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9 The Digital Rage: How Anger is Expressed Online

Abstract: Anger is expressed online through all sorts of different venues (e.g., Facebook, Twitter, discussion forums, email). Although such angry expressions are common, they also have potential to become highly problematic. It is not uncommon for people to indicate that they have behaved aggressively online through name-calling, rumor spreading, creating angry pages or events on Facebook, or even hacking into someone else's account to make inappropriate comments. Not surprisingly, such behavior can result in damaged relationships, regret, or other sorts of negative consequences.

Despite knowing that online anger is common and there can be serious consequences of such anger, relatively little research has been conducted on the subject. This is unfortunate as the few research projects there are point to online anger being an important phenomenon. For instance, Rui Fan and colleagues (2013) found that anger was shared more frequently on Weibo (a Twitter-like website in China) than other emotion. In fact, it was shared by both close connections and distant connections whereas an emotion like joy was shared mainly by close connections. Likewise, Martin and colleagues (2013) found that those who express their anger online via rant-sites (e.g., justrage.com) are more likely to experience maladaptive anger in other areas of their life.

The current chapter explores the limited research on online anger along with identifying psychological phenomena which makes online anger more likely (e.g., anonymity, impulsivity). Likewise, the chapter offers suggestions on how to minimize the frequency of expressing anger online, thus leading to fewer negative consequences.

9.1 The Digital Rage: How Anger is Expressed Online

Anger is expressed online through a variety of venues (e.g., Facebook, Twitter, discussion forums, email). Not only are such angry expressions common, they also have potential to become highly problematic. It is not uncommon for people to indicate that they have let their anger get the best of them and had it lead to them calling people names online, spreading rumors about people, creating angry pages or events on Facebook, or even hacking into someone else's account to make



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inappropriate comments. Not surprisingly, such behavior can result in damaged relationships, regret, or other sorts of negative consequences.

Despite knowing that online anger is common and there can be serious consequences of such anger, relatively little research has been conducted on the subject. In this chapter, we will explore the limited research on online anger along with identifying psychological phenomena which makes online anger more likely (e.g., anonymity, impulsivity). Likewise, we will offer suggestions on how to minimize the frequency of expressing anger online, thus leading to fewer negative consequences.

9.2 Challenges Surrounding Online Anger Research

As we said earlier, there is relatively little research on the subject of online anger. There are likely several reasons for this. For instance, because it is a relatively new phenomenon, researchers have likely not had time to begin studying it in depth. There are also fewer journal outlets available for such research, so authors may have difficulty finding a place to publish such research. However, what is likely the most significant reason for the slowness in publishing research on the topic has to do with the challenges associated with conducting such research.

There are three main obstacles to conducting research on online anger expression. First, the online community is a difficult population to assess. Unlike research conducted at universities or medical centers, there is no captured audience for a researcher to study. For the most part, we must try to gain access to willing participants through the websites they frequent (Twitter, discussion forums, YouTube, etc.). There is, not surprisingly, reluctance to be surveyed from such participants. They are posting online, often in an anonymous or semi-anonymous format, for a reason, and they are less likely to complete surveys because of their desire to remain anonymous. For instance, in one study that we tried to conduct, where we contacted randomly selected participants from Twitter and asked them to complete a survey for the potential to win a gift certificate, not only did we have almost no Twitter users elect to participate, we had a few of the selected users write us back with fierce criticism of our even contacting them in the first place.

There are a few potential solutions to this problem. However, none of them will address it fully. First, researchers could offer greater reward for participation (e.g., instead of a chance at a gift certificate, they could offer a gift certificate to each participant). One example of this might be to use Amazon Mechanical Turk, where participants would be paid a small fee for completing the survey. They could also utilize captured audiences who are active on social media and offer rewards to participants (e.g., students enrolled in a course who use Twitter could receive course credit for participation in the study). Finally, researchers could partner up with social media outlets to share data (e.g., researchers could work with Twitter/Facebook to exchange data on users).

A second hindrance is that it is sometimes difficult to infer emotional intent from written comments like tweets or Facebook posts. For instance, if someone were to tweet, “I can’t believe this is happening,” one could interpret them as angry, excited, devastated, overwhelmed, etc. Because tone of voice is so important to understanding emotional expressions, there can be a lack of clarity when trying to interpret the emotional intent of a post. This is particularly true when sarcasm may be involved. On the night of the 2012 United States Presidential Election, one of the tweets I came across read, “So Obama is the president for another 4 years. Good for you, America.” You could easily interpret that as excitement or joy over the election results. However, when I looked at the user’s other posts, what I found was a host of tweets in opposition to President Obama’s policies, suggesting the real intent of the election night post was frustration being expressed through sarcasm.

One method people use to convey their emotions online is, of course, the emoticon, which people often use to mimic the nonverbal behavior they would use in an offline conversation (e.g., a smiley face instead of smiling, a sad face instead of frowning; Derks, Bos, & von Grumbkow, 2008a). Research on the use of emoticons reveals that people often use them to make the emotional display more clear or to demonstrate sarcasm (Derks, Bos, & von Grumbkow, 2008b).

While research on online anger could use emoticons as a means of classifying emotions, there are still problems with such an approach. First, people are unlikely to use them consistently (i.e., even frequent emoticon users are likely to post something sad without a sad face from time to time). For example, research has shown that males are more likely to use emoticons when interacting with females, particularly for teasing or sarcasm, and females are more likely to use emoticons when making a joke (Wolf, 2000). Consequently, while emoticons are one method for inferring emotion from written content, researchers cannot rely on them completely.

Related to emoticon usage in research, Fan and colleagues (2013) had an interesting solution to the problem of inferring emotions from written content by using a computer program to code emotions based on key words, emoticons, etc. While that does not eliminate the potential for error due to sarcasm or unclear intent, it does offer some consistency with regard to coding.

A final problem is that the technology associated with social networking changes very quickly and, sometimes it can make the research that has been conducted obsolete before it has been published. Facebook, for example, has been known to change its format often. Such changes likely influence how people express their emotions on the given website. Most notable, is that in January of 2013 Facebook added an option where you can explicitly indicate how you are feeling when you post a status update. Though many people do not use the “feeling...” option when they update their statuses, the fact that it exists allows for a different means of expressing yourself and changes the nature of online anger research. Another more recent example is that in November of 2013, Google announced a change in how comments would be displayed on YouTube and how they would no longer allow for anonymous

comments. This was done as a direct result of anger and harassment online. It will likely have the effect of reducing anger and aggression online, as anonymity is one of the driving forces involved in internet anger, aggression, and bullying. There is no easy solution to this problem but for researchers and research outlets to work quickly in publishing results of studies.

9.3 Online Anger or Online Aggression

It is important to clarify the difference between online anger and online aggression. The two concepts are related, to be sure, but different enough as to warrant discussion. Anger is an emotion. It ranges from mild frustration someone might feel when they cannot find their car keys to the intense rage treated terribly by a friend or coworker (Spielberger, 1999). Aggression, meanwhile, is a behavior that can be expressed physically and verbally. Specifically, it is a behavior where the individual has the intent to harm someone or something (Graham et al., 2006). Hitting, kicking, or insulting someone are all examples of aggression. Although anger and aggression are related, they are separate, one obviously can be angry without being aggressive (e.g., anger control, anger suppression) and, though it is less common, one can be aggressive without being angry (hunting, boxing, etc.).

In the online environment, we see many examples of both anger and aggression. With regard to anger, it is not uncommon for people to vent online purely for the sake of venting. People will often use Twitter or Facebook to simply tell the world that they are angry about something. This is particularly true following nationally shared events like an election, a sporting event, or other controversial public experiences. In the wake of the Super Bowl, for example, it's common for people to tweet angrily about their team losing, perceived bad calls, or even their dislike of the halftime show.

People will also use social media as a means of aggressing against an individual or a group they dislike or want revenge against. Online aggression can take many forms; anything from name-calling, threatening, rumor spreading, or even hacking into social media accounts to disrupt social networks. Like most aggression, online aggression is typically motivated, in part, by anger. It is fair to say that online aggression is more problematic than online anger in the sense that it is likely to have more severe consequences. However, that does not diminish the seriousness of the potential consequences associated with online anger, like arguments, damaged relationships, or other common costs. It should also be noted that much, though not all, of online aggression is rooted in anger, so identifying ways to manage online anger will likely lead to a decrease in both anger and aggression.

A related topic that has gotten a lot of attention in the media is online bullying. Online bullying, or cyber-bullying, is an increasingly common form of aggression primarily associated with, but not limited to, social media use amongst school-age children and adolescents. Cyber-bullying, like online anger, is appealing to some for

the social distance or even anonymity it allows; one can aggress and elicit harm without facing his or her targets or allowing them a chance to respond. Online bullying often has detrimental effects on the bully and the victim but is extremely difficult to curtail. Not surprisingly, online aggression and online bullying have received considerably more attention in the literature than online anger (Badaly, Kelly, Schwartz, & Dabney-Lieras, 2013; Runions, 2013)

9.4 Research on Online Anger

Given the difficulties associated with researching online anger, it is not surprising that there is scant literature in the area. There has been research exploring perceptions of those who express their anger online, especially in an aggressive way (Badaly et al., 2013; Teng, Tseng, Chen, & Wu, 2012). There has also been research exploring the emotions people have to shared events. For example, Lee (2012) looked at online emotional expressions following the death of Michael Jackson. Though the study looked at all emotional responses, and not just anger, Lee found that anger was the second most common emotion expressed online. However, very little research has explored anger directly rather than aggression or bullying.

Despite this, we have seen some research in the last few years that demonstrates the importance of understanding online anger and finding ways to minimize it. For instance, a recent study found that anger spread faster online than joy, disgust, or sadness (Fan, Zhao, Chen, & Xu, 2013). In other words, anger was more likely to be retweeted or favorited and was, therefore, more viral, than the other emotions they studied. The authors classified the emotions of more than 70 million tweets on Weibo (a social-networking site in China, similar to Twitter). They then looked to see which tweets were more likely to be retweeted or shared with others. They found that, while sad and disgusted tweets were not shared by many people, and joyful tweets were shared by those you were close to, angry tweets were shared by both close and distant relationships. The implication of this research is that anger is the most “viral” of all emotions.

Similar findings come from a previous study that looked at the “virality” of online stories and news (Berger & Milkman, 2012). It was found that how quickly a story spread, depended on both the content and the emotional foundation of what is shared. Although stories positive in nature were more likely to be shared than those negative in nature, stories with high arousal (e.g., angering) were more likely to be shared than those with low arousal (e.g., sadness).

Anger is not just quick to spread online, it is also problematic. In another recent study we explored the use of rant-sites (Martin, Coyier, Van Sistine, & Schroeder, 2013). Rant-sites are websites that provide people with an online space to rant, anonymously, on any topic they are angry about. Visitors post rants about politics, family members, coworkers, or even just situations that annoy them (e.g., being

asked to install toolbars on their web browsers). There are rant sites for people to rant on general topics (e.g., <http://www.justrage.com>) whereas others are designed for rants on specific types of topics (e.g., offering service providers a place to vent about customers). Although clearly not as popular as social networking sites like Facebook or Twitter, they definitely see their share of internet traffic. Just one of these sites, Justrage, had more than 6,500 rants posted with more than 90,000 comments.

Our study surveyed rant site users to better understand why they visited rant-sites, why they posted on them, and how they felt after posting. We found that 100% of participants reported feeling calm and relaxed after posting and that the majority (66%) was hoping for comments from others on their posts. Some wanted validation or advice, and some were hoping for debate. We also surveyed participants on their general anger levels using the State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999) so we could compare them to the average as reported in the manual. We found that rant-site users were angrier than the average person and expressed their anger in more maladaptive ways. Finally, rant-site users reported many consequences as a result of their anger, including frequently feeling other negative emotions like sadness or fear, getting in physical or verbal fights, damaging property, or even having harmed themselves physically.

9.5 Problems With Expressing Anger Online

One of the most widespread misunderstandings involving anger expression is the catharsis myth; many people believe that releasing anger via venting, physical actions, or writing is a healthy coping mechanism, despite a wide array of research stating otherwise (Lohr, Olatunji, Baumeister, & Bushman, 2007; Bushman, Baumeister, & Phillips, 2001). Bushman (2002) showed that venting was actually counterproductive, as it caused people to further ruminate about their anger rather than move on. Similarly, one study showed that anger actually increased when those listening reinforced participants' venting behaviors, and decreased when the angering situation was reinterpreted by others (Parlamis, 2012). Additional research has shown that venting can be a healthy coping skill, but it must be used in a way that allows someone to release his or her anger and take a problem-solving approach to finding a solution for the cause of the anger. Nils & Rimé (2012) found that venting was only an effective coping method for dealing with anger when the person on the receiving end engaged in cognitive reframing directing the angered person toward problem-focused solutions.

The study on rant-sites described earlier (Martin et al., 2013) helps elucidate how online ranting reinforces the catharsis myth. All participants in the study reported feeling calm and relaxed after ranting. Although it may seem to the ranting person that their anger-reduction strategy has worked, that may not be the case. As pointed out by Olatuni and colleagues (2007), it is common for people to feel

relaxed immediately after venting, which is why participants feel that venting their anger is worthwhile; they are immediately reinforced with feelings of calmness and relaxation. However, and consistent with the literature on catharsis outlined earlier, Olatunji and colleagues go on to argue that over the long term, people who vent in this way are angrier and suffer more maladaptive consequences as a result of their anger. This is consistent with Martin and colleagues (2013) finding that those who frequent rant-sites were angrier and expressed their anger in more maladaptive ways than the norm.

The fact that it makes one's anger worse is not the only problem with ranting online. There can be interpersonal consequences as well. This is especially true given the fact that much online aggression is rooted in online anger. In fact, recent research (Martin) surveyed participants on how often they become angry, how they express their anger, and what sorts of consequences they experience as a result of their anger. Regarding this last piece, anger consequences, we asked specifically about behaviors and consequences in online environments over the last month and found that a striking number of participants had behaved in angry and aggressive ways online and had experienced negative consequences as a result. For instance, 12% of participants had posted angry or aggressive comments on a social networking site in the last month. Eleven percent had posted something negative about someone online in the hopes that he or she would see it and 3% had actually threatened someone via a social networking site. Nine percent had gotten into an argument that they later regretted and three percent had lost a friend or damaged a relationship because of something they posted online. The types of angry behaviors were broader than you might think as well. Some participants reported "hacking" into someone's social networking account and saying things as if they were them (6%), intentionally posting an unflattering picture of someone (4%), or even creating an angry page or event online (4%).

Not surprisingly, there is no published research on the treatment of chronic online anger problems. Social networking is relatively new and there are enough challenges associated with online anger research so that we have not yet seen any sort of intervention research related to online anger. That said, it is reasonable to assume that the basic cognitive-behavioral treatments associated with anger would be useful and appropriate in treating those with online anger problems as well. Specifically, relaxation approaches and replacing maladaptive angry thoughts with more positive thoughts will likely be valuable in treating online anger problems.

9.6 Why Does Online Anger Happen?

To understand online anger, one needs to understand why people get angry in general. Deffenbacher (1996) argues that anger results from a combination of a precipitating event, the angered individual's preanger state, and the individual's

appraisal of the precipitating event. The precipitating event is the event that served as the trigger (e.g., a long line at the grocery store, someone posting something you find offensive on Facebook). People often think of it as the cause of their anger but, ultimately, that is not entirely true. It is ultimately only one piece of the cause, contributing to the preanger state and the appraisal. Our preanger state is how we are feeling immediately before the precipitating event (e.g., stressed, tired, hungry, in a hurry). These feeling states can have the effect of exacerbating our angry response by affecting how we appraise the precipitant. For example, being tired is associated with poorer impulse control that may lead to a more intense angry response when faced with a provocation.

The final piece of Deffenbacher's model is appraisal, or how we interpret the precipitating event. Deffenbacher argues that we become angry because we appraise situations as blameworthy, unjustified, punishable, etc. So, if you are on Facebook one night and see a political post from a friend (the precipitating event) that you disagree with, you are likely to get angry if you interpret that post as blameworthy (e.g., "he should know better than that"), unjustified (e.g., "I should not have to read this sort of thing from him"), and/or punishable (e.g., "I am going to let him have it). If you interpret the situation a little differently, (e.g., "that is a foolish post, but people are allowed to believe whatever they want"), you are less likely to become angry.

It is important to note that when it comes to cognitive appraisal, anger-inducing interpretations or appraisals of a situation are not necessarily inaccurate. Sometimes people are absolutely correct in their interpretation of an event and anger is a perfectly reasonable emotion to feel. For instance, if an acquaintance posts something negative and hurtful about you, it would seem totally reasonable to become angry in response. The next step, though, is figuring out how to handle your anger. Is it wise to respond with your own angry comment, call him or her to talk about it in person, decide the relationship is not worth it and block/unfriend the person? Each of those responses might be reasonable, depending on a host of contextual factors (e.g., the type of relationship you have with the person already, other mutual friends who might be involved in the discussion, the consequences of ending the relationship).

Although anger online occurs just like anger anywhere else, there are a few elements of the online environment that make angry interactions more common or more problematic online. First, in those online settings that allow for truly anonymous posting (e.g., 4chan.org, Justrage.com), there is an increased likelihood of angry and aggressive posts. Ultimately, anonymity leads to what feels like consequence free emotional expressions and people become less afraid of expressing their anger. People may be more open to actively expressing their anger online when they know it cannot be tied back to them.

Although true anonymity is somewhat rare online, there is a related phenomenon that is relevant in most online environments. Online interactions through Facebook, Twitter, and even email, allow for greater social distance than in person interactions. What this means is that they feel somewhat anonymous to people even though

they are not truly anonymous. The distance between you and the person you are interacting with may stop you from censoring yourself. As you type the post, you are not looking the person in the eye or seeing their facial expressions. In a face-to-face conversation, you might notice that he or she is really reflecting on or is hurt by what you are saying and you may back off before things get too heated. None of that happens in an online interaction so things can escalate quickly.

The online environment also has a tendency to exacerbate impulsivity problems. Posting on Facebook, Twitter, email, etc. are a little too quick and easy sometimes. You can respond to a provocation immediately, and when you are most angry, rather than giving yourself time to emotionally calm down you become less rational and less likely to think through the consequences of what you are writing. What you post might actually capture how you are feeling very well, but it is probably not expressing that frustration in the most effective way or, worse yet, may come off in a way that damages a relationship.

Finally, the online environment can also lead to misunderstandings. Because it is written, it can be somewhat difficult to understand the intent of other people's posts or emails. Similar to the difficulty in researching online anger that was addressed earlier, sarcasm, hyperboles, irony, etc. can often be hard to identify when written. For example, the day after President Obama won the Noble Peace Prize, I saw a friend post an article about it on Facebook with the following: "About time a Kenyan won!" Though I knew my friend well enough to know she was making a joke about the birther movement, another of her friends did not and responded with a lengthy, and somewhat cruel, angry response. The exchange, which escalated from there, was the result of a simple misunderstanding.

9.7 Avoiding the Anger Online Trap

Given the finding reported earlier, that almost one in ten report having an argument online in the last month that they later regretted, it seems clear that online anger is getting the best of many people. While it is completely reasonable that people want to voice their frustration in an online venue, it is also important to avoid becoming so angry that it leads to negative consequences. Here are some strategies people can use to avoid experiencing those consequences.

1. Don't respond electronically. Go talk to the person if you can. Email, Facebook, Twitter, etc. are sometimes the easy way out. They are what people do when they do not want to have an uncomfortable face-to-face conversation with someone. There are times when an online response is understandable, but if it is possible to avoid it, it might make sense to do so.
2. Wait. Emotions are usually short-lived. If you can wait it out until your anger starts to dissipate, your response might be better for it. If you really feel you need to do something in response to the provocation, go ahead and start writing but do not

- post or send it until you have had a chance to cool off. Then, reread what you wrote, think it through, probably rewrite some parts, and post the new version.
3. Have it read. You may want to ask a friend you trust to read it before you post it. That person, who is ideally removed from the situation, might be able to offer some much needed perspective, tell you if it sounds rude, or if it is unclear.
 4. Remember that being angry is not the same thing as being cruel. There are infinite ways to voice your anger and it is quite possible to do so respectfully. If you are angered by an article you just read and want to respond in the discussion forum, go for it. But avoid name-calling and other insults. Instead, focus on the ways you disagree with the article. Be responsible and respectful in your response and things are less likely to escalate.
 5. Ask yourself why you are sending it. Make sure you are aware of the end result you are hoping for. Are you trying to change your friends' opinions or get an apology from someone? Regardless, make sure you think about why you are writing it and that you can obtain whatever the desired outcome is. If the point is just to vent, it's probably better not to send it at all and find some other way to deal with your anger.

9.8 In Conclusion

In summary, online anger is a very real and common problem that seems to be becoming even more common as more and more people take to social networking venues to vent about their concerns. Despite the frequent and severe consequences, there has been little research on online anger or online aggression. Likewise, there are few resources designed to provide guidance on how to manage or limit the expression of anger online. This chapter provided a framework for understanding online anger within the context of anger in general, provided solutions to some of the problems associated with researching online anger, and provided hands-on tips for managing online anger.

References

- Badaly, D., Kelly, B. M., Schwartz, D., & Dabney-Lieras, K. (2013). Longitudinal associations of electronic aggression and victimization with social standing during adolescence. *Journal of Youth and Adolescence*, 42, 891-904. doi:10.1007/s10964-012-9787-2
- Berger, J., & Milkman, K. L. (2012). What makes online content viral?. *Journal of Marketing Research*, 49, 192-205. doi:10.1509/jmr.10.0353
- Bushman, B. J. (2002). Does venting anger feed or extinguish the flame? Catharsis, rumination, distraction, anger and aggressive responding. *Personality and Social Psychology Bulletin*, 28, 724-731. doi:10.1177/0146167202289002
- Bushman, B. J., Baumeister, R. F., & Phillips, C. M. (2001). Do people aggress to improve their mood? Catharsis beliefs, affect regulation opportunity, and aggressive responding. *Journal of Personality and Social Psychology*, 81, 17-32. doi:10.1037/0022-3514.81.1.17

- Derks, D., Bos, A. R., & von Grumbkow, J. (2008). Emoticons and online message interpretation. *Social Science Computer Review*, 26, 379-388. doi:10.1177/0894439307311611
- Derks, D., Bos, A. R., & von Grumbkow, J. (2008). Emoticons in computer-mediated communication: Social motives and social context. *Cyberpsychology & Behavior*, 11, 99-101. doi:10.1089/cpb.2007.9926
- Fan, R., Zhao, J., Chen, Y., & Xu, K. (2013). Anger is more influential than joy: sentiment correlation in Weibo. Reprint submitted to Elsevier, 10 September. Accessed January 2013. Available online at <http://arxiv.org/abs/1309.2402>.
- Graham, K., Tremblay, P. F., Wells, S., Parnanen, K., Purcell, J., & Jelley, J. (2006). Harm, intent, and the nature of aggressive behavior: Measuring naturally occurring aggression in barroom settings. *Assessment*, 13, 280-296. doi:10.1177/1073191106288180
- Lee, C. (2012). Exploring emotional expressions on YouTube through the lens of media system dependency theory. *New Media & Society*, 14, 457-475. doi:10.1177/1461444811419829
- Lohr, J. M., Olatunji, B. O., Baumeister, R. F., & Bushman, B. J. (2007). The psychology of anger venting and empirically supported alternatives that do no harm. *The Scientific Review of Mental Health Practice: Objective Investigations of Controversial and Unorthodox Claims in Clinical Psychology, Psychiatry, and Social Work*, 5, 53-64.
- Martin, R. C. (2013). [Online anger consequences]. Unpublished raw data.
- Martin, R. C., Coyier, K., VanSistine, L. M., & Schroeder, K. L. (2013). Anger on the Internet: The perceived value of rant-sites. *Cyberpsychology, Behavior, And Social Networking*, 16, 119-122.
- Nils, F., & Rimé, B. (2012). Beyond the myth of venting: Social sharing modes determine the benefits of emotional disclosure. *European Journal of Social Psychology*, 42, 672-681. doi:10.1002/ejsp.1880
- Olatunji BO, Lohr JM, Bushman BJ. (2007) The pseudopsychology of venting in the treatment of anger: Implications and alternatives for mental health practice. In: Cavell TA, Malcolm KT, eds, *Anger, aggression and interventions for interpersonal violence*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers, pp. 119-141.
- Parlami, J. D. (2012). Venting as emotion regulation: The influence of venting responses and respondent identity on anger and emotional tone. *International Journal of Conflict Management*, 23, 77-96. doi:10.1108/10444061211199322
- Runions, K. (2013). Toward a Conceptual Model of Motive and Self-Control in Cyber-Aggression: Rage, Revenge, Reward, and Recreation. *Journal Of Youth & Adolescence*, 42, 751-771. doi:10.1007/s10964-013-9936-2
- Spielberger, C. D. (1999). Professional manual for the State-Trait Anger Expression Inventory-2 (STAXI-2). Odessa, FL: Psychological Assessment Resources.
- Teng, C., Tseng, F., Chen, Y., & Wu, S. (2012). Online gaming misbehaviours and their adverse impact on other gamers. *Online Information Review*, 36, 342-358. doi:10.1108/14684521211241387
- Wolf, A. (2000). Emotional expression online: Gender differences in emoticon use. *Cyberpsychology & Behavior*, 3, 827-833. doi:10.1089/10949310050191809