The impact of Facebook updates on the value of communication: A critical approach

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Abstract:

This research aims to critically examine some Facebook updates and investigate the extent to which they contribute to the value of communication. The study analyzed all publications of the founder and CEO of Facebook from 2004 to 2022, totaling about 1,500 publications, and identified 54 updates related to Facebook alone. From these updates, the study identified the 5 most important ones aimed at communication between users, including Safety Chuck, Messenger, News Feed, Reaction Buttons, and Facebook Dating. The study also analyzed the negative aspects of each update that users should be aware of to use them correctly. For example, the study found that Messenger may create misunderstandings, and Facebook Dating may lead to deception. The News Feed feature leads to a lack of intimacy and a craving for reactions. The study provides a critical evaluation of these updates to inform users and improve communication on the platform.

Keywords: Facebook; value; communication impact; critical approach.

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1. INTRODUCTION

Social Networking Sites (SNSs) have been steadily developing since their inception, driven by the competition to attract users through the addition of features and services. Among these sites, Facebook is considered one of the most important, as it has been widely used in many countries for a long period of time. This superiority is likely due to the continuous updating of its products, not only by accurately surveying what the public explicitly requests, but also through a predictive vision of what may help the audience to communicate better.

For instance, despite demands for a Dislike button, Mark Zuckerberg deemed it inappropriate and instead added a set of interaction buttons that received a positive response from users and became more frequent. Another example is the News Feed update, which Mark kept with some modifications despite protests demanding its cancellation (Zuckerberg, 2016). This update changed the face of the site and theoretically made it closer to achieving the goal of communication and proximity. With time, it became the most important update after the idea of the site itself.

The emergence of a critical philosophy of SNSs, however, confirms the reverse role of these sites and accuses them of causing social division. This raises serious questions about the credibility of the discourse that categorically confirms the effectiveness of these updates in achieving the value and purpose of communication. The spread of the application among users due to its advantages may not necessarily mean that there is a real benefit to the community. Thus, updates that aim to facilitate connection may not really contribute to connecting the world and realizing the value of communication.

2. Method

2.1 First Subtitle

This study aims to critically examine some Facebook updates and investigate the extent to which they contribute to the value of communication. To conduct this study, we analyzed all of the public publications of Facebook founder and CEO Mark Zuckerberg from 2004 through 2022, totaling around 1,500 publications. Publications dealing with Zuckerberg's personal or professional life were excluded, leaving approximately 54 publications announcing or promoting updates for analysis.

Two types of update posts were identified: those announcing the initial launch of an update and those promoting, praising, or testing updates. The updates were also categorized into two types based on their purpose: those aimed specifically at enhancing communication between users and those aimed at improving user experience, such as privacy updates. This study focuses on the former and examines the five most significant updates in this category.

Therefore, this study aims to critically examine the five updates that were presented as effective through motivating publications, through a critical perception that focuses on weaknesses and deficiencies to educate users on the need for informed use

2.2 Discutions:

2004	2005	2006	2009	2010	2011	2012
1. **The wall**	/	2. **News feed**	/	3. Highest quality photos	4. Praivecy	/
5. **2013**		6. **2014**	7. **2015**	8. **2016**		9. **2017**
10. **Facebook home**		11. **Safety Check** 12. Groups app	13. Amber Alerts 14. Facebook Lite 15. Moments App 16. **control over News Feed** 17. 360° Video	18. **Reaction button** 19. making photos accessible for the visually impaired 20. Facebook live 21. 360° photos 22. Translation into 100 languages 23. Elections Updates 24. reporting hoaxes		25. Contact a helpline 26. Community Help 27. Town Hall 28. Prevent porn revange 29. spotting false news 30. Facebook spaces 31. Fundraisers 32. Suggest groups related to the page 33. Watch
34. **2018**		35. **2019**	36. **2020**	37. **2021**		38. **2022**
39. **Friends' posts are given priority on Newsfeed**		40. **Facebook dating** 41. Facebook News	42. Improved messenger speed 43. (COVID-19) Information Center 44. native Messenger apps 45. **Messenger Rooms** 46. Facebook Shops 47. Updates for elections 48. Climate science information center	49. **Messenger chat themes** 50. **End-to-end encrypted messenger**		51. Screenshot notification 52. Reels 53. **Feeds tab** 54. **Community Chats**

The table displays the outcomes of 54 updates that were announced by Mark Zuckerberg on his Facebook page. These updates cover various topics, ranging from images and live video to personal and financial transactions, as well as responses to elections, environmental disasters, and COVID-19.

Out of these updates, five major updates were identified as significant contributors to enhancing communication between users. These updates are related to Messenger, Online Dating, Wall/News Feed, Reaction Buttons, and Safety Check. They were presented as updates aimed at achieving communication between users, with a very positive discourse surrounding them.

However, this study aims to identify the shortcomings of these updates and assess their impact on the value of communication, beyond the extremely positive discourse that surrounds them. The goal is to make users more aware of their negative effects

3. Présentation:

3.1- Safety check:

The Facebook team has created a tool for major disasters, which is the Safety Check feature to tell your friends that you are safe during a major disaster, and according to Meta, it helps you to "1/ Let friends and family know you're safe/2. Check on others in the affected area/3. Mark your friends as safe" (Meta, 2014). It appears through the definition of this feature that it achieves important social values. However, this very optimistic and human-related update also carries its dark side.

Some critics argue that this feature encourages disaster porn, which is known as "media coverage of disasters which seeks to 'satisfy the pleasure that viewers take in seeing other people's misfortunes, as by constantly repeating vision of an event, often without commentary or context'" (Recuber, 2013) .While others raised questions about sincerity of intention, such as "the theorist Morozov who wondered 'if Facebook isn't watching, will we still do the right thing?'" (Listerman, 2017). This is based on likes on posts showing donations, where the motivation to donate and help may turn into an attempt to gain attention and likes.

The presence of these criticisms leads to further research into the extent to which this feature achieves the value of communication. In fact, the Safety Check feature limits human contact, which can often be used as an excuse to reconnect with old friends or move past personal conflicts and fights. The update, which will show the users which of their friends are fine after every major disaster, will make them completely free from contacting their friends and checking on them themself, as well as using it as an excuse to reconnect.

The reason why users do not express their feelings towards each other is that it has become stored in a quick view of the list of those who declared themselves safe, which creates more individualism rather than cohesion and solidarity. This may not appear in the short term, but the cumulative effect will show how reassuring oneself over the other no longer contains words or feelings, not even emojis.

Users' responses to the update will become the prevailing pattern, and communication with the aim of reassurance will become the anomaly that contradicts the trend on social networking sites. It may come to the point that the user does not feel the value and importance of their safety because they do not receive sufficient reassurance messages

3.2 Online dating:

Mark Zuckerberg's speech shows great optimism about the emergence of emotional relationships because of Facebook, which is logical for several reasons. One of them is that the site reduces space and time barriers and allows access to an infinite number of users, which increases the opportunity to get to know others. However, this does not negate the results of some studies that dealt with the impact of communication sites on emotional relationships after their inception. These studies have confirmed that the use of social media is negatively associated with the quality and happiness of marriage and is positively associated with the experience of troubled relationships and thinking about divorce (Valenzuela, Halpern, & Katz, 2014). Another study indicated that a higher level of

Facebook use was associated with negative relationship outcomes, such as breakup/divorce, emotional cheating, and physical cheating (Clayton, Nagurney, & Smith, 2013).

Despite the relatively negative view that links emotional relationships and social networking sites, they simulate real life, where potential partners are introduced in a natural context similar to the context in real life. Users get to know each other unintentionally, unlike dating applications that are necessarily dedicated to romantic relationships. Online dating services require users to describe themselves through profiles, allow users to contact potential mates directly, or use special algorithms to match them with suitable partners (Toma, Online Dating, 2015).

This difference between the two environments - between Facebook and online dating sites in this case - has great effects on the nature of romantic relationships. It can be identified in the following points:

Focus on physical appearance: Online dating features, like other dating sites, prioritize photos when suggesting users to each other, which makes physical attractiveness the main and primary element in making the decision to communicate. Studies have revealed the effects of physical attractiveness on people's decision to initiate a date request and respond to a date request. It has been shown that people tend to initiate a date request for someone more attractive than themselves as they tend to maximize the opportunities presented by this context by looking for more attractive individuals as possible (Zhang, Phang, & Zhang, 2020).

This race towards glorifying the body makes users obsessed with viewing distinctive images and filtering them to increase their chances of drawing attention, which has negative repercussions due to raising the level of expectations. It is worth noting that this pressure is suffered by females more than males, as physical attractiveness is a basic criterion for men. Women give more priority to social and economic traits when choosing a male partner, such as income, job, and education, than men's physical attractiveness (Abramova, Baumann, Krasnova, & Buxmann, 2016).

• Disappointment: In addition to the points mentioned above, the presence of a profile with a picture and description aimed at searching for a partner is often accompanied by disappointment. Self-presentation using images that reflect a specific period may not reflect the reality of all user cases. Additionally, self-description that expresses the user's view of themselves may be a form of self-marketing that does not necessarily reflect the user's reality. This can lead to potential partners having unrealistic expectations, which in turn can result in disappointment. This can lead to a lack of trust in the other party, causing a barrier of doubt, denial, and suspicion. The meeting can turn from an exploration meeting into an investigation meeting and comparison, which is unhealthy for the emergence of a romantic relationship.

• The Ease of Lying: Virtual spaces provide users with features and capabilities that facilitate deception (Toma, Bonus, & Swol, 2019).While dating sites may not only cause

misunderstandings, they can also lead to instances of lying, trolling, and deliberate deception.

• Instant access to a large pool of potential partners can create a valuation-oriented mindset, reducing users' willingness to commit to one person. It can also cause people to make lazy and unwise decisions when choosing from a large pool of potential partners (Finkel1, Eastwick, Karney, Reis, & Sprecher, 2012). Quickly flipping through potential candidates can establish the idea that dating is simple, accessible, and easy, leading to a lack of effort in the relationship. This can result in a quick end to the relationship, as users can easily find alternative partners.

• Scaling people from 3D to 2D: These sites fail to capture experiential aspects of social interaction that are essential to assessing an individual's compatibility with potential partners (Finkel1, Eastwick, Karney, Reis, & Sprecher, 2012).

• The problem of algorithms: They are not always effective in linking potential partners, as they may depend on incomplete information or be affected by programmers' bias. They may also depend on similarity or difference that is not compatible with all people. There are no scientific studies within the limits of our knowledge that confirm that algorithms are effective.

4. Réactions:

Reactions, beginning with the like button, appeared as an alternative to repeating comments, making it easier to quickly determine if a post is admired, funny, or anger-inducing without the need to view all the comments. However, the negative aspect of this is that users may cancel their desire to comment and settle for the reactions alone, turning qualitative responses into quantitative ones based on the number of interactions instead of creating a real dialogue that is entrenched in the user's mind.

Unlike comments, reactions do not necessarily mean reading, which can result in a false contribution that falls below the real consumption. For example, some likes are only sent to signal that the user is following the poster. As Cheonsoo and Sung-Un (2017) (Cheonsoo & Sung-Un, 2017) note, the effort required to click "like" is less than what is needed for comments and shares, which ask for extra commitment or cognitive effort. However, comments and shares have benefits that go beyond simple communication between users. Studies have shown that comments and shares may have significant contributions to enriching research, including health research (Obamiro, West, & Lee, 2020).

Additionally, the psychological motives for admiration differ among users. Some users may not actually enjoy the posts but may click "like" due to needs related to friendship, passing time, or to please others, reflecting low self-esteem (Lee, Hansen, & Lee, 2016). Friendship ties are also decisive in determining reactions; people are, on average, four times more likely to press the like button if a friend, rather than a stranger, has done so before them (Egebark & Ekström, 2017). Age and gender are also significantly associated with the frequencies of giving and receiving likes, with women receiving likes more frequently than

men, and older people receiving likes more often than younger people (Hong, Chen, & Li, 2017) .

The shift from qualitative responses based on words and language to quantitative responses represented in a number of reactions has made publishers addicted to likes and only care about the number of interactions a single publication has. This has turned reactions into a way of pricing a publication and showing its value, just as the price of a painting may express its value and importance. This shift has also made others mere numbers that can be used to obtain the largest price and appear as required.

On the other hand, users may show false interest when interacting with a publication based on their degree of self-respect or the gender of the publisher. This falsity appears in the ease of leaving a reaction (pressing a button) that carries the meaning of "reading, then agreeing or disagreeing," but it may not necessarily mean that. Instead, it may aim to leave an impression as a compliment or to draw attention.

4. The Wall/News Feed:

The beginning of Facebook's wall was simple: it allowed users to express themselves in writing. However, updates continued and encouraged users to talk in detail about even the most trivial things they experienced, such as the food they ate, the movies they watched, and the games they played. They also shared pictures and videos and described who they were with, where they were, and what they were feeling. This was supposed to be a way to communicate with friends, but in reality, it made users dispense with real friendship ties and a narrow, intimate circle that was meaningful to them in their own lives.

In other words, it breaks the concept of friendship. The owner of the wall becomes like a commodity offered to everyone without the need to make an effort to build a friendship based on personal communication, exchanging conversations, and making an effort to listen to the other person. This model of communication is based on the presentation of personal life for everyone to see. The user's friendship circles become equal, and the narrow circle opens to a greater number of interested people who usually interact with the publication or make comments on it. However, the user is satisfied with the loud quantity instead of the deep quality provided by personal talk. Some analyses have supported a positive association between the frequency and intensity of positive comments users receive and their happiness. (Marengo, Montag, Sindermann, D.Elhai, & Settanni, 2021)

This encourages users to continue transferring personal experiences from intimate personal communication within the narrow circle that requires greater commitment to general communication through which they get positive energy in exchange for less effort in commitment. Instead of seeking to deepen specific friendships through intimate dialogue, they expand the circle of interest by adding more friends. This is what traps users in the trap of narcissism and the increased desire for self-expression and self-marketing. Some studies have confirmed that higher degrees of narcissism led to deeper self-disclosure and more promotional content. (Winter, et al., 2014)

On the other hand, continuing to post about oneself while receiving wide attention to the smallest details will enhance the state of self-centeredness and then acquire narcissistic behavior. This may be exacerbated by the fact that the person who publishes the image on Facebook is more important than the type of image published, according to the interaction of users with it. (Marino, et al., 2022) In other words, if the user publishes a picture of a landscape, no matter how professional the image is, it will achieve less interest compared to personal photos that are accepted and embraced, which deepens the publisher's self-centeredness.

Furthermore, the movement of posts from the wall to the news feed puts users into a state of FOMO (fear of missing out), which is defined as a widespread fear that others may have rewarding experiences that they are too afraid to miss out on. This is characterized by the desire to stay in constant contact with what others are doing. (Przybylski, Murayama, DeHaan, & Gladwell, 2013) As a result, the user becomes addicted to what they receive from others, which affects their mood if they are cut off from social networking sites. (Sek´scinska & Jaworska, 2022)

5. Messenger:

Personal communication via Messenger is one of the most important features of Facebook, as users often maintain their Facebook accounts just for the chat rooms, which are essential for communication and preventing complete isolation. This discussion aims to investigate the extent to which communication's value is achieved.

Messenger enables easy and quick communication with anyone in the world, making it more efficient than ever before. However, this extreme ease of communication can pose a significant problem by hindering real communication, and this is what we refer to as the downside of facilitating communication to the maximum degree. This ease of communication may result in the loss of the value of communication, which can be summarized in the following points:

Users sometimes receive a large number of individual messages at once, which combines individual communication between two people and communication among a group of people. In this case, the user finds himself making serial individual contacts at once, with different topics that distract his attention. He may also find himself forced to prioritize and communicate with the most important people. A study showed that the immediate response to a friend's message is important for maintaining a good relationship. If one does not respond immediately, fatigue may increase because hesitating or evading responses may become burdensome. (Park & Lee, 2019). Thus, the user finds himself under the pressure of immediate and multiple responses with more than one friend, which affects the value of communication and makes it less quality.

Compared to face-to-face communication, written communication is asynchronous, which provides the user with a space of time that allows him to adjust his position and improve it. In this case, the caller can search and view various information around which the discussion revolves and appear more knowledgeable than he is. This may result in creating a false

personality that does not correspond to the level of the original personality. Moreover, the possibility of prolonged thinking and modifying the response makes it less spontaneous and credible, which is contrary to real face-to-face communication. Creating communication that takes advantage of technological capabilities affects the quality of realistic communication, where it discovers the limitations of communication due to the absence of these technological enhancements. Hwang's study presented an example of an individual's adaptation to intermediary personal communication, stating that a person who does not have sufficient communicative competence in real life can practice more efficient communication through personal means of communication if he is accustomed to it (Hwang, 2011). This assertion is consistent with the finding that the mediating interpersonal relationship is primarily influenced by the functional aspects of the mediator that participants use to maintain the relationship (Stafford, Kline, & Dimmick, 1999).

On the other hand, the idea of hiding behind a screen to communicate without seeing real reactions makes communication rely on intuition and expectation, rather than on the real reading of emotions and facial expressions that can shorten speech. Therefore, communication via Messenger is often full of misunderstandings due to the absence of the advantages of face-to-face communication, which is consistent with early research that found computer communication, especially email, to be less valuable for building and maintaining close social relationships than other means, such as face-to-face contact and telephone conversations (Cummings, Butler, & Kraut, 2000).

Communication gains part of its importance from the effort it takes to reach the other person and successfully communicate with them. In the case of Messenger, making communication easy and not requiring any effort to reach a friend makes communication less valuable, as they do not feel its real importance due to the absence of the effort that is feared to be lost. Communication becomes superficial and does not achieve sufficient depth. Compared to traditional messages, instant messages contain brief news that resemble quick telegrams, while traditional messages are more profound because the sender realizes that sending them is a limited opportunity and thus puts in more effort, making the message more meaningful.

One burden posed by Messenger is that it is like a mobile memory that retains information, which is not necessarily a source of intimacy. Some old messages that remain without being erased can become a pressure, burden, or source of shame for users (Park & Lee, 2019). This apprehension extends to concerns about privacy that may negatively impact usage. Experimental findings indicate that connection ubiquitination can increase the intermittent use intent of SNS users by raising privacy concerns and protective motives, and by exacerbating information overload and SNS exhaustion (Gao, Liu, Guo, & Li, 2018).

In short, when compared to traditional messages, Messenger is more superficial, but when compared to face-to-face communication, it is more vague due to the absence of body language and gestures, which on the one hand may hinder communication and on the other hand may help weak face-to-face communication to build fake personalities and thus achieve false communication (more feasibility compared to what can be achieved offline).

5. CONCLUSION

This study aimed to evaluate some updates related to achieving communication that were presented as enhancing the user experience and helping them achieve communication. Using a critical method based on the results of previous studies, we focused on the deficiencies that prevent the realization of communication value. It was found that these updates have a negative part that requires users to deal with them with caution and awareness.

Safety Check may reduce communication and reassurance through personal communication by converting users into numbers. This important update should be taken advantage of to identify those who need help and provide it to them without dispensing with sending reassuring messages, even if the friend announces that they are fine.

Messenger, on the other hand, may create false chemistry and appear to callers with a false appearance as it is less simultaneous than face-to-face communication, which increases the percentage of delusion due to the absence of body language. Additionally, it has become a hybrid communication that combines personal and group communication, which increases the burden and leads to a lack of focus. Therefore, users must choose their contacts carefully and balance communication between presence and messaging via Messenger.

Facebook Dating may not be the best update, as Facebook may be better at finding partners in a healthy way by simulating reality. Unlike the update, which may spread falsehoods by publishing unrealistic pictures and inaccurate descriptions, Facebook's natural approach may be more authentic. The lack of balance and intelligent use of the Newsfeed may cause users to fall into narcissism and create equally sized friendship circles, leading to a larger audience but less intimacy. The addiction to interactions has turned them into a form of currency placed on a publication to determine its value.

5. Bibliography List :

Abramova, O., Baumann, A., Krasnova, H., & Buxmann, P. (2016). Gender Differences in Online Dating: What Do We Know So Far? A Systematic Literature Review. *Hawaii International Conference on System*, (p. DOI:10.1109/HICSS.2016.481). KAUAI, USA.

Cheonsoo, K., & Sung-Un, Y. (2017, 6). Like, comment, and share on Facebook: How each behavior differs from the other. *Public Relations Review, 43*, pp. 441-449 https://doi.org/10.1016/j.pubrev.2017.02.006.

Clayton, R. B., Nagurney, A., & Smith, J. R. (2013). Cheating, Breakup, and Divorce:Is Facebook Use to Blame? *CYBERPSYCHOLOGY, BEHAVIOR, AND SOCIAL NETWORKING*, 717-720 DOI: 10.1089/cyber.2012.0424.

Cummings, J. N., Butler, B., & Kraut, R. (2000). The quality of online social relationships. *Communications of ACM*, pp. 103-108.

Egebark, J., & Ekström, M. (2017, 11 9). Liking what others "Like": using Facebook to identify determinants of conformity. *Experimental Economics, 21*, pp. 793–814 .

Ellison, N. B. (2015, 01 05). Social Network Site Affordances and their Relationship to Social Capital Processes. *The Handbook of the Psychology of Communication Technology*, pp. 205 – 227 https://doi.org/10.1002/9781118426456.ch9.

Finkel1, E. J., Eastwick, P. W., Karney, B. R., Reis, H. T., & Sprecher, S. (2012). Online Dating: A Critical Analysis From the Perspective of Psychological Science. *Psychological Science in the Public Interes*, pp. 3-66 DOI: 10.1177/1529100612436522.

Gao, W., Liu, Z., Guo, Q., & Li, X. (2018). The dark side of ubiquitous connectivity in smartphone-based SNS: An integrated model from information perspective. *Computers in Human Behavior, 84*, pp. 185-193.

Hong, C., Chen, Z. (., & Li, C. (2017). "Liking" and being "liked": How are personality traits anddemographics associated with giving and receiving "likes" on Facebook? *Computers in Human Behavior*, pp. 292-299 https://doi.org/10.1016/j.chb.2016.11.048.

Hwang, Y. (2011 , 03). Is communication competence still good for interpersonal media?: Mobile phone and instant messenger. *Computers in Human Behavior, 27*, pp. 924-934 https://doi.org/10.1016/j.chb.2010.11.018.

Lee, S.-Y., Hansen, S. S., & Lee, J. K. (2016). What makes us click "like" on Facebook? Examining psychological,technological, and motivational factors on virtual endorsement. *Computer Communications*, pp. 332-341.

Listerman, A. (2017, 09 25). *Have No Fear…Facebook is here?* Retrieved from masters of media : new media & digital culture M.A University of Amsterdam : http://mastersofmedia.hum.uva.nl/blog/2017/09/25/have-no-fear-facebook-is-here/

Marengo, D., Montag, C., Sindermann, C., D.Elhai, J., & Settanni, M. (2021). Examining the links between active Facebook use, received likes,self-esteem and happiness: A study using objective social media data. *Telematics and Informatics, 58*, p. 101523.

Marino, C., Lista, C., Solari, D., Spada, M. M., Vieno, A., & Finos, L. (2022, 06). Predicting comments on Facebook photos: Who posts might matter more than what type of photo is posted. *Addictive Behaviors Reports, 15*, p. https://doi.org/10.1016/j.abrep.2022.100417.

Meta. (2014, 10 15). *Introducing Safety Check*. Retrieved 02 02, 2023, from Meta: https://about.meta.com/

Obamiro, K., West, S., & Lee, S. (2020, 5). Like, comment, tag, share: Facebook interactions in health research. *International Journal of Medical Informatics, 137*, p. https://doi.org/10.1016/j.ijmedinf.2020.104097.

Park, Y. W., & Lee, A. R. (2019, 08). The moderating role of communication contexts: How do media synchronicity and behavioral characteristics of mobile messenger applications affect social intimacy and fatigue? *Computers in Human Behavior, 97*, pp. 179-192 https://doi.org/10.1016/j.chb.2019.03.020.

Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Com puters in Human Behavior, 29*, pp. 1841-1848 https://doi.org/10.1016/j.abrep.2022.100417.

Recuber, T. (2013, 5 11). Disaster Porn! *sage journals*, pp. 28-33.

Sek´scinska, K., & Jaworska, D. (2022, 12 23). Who felt blue when Facebook went down? - The role of self-esteem and FoMO in explaining people's mood in reaction to social media outage. *Personality and Individual Differences*.

Stafford, L., Kline, S., & Dimmick, J. (1999). Home e-mail: Relational maintenance and gratification opportunities. *Journal of Broadcasting & Electronic Media, 43 (4)* , pp. 659-669.

Toma, C. L. (2015, 6 18). Online Dating. In *International encyclopedia of interpersonal communication* (pp. 1 - 5 https://doi.org/10.1002/9781118540190.wbeic118). John Wiley & Sons, Ltd.

Toma, C. L., Bonus, J. A., & Swol, L. M. (2019). Lying Online: Examining the Production, Detection, and Popular Beliefs Surrounding Interpersonal Deception in Technologically-Mediated Environments. In T. Docan-Morgan, *The Palgrave Handbook of Deceptive Communication* (pp. 583–601).

Valenzuela, S., Halpern, D., & Katz, J. E. (2014). Social network sites, marriage well-being and divorce:Survey and state-level evidence from the United States. *Computers in Human Behavior, 36*, 94-101.

Winter, S., Neubaum, G., Eimler, S. C., Gordon, V., Theil, J., Herrmann, J., . . . Krämer, N. C. (2014). Another brick in the Facebook wall – How personality traits relate to the the content of status updates. *Computers in Human Behavior, 34*, pp. 194-202 https://doi.org/10.1016/j.chb.2014.01.048.

Zhang, Q., Phang, C. w., & Zhang, C. (2020). From the Side of Both Relationship Initiator and Responder: The Importance of Look and Geographical Distance in Online Dating. *Information & Management*, p. https://doi.org/10.1016/j.im.2022.103593.

Zuckerberg, M. (2016, 09 6). Retrieved from facebook: https://www.facebook.com/zuck/posts