person's friend and least likely to say that they would report the person to Facebook.

Table 8
Means and Standard Deviations of Helping Response

Form of Helping	Mixed (<i>n</i> = 45)	Depressed (<i>n</i> = 48)
Take to ER	2.27 (1.10)	2.25 (1.16)
Take to Primary Care Physician	2.22 (1.06)	2.46 (1.27)
Go Stay with Person	2.91 (1.22)	2.71 (1.18)
Take to Religious Official	2.07 (1.10)	2.21 (1.09)
Call Person's Family Member	2.91 (1.36)	3.04 (1.25)
Call Person's Friend	3.53 (1.20)	3.33 (1.26)
Suggest Crisis Hotline	2.93 (1.44)	2.98 (1.36)
Call Crisis Hotline	2.44 (1.25)	2.65 (1.25)
Call 911	2.04 (1.11)	2.19 (1.12)
Report to Facebook	1.89 (0.91)	1.90 (1.06)
Take to Outpatient Care Center	2.24 (1.23)	2.44 (1.35)

Note. All responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Serious Helping. Hypothesis 2e stated that participants would suggest more serious forms of helping (i.e. taking the individual to the ER, taking them to see their primary care physician, or taking them to an outpatient psychiatric center) for those individuals depicted in the mixed condition than those depicted in the depressed condition. The Serious Helping Scale combined these three forms of helping behaviors. An ANOVA was run where the gender of the individual depicted in the profile and the type of profile (either mixed or depressed) were the independent variables and the Serious Helping Scale was the dependent variable; the same ANOVA was used to evaluate Hypothesis 3d. This analysis showed that there was not a significant difference between offers of serious help for the persons depicted in the mixed ($M = 2.27$; $SD = 1.02$) or depressed ($M = 2.41$; $SD = 1.15$) profile conditions, $F(1,89) = .12, p > .05$.

Response to the Gender of the Individuals Portrayed in the Negative Profiles

The third hypothesis predicted that participants would be more responsive to females, as compared to males, depicted in the negative profiles.

Opinion. Hypothesis 3a proposed that participants would have a more positive opinion of the individuals depicted in the negative female profiles than those individuals depicted in the negative male profiles. The same 2 X 2 ANOVA used to assess Hypothesis 2a was used to evaluate the differences between these groups where the gender and profile condition (either mixed or depressed) were the independent variables and the overall opinion of the person in the profile was the dependent variable. The means and standard deviations for each gender by profile type can be found in Table 9. There were no significant differences in opinions of the individual depicted in the male profiles and the individuals depicted in the female profiles, $F(1,75) = .21, p > .05$. However, there was a significant interaction between the profile type and profile gender, $F(1,75) = 4.88, p < .05$, in that the participants rated the individuals depicted in the mixed male condition more positively than the males in the depressed profiles or the females in either the mixed or depressed profiles.

Table 9
Means and Standard Deviations of Opinion of Mixed and Depressed Males and Females Depicted in Profiles

Opinion	FEMALE		MALE	
	Mixed (<i>n</i> = 16)	Depressed (<i>n</i> = 22)	Mixed (<i>n</i> = 18)	Depressed (<i>n</i> = 23)
Opinion of Individual	2.38 (1.15)	1.91 (1.06)	3.17 (1.15)	1.70 (0.70)

Note. The participants indicated their opinion of a profile by manipulating a smiley face to frown, slightly frown, have a straight line, slightly smile, or smile. Responses therefore ranged from 1 (*negative opinion*) to 5 (*positive opinion*).

Online Response. Hypothesis 3b stated that participants would have more online response to the individuals depicted in the negative female profiles than those individuals depicted in the negative male profiles. The same 2 X 2 MANOVA from Hypothesis 2b was used: profile gender (male or female) and profile type (mixed or depressed) were the independent variables and liking a status, commenting on a status, posting on the person’s wall, starting an

online chat with the person, or messaging the person offline were the dependent variables. Overall there was not a significant difference in participants' response to the males and females depicted in the negative profiles, $F(5,88) = 0.82, p > .05$. The means and standard deviations for each of the forms of response can be seen in Table 10. The gender by profile type interaction was also not significant, $F(5,88) = .85, p > .05$. However, univariate analyses of this interaction showed that there was a marginally significant difference between the participants' likelihood to start an online chat with the person depicted in the profile in that the participants were more likely to report starting a chat with the person depicted in the depressed female condition than the mixed female, depressed male, or the mixed male, $F(1,92) = 3.88, p = .052$. There was also a marginally significant difference between the participants' likelihood to message the individual depicted in the profile when they were offline in that the participants were more likely to report messaging the person depicted in the depressed female condition than the mixed female, depressed male, or the mixed male, $F(1,92) = 3.12, p = .081$.

Table 10
Means and Standard Deviations of Online Response to the Individuals Depicted in the Negative Profiles

Response to Profile	FEMALE		MALE	
	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 24)	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 25)
Like Status	2.67 (1.24)	1.75 (1.07)	2.88 (1.33)	1.84 (0.75)
Comment on Status	2.63 (1.21)	2.71 (1.43)	3.04 (1.27)	2.64 (1.29)
Post on Wall	2.08 (1.06)	2.29 (1.23)	2.42 (1.18)	2.36 (1.25)
Online Chat	2.50 (1.38)	3.09 (1.47)	2.79 (1.25)	2.32 (1.15)
Offline Message	2.54 (1.38)	3.29 (1.57)	2.79 (1.32)	2.64 (1.32)

Note. All online responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Offline Response. Hypothesis 3c put forth that participants would have more offline response towards the individuals depicted in the negative female profiles than the individuals depicted in the negative male profiles. This was assessed using the 2 X 2 MANOVA from

Hypothesis 2b where profile gender (male or female) and profile type (mixed or depressed) were the independent variables and responding in an offline manner such as texting, calling, or starting a face-to-face conversation with the individual were the dependent variables. There was not an overall significant difference in the participants' tendency to help based on gender of profile, $F(3,91) = .61, p > .05$. The interaction between the gender of the profile and the type of profile was also not significant, $F(3,91) = 1.66, p > .05$. The means and standard deviations of all of the forms of offline response can be seen in Table 11.

Table 11
Means and Standard Deviations of Offline Response for Negative Profiles by Gender of Individual Depicted in Profile

Offline Response	FEMALE		MALE	
	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 24)	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 25)
Text	2.96 (1.30)	3.21 (1.56)	3.50 (1.32)	3.04 (1.49)
Call	2.75 (1.29)	2.50 (1.35)	3.04 (1.46)	2.16 (1.25)
Face-to-face Conversation	2.87 (1.33)	2.58 (1.44)	3.08 (1.38)	2.72 (1.43)

Note. All responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Helping. Hypothesis 3d postulated that the participants would suggest more helping behaviors towards the individuals depicted in the negative female profiles than those in the negative male profiles. This was assessed using the 2 X 2 ANOVA from above with profile type (whether mixed or depressed) and profile gender as the independent variables and the Overall Helping Response Scale as the dependent variable. Overall, there was not a significant difference the level of help offered to the males depicted in the negative profiles and the females depicted in the negative profiles, $F(1,89) = .35, p > .05$. There was also not a significant interaction between the gender of the profile and the type of profile on helping response $F(1,89) = .22, p > .05$. Means and standard deviations for these responses can be seen in Table 12.

Table 12

Means and Standard Deviations of Overall Helping Response Scale for Individuals Depicted in the Negative Profiles

Helping Response	FEMALE		MALE	
	Mixed (<i>n</i> = 22)	Depressed (<i>n</i> = 24)	Mixed (<i>n</i> = 23)	Depressed (<i>n</i> = 24)
Overall Helping Response Scale	2.51 (0.88)	2.66 (0.95)	2.49 (0.87)	2.46 (0.79)

Note. Responses were scored from 1 (*very unlikely*) to 5 (*very likely*).

Although the hypothesis was assessed by comparing the average level of serious helping offered to individuals in the mixed and depressed conditions, it is also valuable to consider the different types of help that were offered. Means and standard deviations for each gender portrayed in the mixed and depressed profiles with regard to helping can be seen in Table 13. Recall that a value of 3 can be interpreted as the participant being neither likely nor unlikely to offer that form of help and values below 3 indicate that help is not likely to be offered. An examination of the average likelihood of offering each type of help suggests that participants were not likely to offer any type of help to the individuals portrayed in the negative profile conditions, regardless of gender. They were most likely to say that they would call the depressed female’s friend or a family member and least likely to say that they would take the mixed female to a religious official.

Table 13
Means and Standard Deviations of Helping Response by Gender of the Negative Profiles

Form of Helping	FEMALE		MALE	
	Mixed (n = 22)	Depressed (n = 24)	Mixed (n = 24)	Depressed (n = 24)
Take to ER	2.64 (1.22)	2.33 (1.27)	1.91 (0.85)	2.17 (1.05)
Take to Primary Care Physician	2.45 (1.14)	2.62 (1.38)	2.00 (0.95)	2.29 (1.16)
Go Stay with Person	2.82 (1.30)	2.83 (1.23)	3.00 (1.17)	2.58 (1.25)
Take to Religious Official	1.82 (0.91)	2.21 (1.22)	2.30 (1.22)	2.21 (0.98)
Call Person's Family Member	3.45 (1.14)	3.62 (1.28)	3.61 (1.27)	3.04 (1.20)
Call Person's Friend	3.45 (1.14)	3.62 (1.28)	3.61 (1.27)	3.04 (1.20)
Suggest Crisis Hotline	2.86 (1.49)	3.13 (1.39)	3.00 (1.41)	2.83 (1.34)
Call Crisis Hotline	2.41 (1.22)	2.71 (1.33)	2.48 (1.31)	2.58 (1.18)
Call 911	2.18 (1.10)	2.17 (1.24)	1.91 (1.13)	2.21 (1.02)
Report to Facebook	1.89 (0.99)	1.86 (0.89)	1.91 (0.95)	1.87 (1.04)
Take to Outpatient Care Center	2.27 (1.24)	2.37 (1.47)	2.22 (1.24)	2.50 (1.25)

Note. All responses were measured on a 5 point Likert-type scale from 1 (*very unlikely*) to 5 (*very likely*).

Serious Helping. Hypothesis 3e stated that the participants would suggest more serious forms of helping for the female individuals depicted in the negative profiles than they would suggest for the male individuals depicted in the negative profiles. The same 2 X 2 ANOVA from Hypothesis 2e with gender of the individual depicted in the profile and the type of profile (either mixed or depressed) as the independent variables and the Serious Helping Scale as the dependent variable was also used to assess this hypothesis. Overall, there was a not a significant difference between the level of serious help offered to males and females depicted in the negative profiles, $F(1,93) = 1.21, p > .05$. There was also not a significant interaction between the gender of the person depicted in the profile and the type of profile, $F(1,93) = .56, p > .05$. Means and standard deviations can be seen in Table 14.

Table 14
Means and Standard Deviations of Serious Helping Scale for Individuals Depicted in the Negative Profiles

	FEMALE		MALE	
	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 24)	Mixed (<i>n</i> = 24)	Depressed (<i>n</i> = 25)
Helping Response				
Serious Helping Scale	2.46 (1.07)	2.44 (1.25)	2.08 (0.94)	2.37 (1.07)

Note. Responses were scored from 1 (*very unlikely*) to 5 (*very likely*).

Stigma Towards Depression

Relationships between the Attitudes to and Stereotypes of Mental Health Measure, online and offline responses, helping behaviors offered to individuals depicted in the negative profiles, and opinions of the individuals depicted in the negative profiles were examined in Hypothesis 4, which stated that those with a stigma towards depression would be less likely to respond, either online or in real life, to those with depression, and that people who had a stigma towards depression would not have a positive opinion of the individuals depicted in the negative profiles. There was not a significant relationship between the total ASMHM score and level of online responding to individuals depicted in the negative profile conditions ($r = -.04, n = 97, p = .72$). The level of offline responding (i.e., text, phone call, or face-to-face contact) to the individual portrayed in the negative profiles was also unrelated to stigma ($r = -.13, n = 97, p = .19$). The likelihood to help the person portrayed in the negative profile was unrelated to the total ASMHM score ($r = -.18, n = 93, p = .09$). Finally, the opinion of the individuals portrayed in the negative profiles was unrelated to stigma, ($r = .12, n = 97, p = .31$).

Knowledge of Reporting Suicidal Content

Hypothesis 5 examined the knowledge that participants had about reporting suicidal content to Facebook using the updated reporting system. Only 19.6% ($n = 19$) of participants reported that they knew how to report suicidal content to Facebook. Of those responses 31% (n

= 6) were able to give an accurate description of how to report suicidal content to Facebook's staff via the most recent method: clicking on the arrow next to a status, clicking "report" and selecting the appropriate categorizations. One participant identified the previous method of reporting the content by copying and pasting the link to the status update to a separate window. Those who indicated that they were likely to report one of the negative profiles to Facebook were significantly more likely to know how to report the profile ($M = 2.39, SD = 1.34$) than those who did not know how to report the profile ($M = 1.78, SD = .85$), $t(94) = 2.43, p < .05$.

Exploratory Analyses

Exploratory analyses were conducted to see if the way people use social networking sites in their daily lives influences the way that they interact and connect with the individuals depicted in the positive and negative profiles. Correlations between emotional connectivity, integration of SNSs into everyday life, and people's ratings of the meaningfulness of their Facebook relationships with the key response variables (i.e., opinion, online response, offline response, and helping) were examined. Finally, the responses to the different types of profiles of individuals who have and have not had personal experience with psychopathology (e.g., knowing a friend or family member who had a form of psychopathology) was considered.

Social Media Use Integration Scale. On average, participant's knowledge of how to report suicidal content to Facebook was not related to their social and emotional connection to the site ($t(95) = -.33, p > .05$) or integration with Facebook ($t(95) = -.70, p > .05$) as measured by the Social Media Use Integration Scale.

Meaningful Facebook Relationships. How meaningful Facebook relationships were to the participant was correlated with their overall opinion, level of online response, level of offline response, the Overall Helping Response Scale, and the Serious Helping Scale. There was a

significant positive correlation between the belief that Facebook relationships are meaningful and the level of online response to the individual depicted in the negative profiles. There was also a significant positive correlation between the belief that Facebook relationships are meaningful and the likelihood that the participant would offer more serious forms of helping. The full correlation matrix can be seen in Table 15. It should also be noted that the level of online response to the person depicted in the negative profile condition is significantly positively related to responding offline to the person depicted in the negative profiles as well as the overall likelihood to respond with a form of helping.

Table 15
Correlations with Meaningful Facebook Relationships

	1	2	3	4	5
1 Meaningful Facebook Relationships	--				
2 Opinion of negative profiles	-.11	--			
3 Negative online response	.31**	.32**	--		
4 Negative offline response	.11	.13	.69**	--	
5 Overall Helping Response Scale	.20	.09	.52**	.49**	--
6 Serious Helping Scale	.21*	.07	.40**	.36**	.86**

Note. Scale development for the two helping scales can be seen in Chapter II, the Methods section.

Experience with Mental Illness. Over half (64.9%) of the participants had a friend or family member who had mental health issues compared to 24.7% who did not and 10.3% who were unsure. The relationship between the participants’ experience with mental illness and their reactions to the individuals in the profiles was explored. For the purpose of this analysis the scores that indicated the “unsure” response was coded as “no.” A MANOVA was conducted with the experience with mental illness as the independent variable and the five online responses as the dependent variables. This analysis showed that there was a significant effect of knowledge of mental illness on the online response to the negative profiles, $F(5,90) = 1.90, p < .05$. Means and standard deviations for each response can be found in Table 16. Follow-up

ANOVAs showed that there was a significant difference between groups for likelihood to message the individual depicted in the negative profile, $F(1,94) = 6.52, p < .05$, such that those who indicated that they had a friend or family member with depression were significantly more likely to indicate that they would message the individual when the individual was offline than those who did not know someone with a mental illness. There was a marginally significant difference for likelihood to start a chat with someone online, $F(1,94) = 3.62, p = .06$ such that those who knew someone with a mental illness were more likely to indicate that they would message the individual depicted in the profile while they were online than those who did not know someone with a mental illness.

Table 16

Experience with Mental Illness and Likelihood to Respond Online to the Person Depicted in the Negative Profile

Online Response	Experience with Mental Illness	No Experience with Mental Illness
Like Status	2.24 (0.15)	2.38 (0.21)
Comment on Status	2.84 (0.17)	2.65 (0.22)
Post on Wall	2.32 (0.15)	2.27 (0.20)
Online Chat	2.86 (0.17)	2.32 (0.23)
Offline Message	3.10 (0.17)	2.35 (0.23)

Note. Responses were scored from 1 (*very unlikely*) to 5 (*very likely*).

CHAPTER IV

Discussion

The stigma surrounding depression is preventing people with this disorder from getting the help that they need from their social support network in real life (Tse & Bond, 2003). Facebook's algorithms are designed so that statuses that are more popular within a network (those that are liked and commented on) are pushed to the top of a person's News Feed. The intention is to allow users to get the most out of the site and stay on top of popular events. By the same logic, statuses that are not liked in a network are pushed down the News Feed. Users must interact with others' posts regularly in order to have them show up on their News Feeds. In addition, users both recognize and follow rules regarding what to post and how to interact with other users that delineate which posts receive responses and which posts do not (Bryant & Marmo, 2012). These rules typically follow norms related to positivity and authenticity. Posts that are authentic work to validate a user's online presence by mirroring the person's offline life and create a more accurate experience for other users (Mosseri, 2016). In this way authenticity norms reduces dissociative imagination – posting authentically bridges the gap between the online and offline worlds. The positivity norm encourages people to upload happy information. This tendency towards the positive is related to people's general dislike of public intimacies – especially negative public intimacies (Bazarova, 2012). Posts that do not follow these norms, particularly the positivity norm, may not be responded to (via Facebook's public communication system). Therefore, those users who are depressed and post statuses that have negative content may end up disappearing from a user's News Feed altogether. This can cut off a means of

support for the person with depression. This study examined the response that participants had to people who posted depressed statuses online to see if the participants responded solely online or if their response was transferred into the offline world as well. Whereas responding to the person online with a like or a comment may indicate an increase in communication and interaction in future online interactions, real-world actions that either contact or help the individual posting depressed content, such as texting or making face-to-face contact, or offering to taking them to a hospital or an outpatient psychiatric center, will help the individual more.

Profile Manipulation

In this study participants viewed both a positive and negative profile belonging to a 19-year-old undergraduate student. The positive profile maintained the positivity norm whereas the negative profile violated this norm. Further, the negative condition consisted of viewing either a mixed profile (where the individual portrayed posted statuses that were initially positive and then posted more recent statuses that depicted suicidal ideation) or a depressed profile (where the individual portrayed posted statuses that were consistent with DSM-5 criteria for depression where the most recent statuses depicted suicidal ideation). After viewing each profile participants were asked to rate the profile on several aspects including how happy, authentic, and, in the case of the negative profiles, how suicidal they believed the person depicted in the profile was. Participants did believe that the individuals depicted in the positive profiles were more positive than those depicted in the negative profiles, which indicates that the status manipulation was effective with regard to the positivity norms. Analyses also showed that with regard to the negative condition participants believed that the people depicted in the mixed profiles were more positive than those depicted in the depressed profiles. This may be due to the

initial positive posting of the individuals portrayed in the mixed condition compared to the people in the depressed condition not following positivity norm at all.

Although authenticity was not the primary focus of the study, supplementary analyses were conducted to examine how authentic participants believed each profile to be. Participants rated the likelihood that what each person was posting on their Facebook profile reflected what was happening in that person's life. A repeated-measures t-test showed a significant difference between the positive and negative profiles in that participants indicated that the people portrayed in the negative condition ($M = 4.03$, $SD = .67$) were more authentic than those in the positive condition ($M = 3.60$, $SD = .94$), $t(96) = -3.99$, $p < .01$. An ANOVA analyzed the extent people believed that the people in the negative profiles were being authentic. There was a significant difference between the people portrayed in the mixed and depressed profiles in that the participants believed that the people in the depressed profiles ($M = 4.16$, $SD = .62$) were more authentic than those in the mixed profiles ($M = 3.90$, $SD = .69$), $F(1,93) = 3.94$, $p < .05$. Participants may have believed that the negative conditions were more authentic than the positive conditions due to an interaction of the positivity and authenticity norms: because people on SNSs tend to post the positive highlights of their lives (Anderson, Fagan, Woodnutt, & Chamorro-Premuzie, 2012), participants may believe that the people in the negative condition were being honest because it's hard to violate the positivity norm and post negative comments. Similarly, the participants may have believed that the people portrayed in the depressed condition were more authentic than those portrayed in the mixed condition due to the sudden switch in affect. Participants may have believed that the person depicted in the mixed condition was being inauthentic while posting either the positively charged statuses or the negatively charged statuses. The person depicted in the depressed condition posted statuses with consistent

dysphoric affect, thus participants may have believed that the person depicted in the profile was being authentic to their offline experience throughout all status postings.

Finally, there was not a significant difference between the mixed and depressed conditions in terms of participants' belief that the person depicted in either of these conditions was suicidal. In fact, the means for the overall belief that the person was suicidal for each profile type were under 3, indicating that the participants believed that the person depicted in the negative profiles was less than "somewhat suicidal." As the participants were unlikely to indicate that they believed that the person depicted in the negative profile was suicidal, this belief may have affected how likely they were to respond to the negative profiles online, offline, and especially with regard to helping the person portrayed in the profiles in real life.

Response to Individual Portrayed in Positive and Negative Profiles

The first hypothesis examined the differences between the responses to the individuals depicted in the positive and negative, predicting that individuals in the positive condition would be viewed more positively and receive more online and offline responses than individuals in the negative condition. This hypothesis was partially supported: participants had a more positive opinion of and responded via online communication more to the positive profiles but responded more via offline communication to the negative profiles. The participants had a significantly more positive opinion of individuals that were depicted in the positive condition than they did the individuals portrayed in the negative condition. The people depicted in the positive conditions also received more overall online responses than did the people depicted in the negative profiles. When individual responses were analyzed participants were more likely to "like" a status that the individual in the positive condition posted. These results fall in line with positivity norms that encourage people to present themselves positively when interacting with

others on SNSs (Braynt & Marmo, 2012). This, in effect, rewarded those who shared positive personal statuses while inadvertently punished those who shared negative personal information (as the negative posts were not liked and therefore not promoted by Facebook's News Feed algorithms). Conversely and contrary to predictions, participants were more likely to message or start an online chat with a person depicted in the negative condition than a person depicted in the positive condition. In addition, participants were more likely to contact a person depicted in the negative condition utilizing an offline communication method both overall and for each individual response option. These reactions to the statuses fall in line with Bazarova's (2012) discussion of public intimacies in that negative information is considered to be more private than positive information. The forms of online and offline responses that the participants were likely to engage the people depicted in the negative conditions in are typically performed between two people and are not broadcasted to the general public. These forms of contact may be suggested with the intent of initiating finding the depressed person some form of help. Alternatively, these forms of response might be recommended in the hopes of moving the discussion of the negative topics to a more private setting.

Response to the Individuals Portrayed in the Mixed and Depressed Profiles

The second hypothesis examined how participants responded to the status updates that the individual in the each of the negative profile conditions posted and proposed that the participants would have a more positive opinion of those people depicted in the mixed profiles and would also respond more to the person depicted in the mixed profiles by means of online response, offline response, and through various forms of helping. Those individuals in the mixed condition posted three status updates that were positive and followed Facebook's positivity and authenticity norms, then posted two statuses that were symptoms of depression that did not

follow the positive Facebook norm. The individual in the depressed profile condition posted five statuses that did not comply with the positive Facebook norm. This hypothesis was supported for all measured forms of response. Participants had more positive opinions of the person depicted in the mixed condition than they did of the person depicted in the depressed condition.

Participants were more likely to respond, both online and offline, to the person portrayed in the mixed condition than the depressed condition. When looking at individual forms of response both “liking” a status and calling was more likely for the person depicted in the mixed condition as compared to the person depicted in the depressed condition. This may have been due to the initial postings that followed Facebook’s norms – the individual in the depressed condition never followed the positivity norm. People who do not follow Facebook’s norms are generally less liked than people who do follow the norms (Reinecke & Trepte, 2014). In addition, people tend to not want to interact with people who are depressed (Tse & Bond, 2003), which may have translated to the participants not wanting to interact with the person depicted in the depressed condition either online or offline.

The ways in which participants would help the people depicted in each of the negative conditions was evaluated. There was no difference in the amount of assistance (either general or more serious) that participants said that they would offer to the individuals depicted in the mixed and depressed conditions. As previously mentioned, this lack of response may relate to the fact that participants indicated that the people in the negative conditions were only “somewhat suicidal.” Participants may not have believed that various forms of helping were appropriate for the person depicted in either negative condition because the participants did not believe that the person depicted in the profile was “sufficiently” suicidal. The lack of willingness to help is similar to findings of an Australian study where participants were also unlikely to encourage a

person depicted as depressed and suicidal in a vignette to seek help (Rossetto, Jorm, & Reayley, 2014). The lack of initiating helping behaviors may be due to a general unwillingness to help people with mental illness (Rossetto et al., 2014).

Response to the Gender of the Individuals Portrayed in the Negative Profiles

The third hypothesis examined the differences in the ways that the participants reacted to the gender of the person depicted in the negative profiles. This hypothesis put forth that the participants would have a more positive opinion of the females depicted in the negative profiles and would respond to the females through online, offline, and helping responses. Overall the female participants were not generally influenced by the gender of the individual depicted in the profiles; there were no overall gender differences in opinion, online response, or offline response. However, there were significant interactions between profile gender and the type of negative profile. First, the participants rated the individuals depicted in the mixed male condition more positively than they rated those individuals in the depressed male, mixed female, or depressed female conditions. This may be due to the fact that the male in the mixed condition posted statuses in line with the positivity norm, making them more likable as they did not post as many negative public intimacies as the males or females in the depressed conditions (Bazarova, 2012). This also may have been coupled with Swami's (2012) findings that participants were more likely to identify females with depression than males with depression. Second, the participants were more likely to report starting a chat with and messaging the person portrayed in the depressed female condition than in any other condition. Participants maybe have been more likely to recognize females as having depression than they were for males (Swami, 2012) and may have initiated these forms of a communication as a show of concern. It also may be another example of Bazarova's (2012) public intimacies in that, again, participants wanted to contain the

negative content to a more intimate setting rather than discussing the negative content through commenting on the status or writing a post on the individual's wall.

There were also no differences in the amount or type of helping offered to males and females depicted in the negative conditions. This was true for both helping overall and for helping by suggesting a more serious course of action that placed the person depicted in the negative profile in professional care. These results do not reflect previous literature: females (as all of the participants were) have been found to be more empathetic, especially with regard to recognizing depression and providing emotional support towards other females (Joiner et al., 2016; Mestre, Sampler, Frias, & Tur, 2009).

Stigma Towards Depression

Hypothesis 4 stated that those people who had stigma towards those with depression would tend not to respond to the depressed profiles in an online or offline setting. All correlations between the ASMHM and online response and offline helping behaviors were non-significant. There was not a significant relationship between personal and societal knowledge of stigma towards depression and reacting to or helping the individuals depicted in the negative profiles. Having a personal stigma towards those with depression also did not prevent the participants from indicating that they would contact the person in the negative profile through Facebook or offline through a phone call, text, or by starting a conversation in person. Personal stigma against depression did not significantly affect a participant's likelihood to initiate helping in the real world through taking the person to a service that could help care for the individual. This result, however, may be due to the fact that participants were unlikely to help the people depicted in the negative profiles as a whole. Finally, there was not a significant relationship between stigma and the opinions towards the negative profiles. This may indicate that stigma

towards depression may not play as large as a role in the online world such as when a person views with a person with depression's Facebook profile as it may in the offline world.

Conversely, the participants may not have experienced stigma towards the participants in the negative profiles. The participants did believe that the people depicted in the negative profiles were not as positive as those depicted in the positive profiles, however, the belief that a person is negative is not equivalent to believing that a person is depressed. The participants were unlikely to believe that the person depicted in the negative profile was suicidal, thus any stigma that they may have against people with depression may not have been activated.

Knowledge of Reporting Suicidal Content

Importantly, this study demonstrated that, as expected, the participants overwhelmingly did not know how to utilize Facebook's new format of reporting suicidal content. When those who did indicate that they knew how to report the content were asked to describe how to utilize this feature, the majority were not able to articulate the process of reporting using the newest update of selecting "report" from a drop-down menu next to the content they were concerned about. Most of the participants simply stated that they would "report" the concerning statement, but did not give further detail how they would do that through Facebook's system, indicating that whereas people knew that it was possible to report content they may not know what to click on to start the process. Finally, one person indicated that "you have to copy and paste the link that was posted in order to report it so it can be investigated," a response that is technically viable but does not reflect the fastest and simplest way to report suicidal content.

Exploratory Analyses

Social Media Use Integration Scale. Knowledge of how to report suicidal content to Facebook was not related to the participants' overall feeling of connectedness to the website as

measured by the Social Media Use Integration Scale. Those who did indicate that they knew how to report suicidal content were slightly less likely to both endorse that they were socially and emotionally connected to Facebook as well as indicate that Facebook was a part of their social routine when compared to those who did not know how to report suicidal content to Facebook. This may be because those who know how to report suicidal content are less set in a social routine and are more open to exploring the website and what options it has available to its users. Because Facebook announced the updated policy on a separate website and not on Facebook itself people would have to explore the website, especially its reporting options, to find out about the change. While none of the differences between those who did and did not know how to report suicidal content with regard to feeling connected to Facebook were significant, this option could be explored in further studies. Especially in light of participants engaging in dissociative imagination, the process of reporting suicidal content to Facebook may need to be more transparent so that more Facebook users can utilize the feature. Making the drop-down option of reporting better known may help the depressed users while still maintaining dissociative imagination.

Meaningful Facebook Relationships. A correlation was completed between how meaningful Facebook relationships were to the individual and the overall opinion of the individual portrayed in the profile, how likely the participant was to respond online to the person depicted in the negative profile, how likely the participant was to respond offline to the person depicted in the negative profile, and how likely the participant was to offer general and serious forms of help to the person depicted in the negative profile. There was a significant positive correlation with regard to the belief that Facebook relationships are meaningful and the likelihood to respond to the individual online. There was also a significant positive correlation

between the belief that Facebook relationships are meaningful and the likelihood to suggest a more serious form of helping to the individual portrayed in the negative profile. This may indicate that participants are able to somewhat overcome dissociative imagination and combine the online and offline world: they may suggest intense forms of helping behaviors towards those that they connect with online.

Experience with Mental Illness. There was a significant effect of having a friend or a family member who had a mental illness on the online response to the individuals depicted in the negative profiles. People who did know a person with mental illness were significantly more likely than those who did not know a personal with a mental illness to message the individual depicted in the negative profile when the person was offline and marginally more likely to message the person depicted in the negative profile when they were online. This falls in line with public intimacies: people who know someone with depression may want to discuss the topic but do not see that it is fit for public discussion. In this way they would message the person using Facebook's offline messaging or chat system in order to reach out to the individual without forcing the individual to publicly display their negative thoughts and emotions.

Limitations

One limitation is the use of the Qualtrics system to simulate Facebook profiles instead of using real profiles with hyperlinks. Although the profiles were made to look realistic, participants were not able to interact with the profile as they naturally would on Facebook. Similarly, because the profiles were created for the study, the participant was not actually a Facebook friend of the person depicted in the profile and was instead asked to imagine that they were friends with the person. There was not a way to control for how close of a friend the participant pretended the person in each profile was to them, nor was there a manipulation of

how emotionally connected they were to each of the people depicted in the profiles. In short, because the participants did not know the person the profile represented in real life, as they may with their Facebook friends, they may not have been able to fully engage with the profiles as they would have with their actual Facebook friends. Another limitation associated with the profiles is the lack of interaction on the pages that were created. Facebook encourages its users to interact with other users using various communication features the website has put in place (Mosseri, 2016). The lack of other users interacting with each of the profiles may have influenced how the participants interacted with the profiles. The created profiles were essentially taken out of the context of Facebook's interface – though positivity and negativity norms were preserved, the way that participants interact with the website may not have been.

Another limitation is that the photographs chosen from the Glasgow Unfamiliar Face Database depicted Caucasian males and females. Though these photographs were chosen to reduce potential confounds including level of attractiveness and ethnicity, it is possible that participants may have nonetheless been influenced by ethnicity. As the participants who took part in this study represented a number of ethnicities, it is possible they would have responded differently if the profile depicted someone of their own ethnic background.

Though Facebook is the most widely used social networking site in the world and is still popular among young adults ages 18-29 as 82% of Internet users in this age group use Facebook (Duggan, 2015), younger audiences may be moving towards other social networking platforms. Facebook's main goal, to connect users to their friends and family, may prove to be too intimate to the next generation of Facebook users. The results from this study are a reflection of a time where Facebook is still integrated into the daily lives of college students; future replications may not find similar results due to the changing landscape of social networking sites. Though

Facebook was the most commonly used SNS among this sample this may have been due to the inclusion criteria. Other sites such as Snapchat and Instagram were second and third most commonly used among this sample. Similarly, Facebook is one SNS – other SNSs may have different norms that allow for depression to be talked about in different ways. Analyses of sites such as Twitter or Tumblr that do not require the same authenticity that Facebook works to protect may yield new ways to address depression in the online world. Other SNSs that depend on photograph sharing, such as Instagram and Snapchat, may also be valuable websites to examine with regard to users' reactions to suicidal posts.

Another limitation was in the survey construction. Due the nature of the study's design (combined comparisons between subjects as well as within subjects) some of the scale construction and analyses were beyond the initial skill of the student author. In addition to the general difficulty of the design, the Social Media Use Integration Scale and the Attitudes to and Stereotypes of Mental Health Measure were transferred to the online Qualtrics system incorrectly. The Social Media Use Integration Scale was meant to be on a 6 point Likert-type scale but was instead created on a 5-point Likert-type scale. The Attitudes to and Stereotypes of Mental Health Measure was also answered on a 5 point Likert-type scale instead of its proper 4 point Likert-type scale. Each of these scales and subscales may have had better reliability had they been measured on their respective 6 point and 4 point options.

The sample size may have also contributed to the lack of significant effects. The small number of participants may have increased the likelihood of determining significance when there was not or, conversely, not recognizing significance when there would have been in a larger sample. The results from this small sample may also not be generalizable to larger populations. Finally, though including only female participants in the data analysis prevented gender effects,

opening the study up to male participants may reveal different interactions with the positive and negative profiles.

Implications and Further Research

Overall in this sample there were significant differences between how participants reacted both online and offline to people who demonstrated DSM-5 criteria of Major Depressive Disorder through status updates and those who did not endorse such symptoms. This indicates that people may not ignore people who violate Facebook's positivity norms but instead may try to contact them through Facebook's chat or messaging systems or even through phone calls in the offline world. This study also revealed that people may need to see extreme demonstrations of suicidal ideation or suicidal intent online before they would consider helping the person in the offline world. Further studies may use more extreme examples of suicidal ideation to determine clearer levels of offline helping response. Such studies may also examine the participants' reasoning behind contacting an individual privately instead of assisting the person with seeking help from a professional. In addition, further studies may try to simulate the Facebook News Feed instead of individual profiles to determine ways in which a person uses Facebook affects how a person responds to people depicted in the profiles. Though a profile contains more information about an individual, Facebook users may not click on the profile and instead may only consume information from their News Feed homepage. Understanding how people interact on Facebook, as well as if they participate in dissociative imagination, is crucial to better understanding how people with depression have access to social support when reaching out to their social network.

Examining how people interact on Facebook's platform, especially with regard to how they react to negative statuses that break the norm of positivity, becomes more important in light

of new changes Facebook has made to its “like” button. On February 24, 2016, Facebook updated the “like” button to include “reactions” (Krug, 2016b). Facebook changed how people can react to posts. Instead of “liking” a status a person now has the option to indicate how that post makes them feel. People can choose from “Like,” “Love,” “Haha,” “Wow,” “Sad,” or “Angry.” It is important to note that on the web version of Facebook the reactions are in the form of stationary smiley faces that portray an emotion. When a person hovers over the smiley with the mouse the word to describe the emotion is displayed. The mobile version of the site, however, features moving reactions. The “Haha” reactions opens and closes its mouth to imitate laughter; the “sad” reaction wears a frown and tears drip slowly down its face. Facebook asserts that Reactions will initially work like “likes” in that interacting with a post will indicate that the user would like to see more posts of similar content in their News Feed (Krug, 2016a). As time goes on, however, Facebook stated that it will determine how Reactions should be utilized to show a user more of the content they would like on their News Feed (Krug, 2016a). As of now it is unclear how the reaction button will affect how posts are displayed in the “Top Stories” News Feed organization (where previously posts that had the most likes or comments appeared at the beginning of a user’s News Feed). Further research should address how responding to a post with a more positive Reaction such as “Love” or “Haha” or a negative reaction such as “Sad” or “Angry” will affect the positivity and authenticity norms that Facebook users abide by. Normalizing more negative posts with the negative Reaction options may allow more people to post negative content and get empathizing reactions, for example. Alternatively, Facebook’s algorithms may use the Reactions to further sort out negative posts that violate the positivity norms and place negative posts further down on an individual’s News Feed. Both time and Facebook’s audience’s response to Reactions will determine their place in Facebook’s culture.

This study demonstrates that people respond differently to those who break from the social norms on Facebook related to positivity. It also shows that Facebook users are still unaware of the features the site has put forth to help people who post suicidal content online. Evaluating the way that people interact with others on Facebook, especially people with depression, could be a major step towards combatting the stigma towards depression both on and offline and could lead to helping people access appropriate care.

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Appendix A

Consistently Positive Profile (Male)

The image displays a screenshot of a Facebook profile for a user named Matt Roberts. The profile is characterized by a consistently positive and active social media presence. Key elements include:

- Profile Header:** A cover photo of a beach scene and a profile picture of Matt Roberts. The name "Matt Roberts" is visible, along with a "Following" status and a "Message" button.
- Education and Location:** The user lists "Studied at University of Michigan-Dearborn" and "Lives in Dearborn, Michigan".
- Activity:** The profile shows several recent posts, all of which are positive and personal in nature. For example, one post from September 29 says, "After a long day of work it's so nice to be able to come home and just relax." Another post from September 24 says, "It's almost unhealthy the amount of love I have for ice cream. Scratch that, it's straight up unhealthy." A post from September 22 says, "TIGERS WIIIIIIIIII! Great day at the park!"
- Interests:** The profile lists various interests, including sports teams (Detroit Lions, Detroit Tigers, FC Barcelona, Detroit Red Wings) and music (Imagine Dragons, Red Hot Chili Peppers, The Summer Set, Selena Gomez & the Soc..., Fetty Wap, The Weeknd).
- TV Shows:** The profile lists several TV shows, including Orange Is the New Black, American Horror Story, Game of Thrones, Saturday Night Live, The Walking Dead, and Friends.
- Likes:** The profile lists several items that the user has liked, including Detroit Red Wings, The Weeknd, Top Vines, Marvel, Humans of New York, and Aziz Ansari.

Positive Then Depressed Facebook Profile (Male)

Recent
2015
2014
2013
2012
2011
2010
1996

Josh Johnson
Following Message

Timeline About Friends 544 Photos More

Studied at University of Michigan-Dearborn
Lives in Dearborn, Michigan
From Dearborn, Michigan

PHOTOS - 203

SPORTS - 3
Detroit Red Wings Detroit Lions Detroit Tigers

MUSIC - 28
Dave Matthews Band OK Go LUDO

Post Photo / Video
Write something...

Josh Johnson
September 29 at 5:24pm · 🌐
I can't take it anymore. There's no point to anything.
Like Comment Share

Write a comment...

Josh Johnson
September 21 · 🌐
I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.
Like Comment Share

Write a comment...

Josh Johnson
September 14 · 🌐
Make sure you donate to the dance marathon! Help me dance all night long and support such a worthy cause!
Like Comment Share

Write a comment...

Kendrick Lamar The Beatles The Weeknd
Ask Josh for a music recommendation Ask

MOVIES - 16
X-Men: First Class The Purge Good Will Hunting
Scott Pilgrim vs. the... San Andreas The Princess Bride
Ask Josh for a movie recommendation Ask

LIKES - 292
Top Vines Humans of New York The Hobbit
Aziz Ansari Orange Is the New Blac... Marvel

Josh Johnson
September 12 · 🌐
Like Comment Share
Write a comment...

Josh Johnson
September 10 · 🌐
Beach day!! I had so much fun soaking up the sun and listening to the water.
Like Comment Share
Write a comment...

Josh Johnson
September 1 · 🌐
Nothing better than spending time with my family. #familybonding #Johnsonfamilyreunion
Like Comment Share
Write a comment...

Depressed Facebook Profile (Female)

Rachel Jones
September 12 · 🌐

Studied at University of Michigan–Dearborn
Lives in Dearborn, Michigan
From Dearborn, Michigan

PHOTOS · 203

SPORTS · 3
Detroit Red Wings, Detroit Lions, Detroit Tigers

MUSIC · 41
Dave Matthews Band, OK Go, LUDO

Post Photo / Video

Write something...

Rachel Jones
September 29 at 6:03pm · 🌐

I can't take it anymore. There's no point to anything.

Rachel Jones
September 21 · 🌐

I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.

Rachel Jones
September 14 at 3:30am · 🌐

Can't sleep. Again. #cantsleep

Rachel Jones
September 12 · 🌐

Kendrick Lamar, The Beatles, The Weeknd

Ask Rachel for a music recommendation

MOVIES · 15
X-Men: First Class, The Purge, Good Will Hunting, Scott Pilgrim vs. the..., San Andreas, The Princess Bride

Like Comment Share

Write a comment...

Rachel Jones
September 10 · 🌐

I just feel so alone. No one will ever care about me.

Like Comment Share

Write a comment...

Rachel Jones
September 1 · 🌐

I don't want to go to class, I don't want to do homework. I don't want to work out. I don't even want to see anyone. Everything sucks.

Like Comment Share

Write a comment...

LIKES · 292
Top Vines, Humans of New York, The Hobbit, Aziz Ansari, Orange Is the New Black, Marvel

Appendix B

Social Networking Demographics

To start out you will be asked to answer questions regarding your use of social networking sites. Social networking sites are websites that encourage users to make profiles and connect with other site users. The majority of these questions will focus on your use of Facebook. Please answer them as accurately as possible. If necessary you can open up a new window to check Facebook in order to provide a more accurate response. If you do this, do NOT close out of this tab. You may also check Facebook on another device in order to provide a more accurate response. When you have finished each page, please click the ">>" button.

Which social networking sites are you actively a member of? Select all that apply.

- Facebook
- Foursquare
- Google+
- Instagram
- LinkedIn
- MySpace
- Pinterest
- Reddit
- Snapchat
- Tumblr
- Twitter
- Vine
- Yik Yak
- YouTube
- Other (please identify) _____

Of the social networks that you are a member of which one do you use the most?

- Facebook
- Foursquare
- Google+
- Instagram
- LinkedIn
- MySpace
- Pinterest
- Reddit
- Snapchat
- Tumblr
- Twitter
- Vine
- Yik Yak
- YouTube
- Other (please identify) _____

Approximately how many TOTAL Facebook friends do you have? (If you are unsure, please open up a separate window to confirm)

- 20 or Fewer
- 21-49
- 50-99
- 100-199
- 200-299
- 300-399
- 400-499
- 500-599
- 600-699
- 700-799
- 800-899
- 900-999
- Over 1,000

On average how often do you log onto Facebook?

- More than 10 times per day
- 5-9 times per day
- 2-4 times per day
- 1 time per day
- Once every few days
- Once a week
- Once a month
- Once every 2-3 months

On average how much time per log in do you spend actively using Facebook?

- 1-9 minutes
- 10-29 minutes
- 30-59 minutes
- 1 hour
- 2 hours
- 3 hours
- 4 hours
- 5 or more hours

Please indicate how likely you are to do each of the following.

	Very unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Like a friend's status update	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comment on a Facebook friend's status update	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Update your own Facebook status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Write a post on a friend's Facebook wall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start a chat via Facebook with a friend who is online	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Send a message to a friend who is not online	<input type="radio"/>				
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What device do you most often log onto Facebook on?

- Laptop computer
- Desktop computer
- Smart phone
- Tablet
- Other (please identify) _____

Questionnaire to Follow Consistently Positive Facebook Profile (female)

Consider the information you saw on Jessica Roberts' profile while answering the following questions. Answer the questions as if you were Facebook friends with Jessica. What is your overall opinion of Jessica Roberts? Indicate by moving the slide bar up or down.

- 1
- 2
- 3
- 4
- 5

What contributed to your reaction to Jessica's profile? (Select all that apply)

- Status updates
- Profile picture
- Cover photo
- Likes

What is your likelihood that you would do each of the following?

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Like one or more of Jessica's status updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comment on one or more of Jessica's status updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Write a post on Jessica's Facebook profile	<input type="radio"/>				
Start an online chat with Jessica	<input type="radio"/>				
Send a private message to Jessica	<input type="radio"/>				
Unfollow Jessica's posts	<input type="radio"/>				
Unfriend Jessica	<input type="radio"/>				

Please check the box next to the status update(s) you would "like." To refresh your memory all of the statuses that were posted are provided. You may like one or more of the updates. Respond as if you were actually Facebook friends with Jessica.

- After a long day of work it's so nice to be able to come home and just relax.
- It's almost unhealthy the amount of love I have for ice cream. Scratch that, it's straight up unhealthy. :p
- TIGERS WIIIIIN! Great day at the park!
- 3 days until classes start... Where the hell did my summer go?
- FINALLY was able to watch the season finale of How I Met Your Mother. I thought it was great but...that ending? Seriously?

Please write what you would comment. To refresh your memory all of the statuses that were posted are provided. You may comment on one or more of the updates. Both check the box of the status(es) that you would comment on and provide your comment in the space provided. Again, write your comment as if you were actually Facebook friends with Jessica.

- After a long day of work it's so nice to be able to come home and just relax.

- It's almost unhealthy the amount of love I have for ice cream. Scratch that, it's straight up unhealthy. :p _____
- TIGERS WIIIIIN! Great day at the park! _____
- 3 days until classes start... Where the hell did my summer go? _____
- FINALLY was able to watch the season finale of How I Met Your Mother. I thought it was great but...that ending? Seriously? _____

Write what you would post on Jessica's profile. Again, write your post as if you were actually Facebook friends with Jessica.

Write what you would write in a Facebook chat if Jessica were online. Again, write your post as if you were actually Facebook friends with Jessica.

Write what you would send in a private message to Jessica if she were not online. Again, write your post as if you were actually Facebook friends with Jessica.

Indicate the extent to which you believe that Jessica's posts reflect what is happening in her life.

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Indicate the extent to which you believe that Jessica's posts are happy.

- Very Unhappy
- Unhappy
- Neither Happy nor Unhappy
- Happy
- Very Happy

Indicate the likelihood that you would do each of the following after viewing Jessica's profile.

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Text Jessica	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Jessica	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start a face-to-face conversation with Jessica as soon as possible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How likely are you to send Jessica a friend request?

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

How likely are you to accept a friend request from Jessica?

- Definitely will not
- Probably will not
- Don't know
- Probably will
- Definitely will

Questionnaire to Follow Depressed Facebook Profile (depressed female)

Answer the following questions while considering the information you saw on Rachel Jones's profile. Answer the questions as if you were Facebook friends with Rachel. What is your overall opinion of Rachel Jones? Indicate by moving the slide bar up or down.

- 1
- 2
- 3
- 4
- 5

What contributed to your reaction to Rachel's profile? (Select all that apply)

- Status updates
- Profile picture
- Cover photo
- Likes

What is your likelihood that you would do each of the following?

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Like one or more of Rachel's status updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comment on one or more of Rachel's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

status updates					
Write a post on Rachel's Facebook profile	<input type="radio"/>				
Start an online chat with Rachel	<input type="radio"/>				
Send a private message to Rachel	<input type="radio"/>				
Unfollow Rachel's posts	<input type="radio"/>				
Unfriend Rachel	<input type="radio"/>				

Please check the box next to the status update(s) you would "like." To refresh your memory all of the statuses that were posted are provided. You may like one or more of the updates. Respond as if you were actually Facebook friends with Rachel.

- I can't take it anymore. There's no point to anything.
- don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.
- I just feel so alone.
- Can't sleep. Again.
- I don't want to go to class, I don't want to do homework. Everything sucks.

Please write what you would comment. To refresh your memory all of the statuses that were posted are provided. You may comment on one or more of the updates. Both check the box of the status(es) that you would comment on and provide your comment in the space provided. Again, write your comment as if you were actually Facebook friends with Rachel.

- I can't take it anymore. There's no point to anything. _____
- I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing. _____
- I just feel so alone. _____
- Can't sleep. Again. _____
- I don't want to go to class, I don't want to do homework. Everything sucks.

Write what you would post on Rachel's profile. Again, write your post as if you were actually Facebook friends with Rachel.

Write what you would send in a private message to Rachel. Again, write your post as if you were actually Facebook friends with Rachel.

Indicate the extent to which you believe that Rachel's posts reflect what is happening in her life.

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Indicate the extent to which you believe that Rachel's posts are happy.

- Very Unhappy
- Unhappy
- Neither Happy nor Unhappy
- Happy
- Very Happy

Indicate the likelihood that you would do each of the following after viewing Rachel's profile.

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Text Rachel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Rachel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start a face-to-face conversation with Rachel as soon as possible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Assume that Rachel lives in your town. Based on her Facebook profile, how likely are you to do each of the following?

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Take Rachel to the emergency room/hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Take Rachel to a primary care physician	<input type="radio"/>				
Go to and stay with Rachel	<input type="radio"/>				
Take Rachel to a religious official	<input type="radio"/>				
Call one of Rachel's family members	<input type="radio"/>				
Call one of Rachel's friends	<input type="radio"/>				
Suggest that Rachel call a crisis hotline	<input type="radio"/>				
Call a crisis hotline for Rachel	<input type="radio"/>				
Call 911	<input type="radio"/>				
Report Rachel to Facebook	<input type="radio"/>				
Take Rachel to a psychology outpatient care center	<input type="radio"/>				
Not contact Rachel in any way.	<input type="radio"/>				

Indicate the likelihood that Rachel is suffering from a mental illness. (Examples of mental illnesses include depression, bipolar disorder, schizophrenia, and personality disorders.)

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Indicate the extent that you believe that Rachel is suicidal.

- Not at all suicidal
- Slightly suicidal
- Somewhat suicidal
- Suicidal
- Very suicidal

How likely are you to send Rachel a friend request?

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

How likely are you to accept a friend request from Rachel?

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Questionnaire to Follow Depressed Facebook Profile

Please answer the following questions while considering the information you saw on Kayla Johnson's profile. Please answer the questions as if you were Facebook friends with Kayla. What is your overall opinion of Kayla Johnson? Indicate by moving the slide bar up or down.

- 1
- 2
- 3
- 4
- 5

What contributed to your reaction to Kayla's profile? (Select all that apply)

- Status updates
- Profile picture
- Cover photo
- Likes

What is your likelihood that you would do each of the following?

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Like one or more of Kayla's status updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comment on one or more of Kayla's status updates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Write a post on Kayla's Facebook profile	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start an online chat with Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Send a private message to Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfollow Kayla's posts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unfriend Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please check the box next to the status update(s) you would "like." To refresh your memory all of the statuses that were posted are provided. You may like one or more of the updates. Respond as if you were actually Facebook friends with Kayla.

- I can't take it anymore. There's no point to anything.
- I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing.
- Make sure you donate to the dance marathon! Help me dance all night long and support such a worthy cause!
- Beach day!! I had so much fun soaking up the sun and listening to the water.
- Nothing better than spending time with my family. #familybonding #Johnsonfamilyreunion

Please write what you would comment. To refresh your memory all of the statuses that were posted are provided. You may comment on one or more of the updates. Both check the box of the status(es) that you would comment on and provide your comment in the space provided. Again, write your comment as if you were actually Facebook friends with Kayla.

- I can't take it anymore. There's no point to anything. _____
- I don't know what's wrong with me. It feels like no matter how hard I try I can never do the right thing. _____
- Make sure you donate to the dance marathon! Help me dance all night long and support such a worthy cause! _____
- Beach day!! I had so much fun soaking up the sun and listening to the water.

- Nothing better than spending time with my family. #familybonding #Johnsonfamilyreunion

Write what you would post on Kayla's profile. Again, write your post as if you were actually Facebook friends with Kayla.

Write what you would send in a private message to Kayla. Again, write your post as if you were actually Facebook friends with Kayla.

Indicate the extent to which you believe that Kayla's posts reflect what is happening in her life.

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Indicate the extent to which you believe that Kayla’s posts are happy.

- Very Unhappy
- Unhappy
- Neither Happy nor Unhappy
- Happy
- Very Happy

Indicate the likelihood that you would do each of the following after viewing Kayla's profile.

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Text Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Start a face-to-face conversation with Kayla as soon as possible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Assume that Kayla lives in your town. Based on her Facebook page, how likely are you to do each of the following?

	Very Unlikely	Unlikely	Neither likely nor unlikely	Likely	Very Likely
Take Kayla to the emergency room/hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take Kayla to a primary care physician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Go to and stay with Kayla	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take Kayla to a religious official	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Call one of Kayla's	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

family members					
Call one of Kayla's friends	<input type="radio"/>				
Suggest that Kayla call a crisis hotline	<input type="radio"/>				
Call a crisis hotline for Kayla	<input type="radio"/>				
Call 911	<input type="radio"/>				
Report Kayla to Facebook	<input type="radio"/>				
Take Kayla to a psychology outpatient care center	<input type="radio"/>				
Not contact Kayla in any way.	<input type="radio"/>				

Indicate the likelihood that Kayla is suffering from a mental illness. (Examples of mental illnesses include depression, bipolar disorder, schizophrenia, and personality disorders.)

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Indicate the extent that you believe that Kayla is suicidal.

- Not at all suicidal
- Slightly suicidal
- Somewhat suicidal
- Suicidal
- Very suicidal

How likely are you to send Kayla a friend request?

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

How likely are you to accept a friend request from Kayla?

- Very Unlikely
- Unlikely
- Neither likely nor unlikely
- Likely
- Very Likely

Facebook Suicide Policy Questionnaire

Do you know how to report suicidal content to Facebook?

- Yes
- No

Please explain how you would report suicidal content to Facebook on either the desktop or mobile version of the website.

Facebook Relationships Questionnaire

How meaningful are your Facebook relationships?

- Not at all Meaningful
- Not very meaningful
- Neither Meaningful nor not Meaningful
- Very Meaningful
- Extremely Meaningful