Bits of emotion

The process and outcomes of sharing emotions online

Rodríguez Hidalgo, C.T.

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Chapter 1

Introduction and dissertation outline
“Social media and fame is also a band-aid treatment for our negative feelings. Whenever we are feeling self-conscious, we can upload a photo to Instagram and receive likes, whenever we are angry, we can write a Facebook rant, whenever we are lonely we can Snapchat our friends. But none of these remedies are long-lasting – the likes, comments and snaps give us instant gratification but do not make us confront the roots of our issues”

Knirnschild, April 27th, 2018

The abovementioned quote exemplifies popular conceptions about the negative emotional effects of social media use. The easiness to share personally relevant content, via a simple click and obtaining almost immediate feedback through social networking sites (SNSs) and other social media, has given way to a common conception that these platforms abound with superficial exchanges of a narcissistic nature (Fishwick, 2016, March 17). Under this perspective, content is shared only to obtain a temporary emotional boost by means of impressing others: holidays, parties, baby ultrasounds, new jobs or prizes are published to a large network of contacts. But how true is it, that people only seek to share shallow feelings in social media? How true is it, that social media provides only instant gratification in venting negative emotions? How true is it, that social media is not able to confront users with the root of their emotional issues?

These questions provide the perfect setting for the topic of this dissertation, which aims to investigate whether and how users’ online sharing expressions of emotion, as well as feedback to these emotional sharings – could bring betterment, not bitterness, to its users. In recent times, for the general public, academics, but also for parents and educators, conceptions on whether social media is good or bad for our emotions seem to be met with strong opinions and/or conflicting evidence. On the one hand, studies which have found negative emotional outcomes encompass findings such as that social media may foster malicious envy when used passively (Lin & Utz, 2015) and may be a fertile ground for self-promotion by persons scoring high on narcissism (Choi, Panek, Nardis & Toma, 2015). Other work has found that the mere use of Facebook could become a source of stress (Chen & Lee, 2013) and even lead to depression (Chou & Edge, 2012). On the other hand, positive findings include that social media can be a good source of social support, particularly in health care contexts (Ballantine & Stephenson, 2011; Antheunis, Tates, & Nieboer, 2013); that it can temporarily boost positive affect (Bayer et al, 2017); increase a sense of connection with existing offline friends (Valkenburg, Peter & Schouten, 2006), and even that having a higher number of Facebook friends is associated to feeling less stressed (Nabi, Prestin & So, 2013).
The dissertation aims to bring nuance and clarity to these contrasting views by investigating the use of social media communication for the better of participants. The reported studies are predominantly based on the framework of social sharing of emotion or SSE (Rimé, 2009). SSE entails a description of an emotional event in a language known to both persons, to share the experience with others. SSE is ubiquitous in offline life (Rimé, Mesquita, Boca & Philippot, 1991) and in most of the population (Rimé, Finkenauer, Luminet, Zech, & Philippot, 1998). Sharing is differentiated from venting, or a verbalization ‘outburst’ of an emotion (Rodríguez-Hidalgo, Tan & Verlegh, 2015; Nils & Rimé, 2012).

Emotion regulation is implied in Rimé’s framework as an important possible outcome of SSE. When emotions do not serve the person’s benefit, emotion regulation comes in as attempts to modify the subjective experience and behavioral expressions of felt emotions (Gross, 1998). Research which investigates online SSE and its emotional outcomes under an emotion regulation lens, is uncommon. Looking through this lens is important, since the capacity of emotion regulation enables living a successful and fulfilling life (Gross, 2007). Moreover, emotion regulation is one main goal for sharing emotions in the first place (Rimé, 2007). Sharing constitutes a supportive social interaction for receiving affective support in buffering negative emotions and can provide cognitive support that may in the longer run help alleviate unpleasant affect.

The present dissertation aims to investigate the prevalence and emotional functionality of SSE through social media, thus extrapolating the phenomenon to the online context. The work focusses on SSE as one main behavior which could lead to positive emotional outcomes stemming from active social media usage. Moreover, this dissertation posits that emotion regulation and recovery from negative emotions are possible effects of online SSE, just as they have been found for offline SSE (Rimé, 2009; 2007). So far, only few studies have supported this notion (Qiu, Lin, Leung, & Tov, 2012; Berger & Buechel, 2012). In addition, regarding sharing emotions online, research has addressed the relations between motives (Berger & Buechel, 2012; Vermeulen, Vandebosch & Heirman, 2018), structural aspects (Lin & Qiu, 2012), social norms on the one hand (Waterloo, Baumgartner, Peter & Valkenburg, 2018), and effects of emotional disclosure through SNSs on the other (Bayer et al, 2017; Choi & Toma, 2014), but none addressed specific emotion regulation processes of online SSE which may lead to emotional outcomes.

This dissertation conceptualizes SSE and emotion regulation through social media as a process involving three basic sequential phases. In the first phase, online SSE as a sequential process is initiated by posting an emotional experience. From here on, the initiator’s act of
(initial) expression of emotion to receive feedback is referred to as SSE initiation. Emotion regulation effects on the initiator would correspond to so-called ‘self-effects’ or effects that media use has on the individual themselves, independently of feedback (Valkenburg, 2017). In the second, the initiator receives feedback. In the third phase, feedback elicits distinct emotional processes and effects. The dissertation adds to the literature by investigating the relations and effects of the two, namely sharing and feedback.

The practical application of the research reported in this dissertation is in providing to parents, educators, health care professionals, governmental entities and the like, support in identifying beneficial instances of online SSE and in understanding the conditions of beneficial feedback. This is important, since it has been established that people who disclose negative emotions online usually do not receive enough or sufficiently beneficial replies (Forest & Wood, 2012). Apart from the feedback issue, knowledge about the contribution of SSE to emotion regulation may inform social media use for mental health, which has taken a top three position among the major global health issues of our time (Nathe, 2018, January 19).

In sum, instead of generally asking ‘is social media good for your emotions?’ this dissertation proposes that the academic field and the current societal debate may benefit more from asking a more specific question: ‘what constitutes online emotion sharing, and which underlying mechanisms may explain the emotional outcomes of both online sharing and receiving feedback online?’ This dissertation aims to answer these questions while building on and acknowledging the recent developments in the field. In so doing, its results would bring about greater theoretical knowledge about the mechanisms and processes of online SSE, knowledge which could be used later to improve any possible effects, while minimizing negative outcomes. Next, we provide details about the main specific questions which guide this dissertation, followed by an overview of each chapter and their main results.

Leading questions

1) A theoretical conceptualization of online SSE

The nature of emotional expressions in social media can vary wildly. People may express themselves using just one emoji, writing one sentence, or telling a full emotional story. To carefully study the phenomenon of emotion sharing, a conceptualization and definition of what constitutes social sharing of emotions is necessary to account for the occurrence of the phenomenon, and to establish a theoretical foundation through which the phenomenon may be empirically studied. Key questions to answer are: what exactly constitutes online SSE?
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How is online SSE different than online venting of emotions? Which elements make out its process? This conceptualization would not only serve as a guide throughout the dissertation, but also provide a foundation to study the specific phases of online SSE, together with feedback types.

2) Effects of online emotional expressivity within the process of online SSE

A relevant aspect regarding online sharing of emotion is how users actually express emotion within the context of SSE initiation and feedback. Computer-mediated communication (CMC) of emotions can be equally emotional and involving as F2F exchanges (Derks, Fischer & Bos, 2008). Moreover, CMC communication can be even more explicit and less inhibited than F2F (Joinson, 1998; 2001). Just as in face-to-face (F2F) communication, online expression of emotions can use several means of paralanguage (i.e. multiple exclamation marks, intonations, punctuations). The main question is how are emotional expressions realized by means of textual paralinguistic cues (TPC, Luangrath, Peck & Barger, 2017) and how would these cues affect the process of SSE? Specifically: are paralinguistic cues used to socially share emotions, or merely to ‘vent’ emotions? And how would these cues affect feedback? Would there be any correspondence between these symbols during the three phases of online SSE? More generally, answering these questions could broaden our knowledge as to how paralinguistic cues can be used to make online messages more efficient within the context of online SSE.

3) The intra and interpersonal emotion regulation effects of online SSE

Studies focusing on online emotion sharing have predominantly studied its immediate emotional outcomes (Choi & Toma, 2014; Bayer et al., 2017), or have investigated the characteristics of socially supportive feedback (Seo, Kim & Yang, 2016). However, few studies have incorporated the separate and aggregated effect of both in an interactive communication sequence. In addition, research on the matter has rarely been experimental, so as to bring more certainty about causal mechanisms. In line with recent theoretical accounts which distinguish intra from interpersonal effects of social media use (Valkenburg, 2017), this dissertation aims to contribute with experimental evidence of both intra and interpersonal effects of sharing emotions online. Advancing on this question could clarify the specific role of communicative actions, such as sharing or receiving feedback, within the process of online SSE.
4) Assessing dynamic time-effects of social media support on emotion regulation

A relevant question is assessing the dynamic time-effects of obtaining social media support, given that both a ‘fleeting’ short term positive emotional effect after sharing on SNSs (Bayer et al, 2017) and long-term effect after three weeks (Choi & Toma, 2014) have been identified. However, research which has considered a longer time frame (six months) has found a very limited emotional effect of using SNS (Utz & Breuer, 2017; Frison & Eggermont, 2015). After finding no effect of SNS use on stress, Utz & Breuer (2017) concluded that assessing the impact of shorter time-lags was recommended.

An additional and related aspect which could affect this interplay is the specific nature of the emotion-eliciting event. Different events activate different appraisals and therefore, the nature of the event can importantly determine which, how and for long emotions are felt (Ortony, Clore & Collins, 1990). The present dissertation consequently argues that focusing on the nature of the emotional event could increase our understanding of the influence of online feedback in terms of helping users regulate or manage their emotions during important life events.

5) The interplay of emotion regulation effects through face-to-face and SNSs

Nowadays, people often share their emotions with their offline and online networks. Considering that sharing emotions in most cases results in receiving feedback, and that this feedback is paramount to regulate emotions (Rimé, 2007), the question arises about the interplay between online and face-to-face support when receiving this feedback. The focus lies on the interplay because it has been established that online communication is usually a manifestation and an extension – not a replacement – of people’s social lives (Dienlin, Masur & Trepte, 2017). Through SNSs, users can for example feel closer to their real-life friends (Valkenburg & Peter, 2007) and communicate with their offline friends on the platform (Subrahmanyam, Reich, Waechter, & Espinoza, 2008). Considering this, it is relevant to assess the separate and aggregated contribution of FtF and online feedback in possible regulation effects. Do both types of feedback work together in helping users regulate their emotions, or do they operate in different ways? For this objective, this dissertation employs a within and between persons’ approach to measure effects, because the latest trends in media effects research suggests these also occur at the within persons’ level (Nikkelen, Valkenburg, Huizinga, & Bushman, 2014). This approach measures whether feedback can improve affect across subjects, or whether changes in individual feedback can exert a greater effect on
emotions within persons. Another point which deserves attention is to assess the effect of offline social sharing regarding emotion regulation, whose contribution to diminish the impact of the emotional experience has been found to be limited (Rimé et al., 1998).

**Dissertation outline**

The aim of this dissertation is to investigate the phenomenon of online emotion sharing, building on its occurrence and theoretical conceptualization, while focusing on a main outcome, emotion regulation. The following topics were investigated:

1. Prevalence of online SSE in online social networks (Chapter 2);
2. Theoretical modeling of the process of online SSE (Chapter 2);
3. The use of paralinguistic symbols in the process of online SSE (Chapter 3);
4. Online emotional mimicry in the process of online SSE (Chapter 3);
5. The intra and interpersonal effects of online SSE in the initiator sharer (Chapter 4);
6. The dynamics of FtF and online feedback in the regulation of stress regarding a particular life stressor (Chapter 5).

This dissertation presents the results of five empirical studies in two main components. The first studied more structural aspects of online SSE (chapters 2 and 3) and the second investigated its functional outcomes (chapters 4 and 5). Figure 1 depicts how the chapters fit into the conceptualization of the basic online SSE cycle, with a view on intrapersonal and interpersonal regulation.

As to methodology, the dissertation adopts a multi-methodological approach, aiming to obtain a balanced account of the online SSE phenomenon in terms of internal and external validity. Table 1 shows a methodological overview of the chapters in the dissertation, with their design, the communication medium they investigate, their data composition, main dependent variable, and sample nationality. All chapters are individual research papers which are either published or submitted for publication.

The dissertation concludes with a general discussion on the findings, where a model of online SSE and suggestions for future research are presented (Chapter 6). Based on this discussion, three-practical take away points are provided for practitioners and the general public in its summary.
Figure 1. Chapter overview according to the online SSE cycle

![Diagram showing the SSE cycle with the following steps: Sharing → Intrapersonal response → Feedback → Interpersonal response.]

Table 1. Overview of the main methodological characteristics of each chapter

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Design</th>
<th>Communication medium</th>
<th>Sample</th>
<th>Dependent variable</th>
<th>Sample nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Content analysis</td>
<td>Blog SNSs</td>
<td>8 million blogposts, 540 for human coding</td>
<td>Presence of online SSE</td>
<td>International</td>
</tr>
<tr>
<td>3</td>
<td>Content analysis</td>
<td>Blog SNSs</td>
<td>310 blogposts</td>
<td>Presence of textual paralanguage cues</td>
<td>International</td>
</tr>
<tr>
<td>4</td>
<td>Experiments</td>
<td>Facebook</td>
<td>University lab (n = 173)</td>
<td>Emotion intensity &amp; emotion regulation strategies</td>
<td>Study 1: Chilean</td>
</tr>
<tr>
<td>5</td>
<td>Six-wave longitudinal online survey</td>
<td>Face-to-face, Facebook, WhatsApp, Twitter, Instagram</td>
<td>n = 280 (all waves)</td>
<td>Emotion intensity, Feedback prosociality</td>
<td>Chilean</td>
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<td></td>
<td></td>
<td></td>
<td>Amazon Mechanical Turks (n = 106)</td>
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<td>Study 2: International</td>
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</tbody>
</table>

Sample 2:

Study 1: Chilean
Study 2: International
Chapter 1

Chapter overview

Part I: Prevalence and process of online SSE

The first part of this dissertation focusses on investigating the structural aspects of online SSE, such as its prevalence or natural occurrence in SNSs, of which we know little so far, and on presenting a conceptualization and modelling of online SSE as a sequential communication process.

Chapter 2: Conceptualization of online SSE and its prevalence

Chapter 2 provides a conceptualization of online SSE and its three-phased basic cycle, while investigating the natural occurrence of online SSE in a blog social networking platform, Live Journal. This chapter provides the foundation of this dissertation, since it defines and sets the theoretical model of online SSE and its basic communication phases. Furthermore, it brings empirical evidence to a phenomenon assumed to prevail in online social networks. Results found that the process of online social sharing as it occurs in FtF, in which users’ express emotions and others provide supportive feedback, is also found in a blog SNSs. Further, the majority of SSE initiation (73.5%), in this case posting a blogpost entry displaying online SSE, provided a full account of both the feeling and the emotional situation experienced. Lastly, the study found that feedback tended to be predominantly affective, that is, showed the provider’s empathy and appreciation. These results showed that online SSE is a natural occurring phenomenon in SNSs, with the potential for beneficial feedback instances.

Chapter 3: Textual paralinguistic cues in online SSE and emotional mimicry

Chapter 3 investigates how users utilize textual paralinguistic cues (TPC, Luangrath, Peck & Barger, 2017), such as character repetitions, multiple punctuations and emoji’s (‘yeeell! 😄’) in emotional expressions. Specifically, the chapter distinguishes between online SSE and online venting. Further, it investigates whether emotional mimicry is a phenomenon which occurs within the context of online SSE. Specifically, this chapter investigated the occurrence of five different types of TPC on a sample of blogposts from Chapter 1, however utilizing a new coding procedure which involved both online SSE and non-SSE blogposts. Results showed that TPC were more common in online SSE posts, as opposed to non-SSE posts. Furthermore, auditory TPC predominated in initiation, feedback and response of online SSE phases, while voice qualities (i.e. capitalizations, underlining, punctuations and special characters) were more common in venting posts. Regarding online mimicry, the study found that tactile affective cues in feedback predicted their presence in the initiators’ reaction,
concluding that the context of the communication, for instance if the conversation has an affective character, is important to understand and predict the usage and mimicry of TPC online.

**Part II: The effects of sharing emotions and receiving supportive feedback**

While the previous chapters focus on the structural aspects of online SSE and employ a content analysis methodology to identify and analyze online SSE expressions, the second part of the dissertation complements the first by investigating the functional aspects of online SSE. In particular, it seeks to understand the emotional outcomes of online SSE with a focus on the individual user.

**Chapter 4: The intra and interpersonal effects of online emotion sharing**

Chapter 4 investigated online SSE as an intra and interpersonal phenomenon, focusing on emotion regulation a function of the basic communication cycle of online SSE: SSE initiation, feedback to SSE, and the initiator’s reaction to this feedback (Rodríguez-Hidalgo, Tan & Verlegh, 2015), as identified in Chapter 2. Specifically, the chapter seeks to answer the question: if people share their emotions online and receive feedback, which are the immediate effects in terms of intra and interpersonal emotion regulation? Based on the established emotion regulation framework (Gross, 2007), and building on recent theoretical accounts of both intra and interpersonal effects stemming from social media activity (Valkenburg, 2017), both intra and interpersonal emotion regulation effects were anticipated from the initial act of sharing and after feedback. In two experiments, participants were asked to write a status update, in response to presentation of a sadness inducing vignette. Afterwards, they received two types of prosocial feedback (affective, cognitive) from two relationally distant sources (acquaintances, close friends). These identical experiments were conducted to build on the robustness of the findings. Results showed, as to the interpersonal effects of feedback, that cognitive feedback elicited higher reappraisal, or changing one’s perspective of the situation, while greater relational closeness led to higher emotion stabilization. As to the intrapersonal effects, results suggested that sadness intensity decreased after sharing. This decreasing effect was found to occur consecutively after sharing, and then again after feedback.

**Chapter 5: The interplay between face-to-face and online feedback in the regulation of stress**

Chapter 5 investigated the potential of SSE feedback for emotion regulation in a natural setting. Specifically, this research studied whether the interplay of FtF and online feedback
are associated with negative emotion downregulation over the course of a real-life stressor event. The research employed a six-wave design, which assessed within and between person relationships between the different types of feedback and stress, the emotion under focus. Specifically, students’ stress was assessed during the yearly PSU (Prueba de Selección Universitaria, for its Spanish acronym) exam, the Chilean equivalent to the U.S. SAT, which determines admission to university. The impact of feedback was analyzed in terms of feedback prosociality, operationalized as the degree to which feedback was judged to be prosocial or helpful by the receiver, whereas its outcomes were measured in terms of emotion regulation, or managing emotions to our benefit, reducing their felt intensity (Diener, Larsen, Levine, & Emmons, 1985; Gross, 2007).

Results pointed at online feedback being effective to downregulate stress, but only during the final phase of the test. Notably, this effect was evidenced on the short term (a few days) and also on the longer term (three weeks). In addition, FtF feedback showed a reciprocal reinforcement effect on stress during the test taking phase. The data suggests that prosocial online and FtF feedback have differing effects when it comes to regulating stress during an important life event. Notably, online feedback may help to downregulate stress towards the end phase of a stressful life event.

Chapter 6: Discussion

Chapter 6 provides an overview of the main findings and conclusions of this dissertation and extends SSE theory by presenting a theoretical model of online SSE. This section underlines the theoretical implications of the dissertation and identifies further questions for research. Likewise, limitations are addressed. Lastly, from a more practical standpoint, the summary of this dissertation presents three takeaways or practical suggestions for useful or beneficial online SSE.