

Thesis

To obtain the academic degree of
Master of Science in Economics & Business
(Major in Marketing)

'When We Look Good and Care, We Share'

*Virality Through Disentangling the Effects of Emotion and Social Currency in
Online Content*

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Preface

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Abstract

What drives people to share online content? Formerly, research generally focussed on the impact of virality of such content (e.g. diffusion and sales, Godes & Mayzlin, 2009; Godes & Mayzlin, 2004; Goldenberg, Mazursky, & Solomon, 1999). However, Jonah Berger examined six key drivers for the virality of online content in his STEPPS framework: social currency, triggers, emotion, public, practical value and stories (Berger, 2014). This paper focusses on the two principles ‘social currency’ and ‘emotion’ for driving virality of online content.

The social currency of a certain content (a post, information, data) is the extent to which such content makes the person who shares it look good to its peers (Berger, 2014). People use social currency to achieve desired positive impressions among their peers and so enhance their social status. Next to social currency, emotion also has a positive impact on virality (Berger & Milkman, 2012; Heath, Bell, & Sternberg, 2001). People share emotionally charged content to make sense to their experiences, reduce dissonance, or deepen social connections (Leon, Riecken, & Schachter, 1956; Peters & Kashima, 2007). This paper focusses on two dimensions of emotion: positive valency and arousal (high and low) (Laros & Steenkamp, 2005; Russell, 1980). Positive valence is the extent to which an individual can be pleasant regarding an event, object, or situation. Arousal is the state of action and readiness for action (Heilman, 1997). This impact increases when the content is emotionally more positive and high-arousal (Berger & Milkman, 2012).

Based on experimental research, where I processed 143 respondents with four different sets of online content, each with their own level of social currency (high/low) and emotion (high/ low), I manipulated the sharability (i.e., virality) of the stimuli. The results emphasized a significant impact of social currency and emotion on the virality of online content. However, moderating emotions to social currency does not have a significant effect on its virality.

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1. Introduction

Now-a-days, it is very common to share content with others, since research shows that 59% of people actually do so (Allsop, Bassett, & Hoskins, 2007). Several papers are suggesting that communication between people affect attitudes and decision making (Katz & Lazarsfeld, 1955; Asch, 1956). More recent research shows the impact of word-of-mouth on product adoption and sales (Godes & Mayzlin, 2009; Chavalier & Mayzlin, 2006). Many WOM and viral marketing researches are focussed on its impact, so *how* sharing online content result in, for example, sales (Goldenberg, Mazursky, & Solomon, 1999; Godes & Mayzlin, 2009; Godes & Mayzlin, 2004). However, less is known about *why* people share some content more than other content. In other words, what drives people to share online content?

Because the internet is overloaded with information, people search for content that has been shared with others. Things other people tell have a significant impact on what people think, read, buy, and do. Because word-of-mouth is more persuasive (you trust, listen and believe your friends more) and more targeted (reach people who are actually interested in the thing being discussed), it is at least ten times more effective than traditional advertising. Jonah Berger states in his book 'Contagious', that there are two reasons why people share content. Firstly, because it is interesting, and secondly because it is useful (Berger, 2014). Other external factors, separate from the characteristics of the content, may affect the virality of content by functioning like advertising (interest, surprise, word count, or author fame) (Berger & Milkman, 2012).

The centrality of social media and digital channels in firms' marketing activities and the importance of virality mean that nowadays many brands try to understand how to make their marketing content viral. This led to the emergence of the so-called viral marketing. Van der Lans and his colleagues (2010) describe viral marketing as the phenomenon by which consumers mutually share and spread marketing relevant information, initially sent out by marketers to stimulate word-of-mouth. Viral marketing is a powerful marketing communication tool because information spreads

rapidly and reach many consumers in a short period of time (Van der Lans, Van Bruggen, Eliashberg, & Wierenga, 2010). Furthermore, messages from friends have more impact than advertising and internet allows many different forms of communication such as video's, text, and games. Marketers need to manage the viral process to facilitate the spread of information because information does not spread automatically (Kalyanam, McIntyre, & Masonis, 2007).

Unfortunately, despite the centrality of viral marketing in today's world, there is a lack of guidance for marketers on how to make their marketing content viral. One of the rare theories that explains the drivers of virality was proposed by Jonah Berger and is called the "six key STEPPS" of virality, a model or framework that explains what causes things to be talked about, shared, and imitated: social currency, triggers, emotion, public, practical value, and stories. Yet, the effectiveness of these "STEPPS" has not been widely tested in empirical work. For this reason, in this thesis, I examine, empirically, two of the determinants of virality of online content proposed by Jonah Berger in its STEPPS framework (Berger, 2014): social currency and emotion.

Social currency is the need to share things that make people look good to others. Emotion is a strong feeling that can be categorized in two dimensions when determining virality: valence and arousal. I chose these two determinants of the STEPPS framework because research shows a connection between social currency and emotion on the virality of online content. Firstly, emotions are seen as a social phenomenon, instead of an individual reaction (Parkinson, 1996). Because of this social phenomenon, I assume that emotions are involved in group processes, and therefore related to the need to look good to others (which is social currency). The other way around, research shows that emotions are strongly influenced by social interaction (Hill, Rand, Nowak, & Christakis, 2010). These findings were also agreed by research of Botha and Reyneke, who are saying: *'the emotional reaction that people have to viral content causes them to pass on these videos to their social network that in turn has emotional reactions to the content'* (Botha & Reyneke, 2013, p. 169). This explains that emotion drives virality and so social currency. Another research suggests also the connection between

social currency, emotion and virality since positively valenced content is more frequently shared because it reflects positively on the sender (Berger & Milkman, 2012). Concluding, social currency and emotion are correlated to each other and reinforce each other when determining virality. For this reason, the remaining four dimensions of the STEPPS framework of Johan Berger – triggers, public, practical value and stories – are excluded from this paper.

This brings me to the research question of my thesis: *Do social currency and emotion have a positive impact on virality of online content? And do these two drivers reinforce each other, i.e. is the effect of social currency on virality stronger when the content offers both social currency and is highly emotional?* By answering this research question, my goal is to generate new insights about how managers can engineer their online content¹ - by using social currency and emotion – to increase the likelihood that such content becomes viral.

To examine the research question, I subdivided this paper in four sections. In the first section, the theoretical background includes a virality framework. This continues with the hypothesis development. Here, the factors social currency and emotion will be clarified when determining virality with their hypothesis. The third section includes the research methodology. This continues with the data analyses and results of the experiment. The last section includes the discussion of this research.

¹ In this research, online content are objects (texts, images, or videos) that are distributed through electronic channels (Rowley, 2008) and mostly connected with social media.

2. Theoretical Background

Given the dramatic increase of social media as a marketing channel, firms are increasingly interested in understanding and engineering the virality of the marketing messages they use in social media. Unfortunately, it is far from trivial to explain why online content goes viral. There is no ‘one way’ or ‘step-by-step guide’ for virality success of online content. This is the reason why virality is viewed as more of an art than a science (Diorio, 2001). However, solutions begin to appear in the literature, each with its unique perspective. The definition of virality, according to Oxford Dictionaries², is: ‘*The tendency of an image, video, or piece of information to be circulated rapidly and widely from one internet user to another; the quality or fact of being viral*’. For example, a viral video refers to a video that is quickly shared, and becoming more popular on social media. Hereby, perceptual affinity (similar values, attitudes, and tastes of receiver to sender) is an important part in the viral cycle (Bruyn & Lilien, 2008).

As discussed earlier, I focus on the virality STEPPS framework of Jonah Berger which functions as the main theoretical pillar of my thesis. This framework indicates six determinants of virality (social currency, triggers, emotion, public, practical value and stories) (Berger, 2014). The STEPPS framework explains the ‘ingredients’ that cause content to catch on and go viral.

The first principle is *Social Currency*. Social currency is the need for people to share things that make themselves look good. What people talk about influences how others see them. For example, people want to look smart instead of dumb, and rich instead of poor. Therefore, I assume that online content that evokes desirable impressions towards friends is more likely to go viral than content that does not achieve these positive impressions. Brands need to consider how their consumers make themselves look good when talking about the product or idea. This can be achieved in three ways: find inner remarkability, make people feel like insiders and leverage game mechanics (Berger, 2014). Since this principle is one of the key variables in my paper, I will be going into detail in section 3.1. The second

² <http://www.oxforddictionaries.com/definition/english/virality>

principle, *Triggers*, are stimuli that prompt people to think about related things. People often talk about what comes to mind. Hereby, it is important to consider how brands can remind consumers to talk about their products and ideas. Third, *emotional* things often get shared. It is more important to focus on the feelings than on the functioning. Research shows that emotion can be categorized into two dimensions: valence (positive/negative) and arousal (high/low) (Laros & Steenkamp, 2005; Berger, 2014; Russell, 1980). For the dimension of valence, positive emotions are more likely to be shared, compared with negatively charged emotions (Berger & Milkman, 2012). Therefore, for this research, I am only focussing on positive emotions. For the dimension of arousal, high-arousal activates people and low-arousal deactivates people. This is why I assume that content that contains high-arousal emotions is more likely to go viral compared to low-arousal emotions. The question arising is how brands can craft messages and ideas that make people feel something. As the principle emotion is the second key variable in this research, further explanations will follow in section 3.2. The fourth principle is *Public*. Exposing things to the world makes it easier for consumers to recognize and process information distributed by a brand. For this to be effective, people need to see other people using and engaging with the product. The fifth principle is *Practical Value*. Content needs to seem useful in order to pass it on. Finally, the last and sixth principle is *Stories*. People don't want to just share information, they want to tell stories. Brands need to think about what broader narrative they can wrap their idea in. Table 1 summarizes the six principles of the STEPPS framework each in one sentence.

Table 1: Summary of principles of STEPPS framework (Berger, 2014, p. 207)

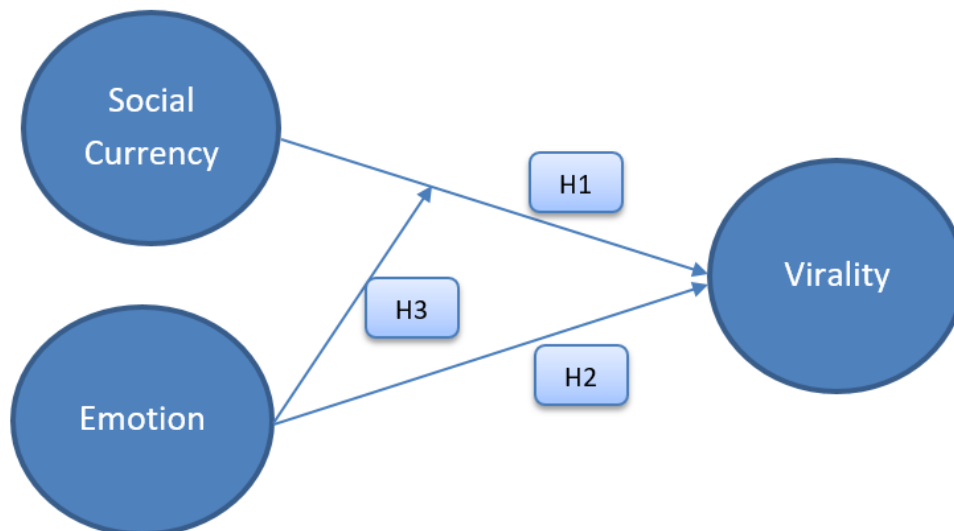
Social Currency	<i>We share things that makes us look good</i>
Triggers	<i>Top of mind, tip of tongue</i>
Emotion	<i>When we care, we share</i>
Public	<i>Build to show, build to grow</i>
Practical Value	<i>News you can use</i>
Stories	<i>Information travels under the guise of idle chatter</i>

3. Hypothesis Development

To examine the research question of this paper, I made three hypotheses regarding virality of online content. The conceptual framework in table 2 visualizes the dependent variable – *Virality* – and the independent variables *Social Currency* and *Emotion*, including the *moderating effect* of emotion on the effect of social currency on virality, and all corresponding hypotheses.

The independent variable social currency is divided in terms of ‘high- and low social currency’. ‘High social currency’ refers to content that portrays a positive image towards others and ‘low social currency’ a low or neutral positive image. For the independent variable emotion, this is divided into positive valenced high- and low-arousal, where high-arousal activates people and low-arousal does not. In this paper, I am calling low-arousal emotion ‘low emotion’, and high-arousal emotion ‘high emotion’. Both low- and high emotion are positively valenced. The moderation effect is the adding of high emotion to social currency for an increased impact on virality. These hypotheses will be clarified thoroughly in the following sections.

Table 2: Conceptual Framework



- H1:** Online content with a high social currency is more likely to go viral than online content with a low social currency.
- H2:** Online content with positively high emotions is more likely to go viral than online content with low emotions.
- H3:** The positive impact of social currency on the virality of online content is stronger when there are high emotions, compared to less emotional content.

3.1 Social Currency

The social currency of a certain content (a post, information, data) is the extent to which such content makes the person who shares it look good towards their peers (Berger, 2014). People use social currency to achieve desired positive impressions among their friends, families, and colleagues and so enhance their social status by sharing such interesting content. Examples of interesting content is content that is unique or counterintuitive (Davis, 1971), or content that makes us look smart, cool or funny (Berger, 2014).

Zinnbauer and Honer (2011, p.51) are suggesting in their paper that: *“Social currency increases one’s sense of community, grants access to information and knowledge, helps form one’s identity, and provides status and recognition”*. Mitchell and Tamir propose that the need for people to talk about themselves arises from the intrinsic value (Mitchell & Tamir, 2012). Furthermore, people may share content because it contains, next to interesting information, useful information. According to Berger and Milkman (2012, p.193) there are two reasons why consumers share useful content, namely: *“for altruistic reasons (e.g., to help others) or for self-enhancement purposes (e.g., to appear knowledgeable”*. To continue with, they argue that: *“Consumers often share content for self-presentation purposes (Wojnicki & Godes, 2008) or to communicate identity, and consequently, positive content may be shared more because it reflects positively on the sender”* (Berger & Milkman, 2012, p.193, see more in section 3.2: Emotion). Research shows that this principle is also common in the financial sector since investors care about their relative wealth in a society (DeMarzo, et al., 2004). So, to get people sharing, crafting content that help people achieve desired impressions is essential.

Marketers can use social currency to make online content go viral. They have to give people a way to make themselves look good while promoting a product or idea (Berger, 2014). According to Jonah Berger (2014), this can be achieved by three ways: find inner remarkability, make people feel like insiders and leverage game mechanics. The first pathway through which social currency boosts virality is to help people *find inner remarkability*. That is, people believe that sharing interesting

content makes them seem more remarkable. In his research on ‘interestingness’, Murray Davis proposes that interesting ideas refuse the beliefs of the audience while non-interesting ideas confirm the beliefs of the audience (Davis, 1971). Therefore, sharing interesting and remarkable content – i.e., content that is unexpected and runs counter people’s common wisdom – may increase the social currency of a person, increasing the likelihood that someone shares such content and, so, its virality. For example, an interesting and remarkable marketing campaign that became viral was Blendtec’s ‘*Will it blend?*’ series³. In those videos, Tom Dickson, the founder of Blendtec, demonstrates blenders while he blends various unusual items like golf balls, iPhones and marbles. Since the enormous amount of shares, the videos on the YouTube channel of Blendtec counts more than 281 million views⁴, so the campaign can be seen as a case of viral success.

The second way to boost virality is to *make people feel like insiders*. “*If people get something not everyone else has, it makes them feel special, unique, high status* (Berger, 2014, p. 55)”. For example, having the first new gadget of Apple. By doing this, people do not only like the product more, but tell others about it because telling others make them look good (Berger, 2014). Furthermore, people may want to share content that makes them feel like they belong to a group. Within a group, members (or insiders) feel that the group is important and that they are important to the group (McMillan & Chavis, 1986). Moreover, virality of content may arise since individuals want to motivate others to create commitment, effort, and high-quality performance (Ryan & Deci, 2000). To evoke people to feel like insiders, according to Jonah Berger (2014), it is important to use scarcity and exclusivity. *Scarcity* is about how much of something is offered. The number of products is low because of high demand, limited production, or restrictions on the time or place they can be acquired (Berger, 2014). When there is scarcity, people desire it much more (Cialdini, 2007). *Exclusivity* is about the availability: products are accessible only to people who meet particular criteria. Scarcity and exclusivity help products catch on by making them seem more desirable. An example for making people feel like

³ <http://www.willitblend.com/>

⁴ <https://www.youtube.com/user/Blendtec/about>

insiders is the selling strategy of OnePlus, who does not sell their phones in stores, but only through invites. Another example is crowdfunding, through which new ideas and products can be introduced to the world. This gives the opportunity for people to receive exclusive perks for their offers and so bragging rights for being a supporter.

The third key to evoke social currency and trigger virality is to *leverage game mechanics*. Game mechanics are elements of a game, application, or program that make them fun and compelling. The use of game design elements to enhance non-game goods and services, also called gamification, may encourage product advocacy (Hofacker, et al. 2016). Also, gamification may stimulate an increase in social and motivational benefits through product usage (Blom & Leimeister, 2013). Good game mechanics gets people engaged, motivated, and always wanting more. People enjoy achieving things and it allows for social comparison, motivating them on an interpersonal level. Game mechanics boosts virality because doing well makes people look good and people want to show off their achievements, but along the way, they talk about the brands or domains where these were made. For example, airlines are making flying gamified by recording airmiles and awarding status levels. This provides social currency as people love to talk about it and, so, increasing the virality of the content. Another example is a voting contest. By telling people to vote for them, they spread awareness about the product, brand, or initiative sponsoring the contest. The people who want to win the contest do the marketing themselves.

All in all, independently of the exact mechanism, virality through social currency means that people share online content that makes them look good to others. In other words, people share content as a mechanism to achieve desired positive impressions among their friends. In turn, this means that content that has a 'high social currency' or impression potential will be more actively and widely shared, so I hypothesize that:

H1: *Online content with a high social currency is more likely to go viral than online content with a low social currency.*

3.2 Emotion

Existing research shows that emotion has a positive impact on virality (Berger & Milkman, 2012; Heath, Bell, & Sternberg, 2001). Berger (2014, p. 104) is saying in his book 'Contagious' that: "...*experiencing any sort of emotion might encourage people to share*" and he describes the phenomenon of sharing emotion as: "*a social glue, maintaining, and strengthening relationships*" (Berger, 2014, p. 105). Furthermore, Berger and Milkman (2012, p. 2) note that: "*People may share emotionally charged content to make sense of their experiences, reduce dissonance, or deepen social connections (Festinger, Riecken, & Schachter, 1956; Peters & Kashima, 2007; Rime et al., 1991)*".

Research shows that, even though there are lots of different ways to define and measure emotions, two high-level dimensions emerge across studies: valence and arousal (Laros & Steenkamp, 2005; Russell, 1980). *Valence* is the extent to which an individual can be pleasant (positive valence) or unpleasant (negative valence) regarding an event, object, or situation. *Arousal* is the state of activation and readiness for action (Berger, 2014). Low-arousal or deactivating is characterized by relaxation and high-arousal or activation by activity (Heilman, 1997; Berger & Milkman, 2012).

When determining virality, Jonah Berger propose that emotions can be categorized into the two high-level dimensions highlighted by Laros and Steenkamp (2005): *valence* (positive/negative), and *arousal* (high/low) (see appendix 1) (Berger, 2014). For instance, *sadness* is an example of a negative and low-arousal emotion. In contrast, *anger* is an example of a negative but high-arousal emotion. Among positively valenced emotions, *contentment* would be an example of a positive but low-arousal emotion while *excitement* would be an example of a positive and high-arousal emotion.

Research on emotion is multidisciplinary and complex. However, across different research streams, and beyond the generalized agreement regarding the valence and arousal dimensions, some additional empirical regularities can be identified. For instance, past research shows that while certain emotions increase sharing, others decrease it. Take the case of emotional valence. Earlier research had a belief that people are more likely to pass along negative news (Godes, et al., 2005), although this has

never been tested. Furthermore, this study is focused on understanding what types of news people *encounter*, not what they *transmit*. This may be followed from more general literature in social psychology. Baumeister and his colleagues examined that negatively valenced (bad) emotions have a greater impact on the individual than positivity valenced (good) ones (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). However, focusing on virality, the impact of bad versus good reverses. Research shows that, when determining virality, positive content is more likely to go viral, compared to negative content (Berger & Milkman, 2012). As mentioned before in chapter 3.1 (Social Currency), customers share content for self-presentation purposes (Wojnicki & Godes, 2008) or to communicate identity. Positive content reflects positively on the sender. Most people share rather favourable opinions about themselves than bad opinions and they prefer to be known as someone who makes others feel good rather than someone who shares content that makes others sad.

Scholars also have identified connections between arousal and virality. For instance, content that evokes high-arousal (independently of the valence), is more viral than content that evokes low-arousal (Berger & Milkman, 2012). High-arousal activates people and drives them to act. High-arousal emotions – such as awe, excitement and amusement – can thus be particularly instrumental in driving the virality of online content.

There are studies that examine interactions between valence and arousal as an antecedent of virality. Negative and high-arousal emotions, for example, include anger and anxiety. When people are anxious, they may check and recheck things. This is a negative activity. A positive low-arousal emotion can be contentment, people relax. For example, when people are taking a long hot shower or a relaxing massage. People are happy, but there is not a transition into another activity. Sadness is a negative low-arousal emotion, e.g., a breakup or death of a pet. People tend to power down and want to sit on the couch with comfortable clothes and a bucket of ice cream. So, the emotion sadness makes people less likely to share content, while positive content is more likely to be shared than negative ones, but

anger and anxiety increase sharing (Berger, 2014)(see table 3). Concluding, content is more likely to become viral the more positive and high-arousal emotions it has.

Table 3: High- and Low-Arousal with emotions (Berger, 2014, p. 109)

	HIGH-AROUSAL	LOW-AROUSAL
POSITIVE	Awe Excitement Amusement (Humour)	Contentment
NEGATIVE	Anger Anxiety	Sadness

For virality through emotion, it is important for marketers to focus on feelings and not on functionality. *“When we care, we share. (..) Don’t just point out how big the problem is or list key statistics. Figure out how to make them care”* (Berger, 2014, p. 116). When marketers are using emotion to drive virality, it is important to select the high-arousal emotions that drive people to action. Adding more arousal to a message can have a big impact on people’s willingness to share (Berger, 2014).

Altogether, virality through emotion means that experiencing any sort of emotion encourage people to share content (Berger, 2014). Especially positive emotions are more likely to be shared, compared with negatively charged content. For this reason, in this research I only focus on positively valenced emotions. Furthermore, content that evokes high-arousal emotions is more viral than content that evokes low-arousal emotions (Berger & Milkman, 2012). In this paper, I call positive high-arousal emotion ‘high emotion’, and positive low-arousal emotion ‘low emotion’. Concluding, this means that content that has a positively high level of high-arousal potential will be more actively and widely shared, so I hypothesize that:

H2: *Online content with positive high emotions is more likely to go viral than online content with low emotions.*

3.3 Social Currency and Emotion

As mentioned before, discussing the two dimensions of emotion (valence and arousal), research shows that positive content may be shared more because it reflects positively on the sender (Berger & Milkman, 2012). In other words, emotions increase the level of social currency. Adding a sort of emotion to social currency, content is more likely to be shared by persons because the content makes them look good. Furthermore, the degree of arousal has also effect on the virality of content. Comparing arousal with the three pathways of Jonah Berger – finding inner remarkability, leverage game mechanics, and make people feel like insiders – assumes that the impact will be stronger when arousal is high. Finding inner remarkability and leverage game mechanics are more likely to happen when content has positive emotions with high-arousal, compared with low-arousal. In both cases, increasing, for example, the usage of the by Jonah Berger proposed positive high-arousal emotion ‘amusement’ can increase the virality of content. This has been proven by the earlier mentioned examples of the viral success of Blentec and gamifications. Furthermore, positive content with high-arousal emotions makes it more likely that people feel like insiders since people are excited to belong to a group, as excitement is also a positive high-arousal emotion. Moreover, research in psychology shows that such positive emotions have several benefits for people’s cognitions, including boosting people’s creative thinking (Isen, 1987). Thus, positive high-arousal emotions may help people activate the cognitive mechanisms they need to find inner remarkability and leverage game mechanics, amplifying the effects of social currency on virality.

Successively, this means that moderating positive high-arousal emotions to social currency, the effect of social currency is stronger for such emotional content than non-emotional (positive low-arousal) content, and content will be more actively and widely shared. Again, for this hypothesis I only focus on positive valenced emotion where high-arousal emotion is called ‘high emotion’ and low-arousal emotion ‘low emotion’. I hypothesize that:

H3: *The positive impact of social currency on the virality of online content is stronger when there are high emotions, compared to less emotional content.*

4. Research Methodology

To examine the impact of the factors social currency and emotion on virality, I conducted an experimental research. In this research, I manipulated these two factors into an online survey experiment. This chapter will explain the methodology of my research.

4.1 Factors, Levels and Groups

In the experiment, I subdivided the two factors, social currency and emotion, based on previous research, each in two levels (high versus low). By ‘high emotion’, I mean positive high-arousal emotions capable of activating people to engage in a certain activity. By ‘low emotion’, I mean positive low-arousal emotions, that tend to deactivate people. For the levels, I used the positively valenced high- and low-arousal emotions: excitement and contentment (Berger, 2014, p. 109).

For social currency, the ‘high level’ refers to content that allows people to achieve highly desired positive impressions towards others. By ‘low social currency’ I mean content that has a low or neutral level of achieving positive impressions towards others. In other words, the ‘high social currency’ level represents content that allows the person who shared it to portray a positive image towards others while content with a ‘low social currency’ does not allow the person who shared it to achieve such social benefits. Therefore, in this research, the high- and low positive image is based on the level of boosting virality through social currency, as examined by Jonah Berger: game mechanics (Berger, 2014). Table 4 (next page) visualized the factors and levels.

Table 4: Factors and levels

Emotion	High Emotion	<i>Excitement</i>
	Low Emotion	<i>Contentment</i>
Social Currency	High Social Currency	<i>High positive image</i>
	Low Social Currency	<i>Low positive image</i>

The levels of the factors emotion and social currency has been mingled by making four content groups: (1) high emotion versus high social currency, (2) high emotion versus low social currency, (3) low emotion versus high social currency and (4) low emotion versus low social currency (see table 5). I made those four content groups to create different sets of online content that represented my experimental stimuli (see next section).

Table 5: Four content groups

	HIGH EMOTION	LOW EMOTION
HIGH SOCIAL CURRENCY	Content group 1	Content group 3
LOW SOCIAL CURRENCY	Content group 2	Content group 4

4.2 The Experiment

To test my hypotheses, I created different sets of online content per content group (i.e., my experimental stimuli). I then manipulated the content to show the corresponding levels of emotion and social currency. Online content refers to messages from companies or brands, posted on their Facebookpages for promotional purposes. For the manipulation, I used the two independent variables, high versus low social currency and high versus low emotion. The manipulation of these independent variables were indicated as follows.





For emotion, the positive valenced *high-arousal emotion* that has been used in the manipulation is excitement. For this reason, the content contained a coupon of the respondents

favourite clothing brand that they love. The pictorials that were used appealed to the consumers' emotion (such as a red heart and a gold status logo, see next section for details). For *low emotion*, I used the emotion contentment. Hereby, the content contained a coupon of a new clothing brand. Here for, neutral and emotionless pictorials were used (such as a discount coupon and sign up button).

For social currency, game mechanics are manipulated in a reward program. In the reward program for *high social currency*, the manipulation is cueing that the consumer has a long tenure with the company (gold member) and a good history of reviews. For *low social currency*, the content is cueing that the consumer is new to the company and has no history of reviews.

I used corresponding pictorials for each content group to strengthen the content messages. For content group 1 (high emotion and social currency) I used a picture that says: gold status. With this picture, I manipulated the respondent for being excited to try a product that the participant loves (high emotion) and for being a gold member of their favourite brand, which contained the game mechanic element of the respondent being able to show off their high score of the prestigious reward program (high social currency). For the second content group (high emotion and low social currency), I used a picture of a red heart. This picture manipulates an exciting product that the respondent loves (high emotion) but where they did not achieve any scores yet (low social currency). Low emotion and high social currency (content group 3) represented a picture of a discount coupon. Hereby, the online content contained the game mechanic element that ensured the participant could show off their high score of the prestigious reward program (high social currency). However, low emotion (contentment) was manipulated since the coupon was not that special for the respondent. The final content group (low emotion and social currency) included a picture of a 'sign up now' button. For this manipulation, the respondents had not received any scores yet (low social currency) and the coupon was not that special for the respondent (low emotion). See table 6 for the manipulation of the four content groups. The underlined parts represent the manipulation for social currency. The other parts represent the manipulation for the variable emotion. For a detailed description, see appendix 2 and 3.

Table 6: Manipulation groups experiment

NO.	GROUP NAME	MESSAGE	IMAGE
1	High emotion/ <u>High social currency</u>	<i>Thumbs up for being a gold member of your favourite brand! To celebrate this, we are happy to send you a unique coupon that allow you to try the new exciting product that you love.</i>	
2	High emotion/ <u>Low social currency</u>	<i>Sign up NOW for our brand's reward program and receive loads of benefits. To start with, you will receive a coupon to try a new exciting product that we are sure you will love.</i>	
3	Low emotion/ <u>High social currency</u>	<i>Thumbs up for being a gold member of your favourite brand! Please use this coupon to try our latest product, which has several features that will help you in your daily life.</i>	
4	Low emotion/ <u>Low social currency</u>	<i>Sign up NOW for our brand's reward program and receive loads of benefits. Please use this coupon to try the new product of this new brand with features that will help you in your daily life.</i>	

For each content group, the respondents needed to rate, based on a seven-point scale, how likely it was for them to share the shown online content on their social media platform (i.e., virality). After expressing the sharing likability, per content group, respondents needed to indicate, again based on a seven-pointed Likert scale, the level of emotion and social currency. Respondents assigned how emotionally charged they find the content and if sharing the content would make them look good to others. By manipulating the independent variables – emotion and social currency – and the dependent variable – virality –, I tested the hypotheses by analysing the data in different ways (e.g., regression analysis and ANOVA).

The online survey contained two parts. After the introduction, the four different content groups were manipulated by displaying them on a randomized basis (see section data collection). After that, respondents needed to answer some media usage- and general questions. You can find the online survey in appendix 3.

4.3 Data Collection

For data collection, a within-subject method has been used with the same respondents during the survey. Each respondent has rated how likely it would be for them to share the different types of online content varying in their levels of emotionality and social currency. To avoid order effects of the within-subject design, randomizing had been implemented. This means that the order of the four content groups for each respondent were randomized.

Respondents have been recruited by posting the online survey on my Facebook page (1.169 friends), on the Marketing ESE Facebook groups, and sending personal messages to friends, colleagues, and family. In this survey, the independent variables were social currency and emotion, and the dependent variable was virality. Since the respondents had to rate the likelihood of sharing the content and the level of emotion and social currency, the ranking of the answers matters, however, the number did not have a meaning. This means that the variables have an ordinal measurement level.

4.4 Sample Size

Research shows that the statistic designed tests that I used for this research to detect differences among groups, needs 30 respondents per cell to have about 80% power (Wilson van Voorhis & Morgan, 2007). 80% power is the minimum suggested power for an ordinary study (Cohen, 1988). As discussed before, the survey contained four types of content, so four different cells. This means that the minimum sample size of this survey is 120 respondents to maintain adequate power when using statistics designed to detect differences.

The total number of respondents who participated in the experiment were 200 people. However, since 57 of the participants had some missing values, I excluded them from the experiment. This resulted in a total number of 143 respondents, which is more than the originally measured sample size. However, to increase the adequate power, I included all 143 respondents.

5. Data Analyses and Results

In this chapter, I will first describe some sample results of the participants in the experiment. After that, I will present a manipulation check showing whether the respondents indeed find the high emotional stimuli highly emotional and the high social currency stimuli to actually lead to high social currency. This will follow with an analysis of the impact of emotion and social currency on the virality of the manipulated online content with a robustness check. After that, I will describe the results of the tests regarding my hypotheses. This means the results of the analysis showing whether high social currency online content is more viral compared to low social currency online content, and high emotional online content more viral than low emotional online content. The last analysis focusses on the moderation effect of high emotion and social currency on the virality of online content.

5.1 Sample – Participants

As mentioned before, 143 respondents participated within the experiment. 46% of the participants were male, 54% female and 97.9% of them were of Dutch nationality. The respondents were between 16 and 68 years old with an average age of 31. The experiment consisted of high educated respondents as almost 82% of them had at least a bachelor's degree (HBO). Furthermore, I can say that most of the respondents were active social media users since 54.5% of them checked their social media platforms approximately more than 10 times per day, 30.8% 5-10 times per day and only 14.7% less than 5 times per day. In this experiment, both Facebook and WhatsApp are the most common used social media platforms (96.5%). Followed by Instagram (62.9%), LinkedIn (60.8%), Snapchat (55.2%), and YouTube (50.3%). Twitter (18,9%) and Pinterest (2,8%) are the least used platforms.

Only 16.1% of the respondents stated that they have shared comparable online content of the manipulation on their social media platform before. All respondents who *did* share comparable online content used their Facebook platform where three respondents also used Twitter, Instagram, LinkedIn or YouTube for sharing. Four respondents also shared the message via WhatsApp. Almost 40% of the

participants shared the online content because companies offered them giveaways, 17.4% did so for fun and 8.7% for receiving a discount. Other reasons for sharing comparable content was for promotional activities of a new product/start up, a charity, or because they felt affinity with the product.

5.2 Manipulation Check

In my experiment, I analysed whether the respondents deem the manipulated online content as ‘emotional’ and ‘good looking to their friends’. For this, the respondents needed to rate based on a seven-pointed Likert scale, how far they find the manipulated online content emotionally charged and whether sharing it would make them look good towards their friends, family and colleagues. I did a manipulation check to see whether stimuli with high emotion and social currency is indeed more emotional or has a higher social currency than low emotional or social currency stimuli.

For the variable emotion, I tested whether the participants actually find ‘high emotional stimuli’ more emotional than ‘low emotional stimuli’. With the paired-samples *t*-test, I compared the differences of the by the respondent indicated emotionally charged means. Hereby, I compared the means of the ‘high emotional stimuli’ (gold status and heart) with the means of the ‘low emotional stimuli’ (discount coupon and sign up). This test showed that, on average, the participants experienced significantly high emotional stimuli (gold status ($M = 3.08$, $SE = 0.141$) and heart ($M = 3.05$, $SE = 0.137$)) *more* emotionally charged than low emotional stimuli (discount coupon ($M = 2.78$, $SE = 0.128$) and sign up ($M = 2.08$, $SE = 0.106$)), with:

Table 7: Manipulation check 'high emotional stimuli' versus 'low emotional stimuli'

High Emotion	Low Emotion	t-value
Gold status	Discount	$t(142) = 2.717^*$
Gold status	Sign up	$t(142) = 7.821^*$
Heart	Discount	$t(142) = 2.258^{**}$
Heart	Sing up	$t(142) = 8.092^*$

Sig. * $p < 0.01$, ** $p < 0.05$ (2-tailed)

The same kind of manipulation check has been done for the variable social currency. I compared the means of ‘high social currency stimuli’ with ‘low social currency stimuli’ for indeed experiencing a higher social currency. In this case, I compared the differences between the means of ‘high social currency stimuli’ (gold status and discount coupon) with the means of ‘low social currency stimuli’ (heart and sign up). The paired-samples *t*-test showed that, on average, the participants experienced significantly in high social currency stimuli (gold status (M = 3.08, SE = 0.146) and discount coupon (M = 2.71, SE = 0.136)) a *higher* level of social currency than low social currency stimuli (heart (M = 2.67, SE = 0.126) and sign up (M = 2.08, SE = 1.08)) with:

Table 8: Manipulation check 'high social currency stimuli' versus 'low social currency stimuli'

High Social Currency	Low Social Currency	t-value
Gold status	Heart	$t(142) = 3.501^*$
Gold status	Sign up	$t(142) = 7.874^*$
Discount	Heart	$t(142) = 0.364^{**}$
Discount	Sing up	$t(142) = 5.405^*$

Sig. $p < 0.01$, $**p < 0.1$ (2-tailed)

To conclude, in all cases, the respondents experienced high emotional stimuli as more emotional compared to low emotional stimuli. For social currency, the respondents experienced stimuli with high social currency to result in a higher level of social currency than stimuli with low social currency.

5.3 Impact Social Currency and Emotion on Virality

To test the impact of social currency and emotion on the virality of online content, I used a multiple regression model with the following equation:

$$Virality_i = (b_0 + b_1D_Emotion_i + b_2D_Social\ Currency_i + b_3D_Emotion * Social\ Currency_i) + \varepsilon_i$$

Hereby, the dependent variable is the measurement of virality of the manipulated online content. b_0 is the variable where both emotion and social currency are low of the online content. b_1 is the dummy variable emotion where there is a high emotion (1) or not (0) and b_2 the dummy variable for high social currency (1) or low social currency (0). b_3 reflects the dummy variable emotion times

social currency where 1 means that the online content contains both high emotion and social currency and 0 that either one or both emotion and social currency is low.

The results show that, with a R-Square of 0.077, 7.7% of the variation of the variable virality can be defined by the three independent dummy variables. The F-test shows that the model is significant with $p < 0.01$, which means that the regression model is a good fit for the data. Furthermore, as can be seen in the next equation, the intercept b_0 is 1.965 and both dummy variables of emotion and social currency are positive with 0.727 and 0.769. This means that, when adding high emotion (1) and/or high social currency (1) will significantly result in a higher virality of online content with $p < 0.01$. However, the dummy variable of emotion and social currency has a significantly negative b_3 of 0.427 at $p < 0.1$, but is not significant at $p < 0.05$ (see table 9).

$$Virality_i = (1.965 + 0.727D_Emotion_i + 0.769D_Social\ Currency_i - 0.427D_Emotion * Social\ Currency_i) + \varepsilon_i$$

Analysing the t -value of the impact of emotion and social currency on the virality of online content, for emotion this accounts for $t(568) = 4.510$, $p < 0.01$, social currency $t(568) = 4.770$, $p < 0.01$ and emotion times social currency $t(568) = -1.871$, $p < 0.1$. This means that there is a significant positive impact of emotion and social currency on the virality. However, when combining the two variables, there is a significant negative impact on virality. From the magnitude of the t -statistics there can be seen that the variable emotion has less impact on virality than social currency (see table 9).

Table 9: Results impact dummy social currency and emotion on virality

Coefficients ^a	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1,965	,114		17,234	,000*
Dummy Emotion	,727	,161	,257	4,510	,000*
Dummy Social Currency	,769	,161	,272	4,770	,000*
Dummy Emotion*Social Currency	-,427	,228	-,131	-1,871	,062**

a. Dependent Variable: Virality. R²=0,077; Adjusted R²=0,072; df= 142, * $p < 0.01$; ** $p < 0.10$

5.4 Robustness Test: Multiple Regression Model

To check the correctness of the multiple regression model described above in section 5.3, I did a robustness check for testing the impact of social currency and emotion on the virality of online content with the form of the equation stated in Equation 1. Per manipulated online content (gold status, heart, discount coupon and sing up), I created a multiple regression model to test whether social currency and emotion matter determining virality.

$$\text{Equation 1: } \text{Virality}_i = (b_0 + b_1 \text{Social Currency}_i + b_2 \text{Emotion}_i) + \varepsilon_i$$

5.4.1 Gold Status

With a high level of social currency and emotion (gold status), the model is correlating $R=0.320$ with the dependent variable. Furthermore, the independent variables emotion and social currency accounts for 32% of the variation in virality. The Durbin-Watson analysis explains that the assumption of the independent errors are tenable since this is 1.874. The initial model significantly improved the ability to predict the outcome variable virality since $F(2,140) = 32.892$, $p < 0.01$. This means that the regression model is a good fit for the data.

Analysing the t -value of the impact of emotion and social currency on the virality of online content, for emotion this accounts for $t(140) = 2.207$, $p < 0.05$ and social currency $t(140) = 5.442$, $p < 0.01$. From the magnitude of the t -statistics it can be seen that the variable emotion has had less impact on virality than social currency. Including the unknown quantities (b -values) into the equation shows that the independent variables (emotion and social currency) have a significantly positive relationship with the dependent variable virality (see equation 2 on the next page). So, as social currency increases with one unit, virality will increase with 0.412 points. For emotion, virality will increase with 0.173 points.

In other words, both social currency and emotion have a significant impact on the virality of online content. Moreover, when social currency increases to a more highly social currency value and emotion to a more highly emotional value, virality of online content will increase.

$$\text{Equation 2: } \text{Virality}_{\text{GoldStatus}} = 1.233 + 0.412 \text{ Social Currency} + 0.173 \text{ Emotion}$$

5.4.2 Heart

For the manipulation for low social currency and high emotion, the model is correlating $R=0.374$ with the dependent variable. Furthermore, emotion and social currency accounts for 14% of the variation in virality. The model has a great Durbin-Watson ratio of 2,113. Moreover, the regression model is a good fit for the data since $F(2,140) = 11.394, p<0.01$.

The t -value of the impact on virality of high emotion is $t(140) = 2.174, p<0.05$, and low social currency $t(140) = 2.999, p<0.05$. Hereby, it can be concluded that, also for this manipulation, emotion has less impact on virality than social currency. Including the positive b -values into the equation, it can be seen that also for this manipulation, there is a positive relationship between the dependent and independent variables (see Equation 3). If low social currency increases by one unit, virality will increase by 0.235 points, and for emotion this will be 0.158 points.

I can conclude that for this manipulation, social currency and emotion significantly matter when determining virality.

$$\text{Equation 3: } \text{Virality}_{\text{Heart}} = 1.583 + 0.235 \text{ Social Currency} + 0.158 \text{ Emotion}$$

5.4.3 Discount Coupon

For the third manipulation, the discount coupon with low emotions and high social currency, the model correlates $R=0.540$ with the dependent variable. The independent variables emotion and social currency accounts for 29.2% of the virality of online content. The Durbin-Watson ratio of 1.903 informs that the assumption of the independent errors is tenable. Also, the regression model is a good fit for the data since $F(2,140) = 28.802, p<0.01$.

From the magnitude of the t -statistics, it can be concluded that at a significant level of 99%, here again, emotion has less impact on the virality of online content than social currency. The high

social currency ratio has been increased again, compared with the low social currency manipulation (heart), to $t(140) = 5.504, p < 0.01$. For low emotion, this is $t(140) = 2.731, p < 0.01$. In Equation 4, the b -values of the multiple regression model shows again a positive relationship between emotion, social currency and virality.

$$\text{Equation 4: } \text{Virality}_{Discount} = 1.274 + 0.350 \text{ Social Currency} + 0.184 \text{ Emotion}$$

5.4.4 Sign Up

The manipulation where low emotion and low social currency content have been measured, the correlation of the model is $R=0.386$ with virality and 14.9% has been explained by emotion and social currency. The Durbin-Watson ratio accounts 1.962, which means that the residuals are almost uncorrelated. With $F(2,140) = 12.220, p < 0.01$, the regression model is a good fit for the data.

The t -value of emotion accounts for $t(140) = 3.734, p < 0.01$. For social currency, this is $t(140) = 1.603$, however, this is not significant with $p > 0.05$. In Equation 5 you can see the positive relationship between social currency and emotion.

$$\text{Equation 5: } \text{Virality}_{SignUp} = 1.179 + 0.112 \text{ Social Currency} + 0.265 \text{ Emotion}$$

All in all, I can conclude that social currency and emotion have a significant impact on the virality of online content which results in the same findings as the multiple regression model in section 5.3. For a detailed overview of the results of the robustness check, see appendix 4.

5.5 High versus Low Social Currency and High versus Low Emotion

In this chapter, the results of the virality of online content will be described whether the content contained high or low social currency. After that, the results of virality will be explained whether the manipulated content contained low or high emotion.

For both variables, analysing the data whether online content with high social currency or emotion reflects more positively on the virality of such content compared with online content with low social currency or emotion, I used the paired-samples *t*-test, or dependent *t*-test. This test indicates whether two means, collected from the same sample, differ significantly by using the *t*-statistic (Field, 2009). I used this test to analyse the *differences* between scores since I am interested in the sampling distribution of these differences. In other words, the differences of impact on virality of online content when using high/low emotion or high/low social currency. Concluding, the measurement of the test indicates the differences of the impact on virality between the different content groups with the same participants.

As mentioned before, all respondents were in a randomized order exposed to the four different content groups (gold status, heart, discount coupon and sign up). Their likelihood to share the manipulated online content was measured in each condition. For executing the paired-samples *t*-test, I selected pairs of variables (i.e. content groups) for each emotion and social currency to be analysed. For the independent variable social currency, I paired the high social currency content groups (gold status and discount coupon) with the low social currency content groups (heart and sign up, see table 10). This means that I analysed the virality of the manipulated content with high social currency against content with low social currency. This makes four different analyses, or, how I call them, pairs. The same method has been used for the independent variable emotion. Hereby, pairs were formed between the manipulated content groups of high emotion (gold status and heart) and low emotion (discount coupon and sign up, see table 11). After making the four pairs for social currency and four pairs for emotion, I analysed the differences between scores to see whether online content with high social currency/emotion is more viral than online content with low social currency/emotion.

Table 10: Pairs of high/low social currency

PAIR	HIGH SOCIAL CURRENCY	LOW SOCIAL CURRENCY
1	Gold status	Heart
2	Gold status	Sign Up
3	Discount coupon	Heart
4	Discount coupon	Sign Up

Table 11: Pairs of positive high/low-arousal emotion

PAIR	HIGH EMOTION	LOW EMOTION
1	Gold status	Discount coupon
2	Gold status	Sign Up
3	Heart	Discount coupon
4	Heart	Sign up

5.5.1 High versus Low Social Currency

Comparing the data of the online content with high versus low social currency, we can see that all four pairs are positively correlated with the Person's correlation coefficient at a 95% significant level. This Pearson's correlation coefficient is a standardized measure of the strength of the relationships between the two variables, high versus low social currency. Pair 1 (gold status and discount coupon) and 3 (heart and discount coupon) have both a large positive correlated effect ($r=0.675$ and $r=0.579$) with $p<0.01$. Pair 4 (heart and sign up) is also significantly correlated ($p<0.01$) with a medium positive correlation effect ($r=0.381$). Pair 2 (gold status and sign up) has a small positive correlated effect ($r=0.250$) at a significant level of $p=0.003$. The positive correlation coefficients of the data show that changes in one variable changes the other variable in the same direction by the same amount. Hereby I can conclude that for all four pairs there is a significant positive correlation between the virality of the online content whether such content contains high social currency or low social currency.

Analysing the t -values of the four pairs, all values are positive. This means that for all pairs, the first condition (high social currency) has a greater mean than the second (low social currency). For each pair (except pair 3), I can conclude that: on average, participants experienced a significantly *greater* likelihood to share high social currency online content than online content with low social currency (see table 12).

Table 12: High versus low social currency

Pairs	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Sig.
				Lower	Upper		
1: Gold & Heart	,343	1,222	,141	1,965	,114	3,352	,001*
2: Gold & Sign Up	1,070	1,694	,142	,727	,161	7,555	,000*
3: Discount & Heart	,042	1,250	,105	,769	,161	,402	0,689**
4: Discount & Sign Up	,769	1,362	,114	-,427	,228	6,754	,000*

* $p < 0.01$; ** $p > 0.1$ (2-tailed); $df = 142$

I can conclude that for three of the four existing pairs, exposure to online content with high social currency caused significantly more reported virality than exposure to online content with low social currency. These results lend support to H1: Online content with a high social currency is more likely to go viral than online content with a low social currency.

5.5.2 High versus Low Emotion

As mentioned before, for the independent variable emotion, the data is analysed via pairs that compared the virality of online content with high emotion versus low emotion (see table 11).

Firstly, comparing the manipulated online content with high emotion and low emotion regarding the Pearson's correlation coefficient, I can conclude that all four pairs are positively correlated with a significance level of 95%. Pair 1 (gold status & discount coupon) and 3 (heart and discount coupon) have a large positive correlated effect ($r = 0.719$ and $r = 0.579$), and pair 4 (heart & sign up) a medium positive correlated effect ($r = 0.464$), all with $p < 0.01$. Pair 2 (gold status & sign up) has a small positive correlated effect ($r = 0.250$) at a significant level of $p = 0.003$. Concluding, all four pairs have a significant positive correlation between the virality of online content with high emotion compared with low emotion.

Furthermore, both pair 1, 2 and 4 have positive t -values and are significant at $p < 0.01$. This means that for those pairs the condition of high emotion had a greater mean than low emotion, so online content with high emotions lead to greater virality than online content with low emotions. For each pair of the variable emotion (except for pair 3) I can conclude that: on average, participants

experienced a significantly *greater* likelihood to share online content with high emotion than online content with low emotion (see table 13).

Table 13: High versus low emotion

Pairs	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	Sig.
				Lower	Upper		
1: Gold & Discount	,301	1,132	,095	0,114	,488	3,176	,002*
2: Gold & Sign Up	1,070	1,694	,790	,790	1,350	7,555	,000*
3: Heart & Discount	-,042	1,250	-,249	-,249	,165	-,402	0,689**
4: Heart & Sign Up	,727	1,296	,108	,513	,941	6,713	,000*

* $p < 0.01$; ** $p > 0.1$ (2-tailed); $df = 142$

I can conclude that for three pairs, exposure to online content with high emotion caused significantly more reported virality than exposure to online content with low emotion. This means that these results are in line with H2: Online content with high emotions is more viral than online content with low emotions.

5.6 Moderating Effect: Interaction between Emotion and Social Currency

In my third hypothesis, I propose that moderating high emotions to social currency will lead to greater virality compared to less emotional online content. In other words, virality will be greater when there is a moderation effect between social currency and high emotion, compared to the moderation effect of social currency and low emotion (social currency * high emotion > social currency * low emotion).

To test this, for each content group I created a moderation variable. Hereby, per content group (gold status, heart, discount coupon and sign up) I multiplied the mean of social currency with the mean of emotion. For all four stimuli, the regression analysis showed that the moderating effect was not significant at $p > 0.05$. Since the effect is not significant, this means that the moderator is not moderating the relationship between the predictor (social currency*emotion) and the outcome (virality).

Concluding, in this research, moderating any positive emotion to social currency does not have a significant effect on the virality of online content. This result is not in line with H3: The positive impact of social currency on the virality of online content is stronger when there are high emotions, compared to less emotional content.

6. Discussion

It is clear that people share online content. Existing research is generally focussing on the impact of sharing online content (e.g. sales), but less about what drives people to share online content. The STEPPS framework of Jonah Berger explains six principles that drive content to go viral (social currency, triggers, emotion, public, practical value and stories). Furthermore, research shows that there is a connection between social currency and emotion on the impact of virality of online content. The main purpose of this paper is to clarify whether the principles social currency and emotion actually have significantly impact on the virality of online content and whether those two principles moderate with each other. This chapter contains the conclusion of the research question, the marginal implications, the limitations and the directions for future research.

6.1 Conclusion

The first part of my research question contains: *Do social currency and emotion have a positive impact on virality of online content?* Focussing on virality through social currency, people share online content that makes them look good to others. Existing research has shown that social currency does have a positive impact on virality to achieve desired positive impressions among their friends, family and colleagues (Berger, 2014). The most common reason for doing that is because the online content is interesting (unique or counterintuitive (Davis, 1971)), or because it contains useful information (altruistic reasons or self-enhancement purposes (Berger & Milkman, 2012; Wojnicki & Godes, 2008)). According to my experimental research, I also propose that social currency do have a significantly impact on the virality of online content. In this study, the first hypothesis – online content with a high social currency is more viral than online content with a low social currency – can be accepted. This means that exposure to online content with high social currency is causing significantly more reported virality than exposure to online content with low social currency.

For emotion, both the literature as well as my experimental research are proposing that emotion have a significantly impact on the virality of online content. Existing research has shown that

experiencing any sort of emotion encourage people to share online content (Berger & Milkman, 2012; Heath, Bell, & Sternberg, 2001) to make sense of their experiences, reduce dissonance, and deepen social connections (Berger & Milkman, 2012; Leon, Riecken, & Schachter, 1956; Peters & Kashima, 2007). Moreover, online content is more likely to become viral the more positive and high-arousal emotions it is (Berger, 2014; Berger & Milkman, 2012). This is in line with the results of my experimental research since exposure to online content with high emotion caused significantly more reported virality than exposure to online content with low emotion. This means that also my second hypothesis – online content with positive high emotion is more viral than online content with positive low emotion – can be accepted.

The second part of my research question contains whether the two drivers – social currency and emotion – reinforce each other, i.e. whether the effect of social currency on virality is stronger when the online content offers both social currency and is highly emotional. While the literature would say that emotions increase the level of social currency (Berger & Milkman, 2012; Isen, 1987), the results of my experiment contradicts the third hypothesis – the positive impact of social currency on the virality of online content is stronger when there are high emotions, compared to less emotional content – derived from these earlier theories. This means that moderating positive emotions to social currency does not have a significant effect on the virality of online content. Table 14 visualizes an overview of which hypotheses are accepted or rejected and its conclusion.

Table 14: Summary hypotheses

	HYPOTHESIS	FINDINGS	CONCLUSION
H1	Effect of social currency on virality	Accepted	Online content with high social currency is significantly more viral than online content with low social currency
H2	Effect of emotion on virality	Accepted	Online content with high emotion is significantly more viral than online content with low emotion
H3	Effect of moderating emotion to social currency on virality	Rejected	Moderating emotion to social currency does not have a significantly effect on the virality of online content

6.2 Managerial Implications

Since information does not spread automatically, marketers need to manage the viral process (Kalyanam, McIntyre, & Masonis, 2007). The results of this study indicate that high social currency has a significant effect on the virality of online content. Since people use social currency to achieve desired positive impressions among their peers, it is wise for managers to craft content that help them achieve these desired impressions. In other words, to boost virality of their online content by giving people a way to make themselves look good to others while promoting a product. A way of achieving this is to find inner remarkability, make people feel like insiders and leverage game mechanics (Berger, 2014).

For increasing virality of online content with emotions, managers need to focus on positive, high-arousal emotions since positive emotions are more likely to be shared than negative emotions (Berger & Milkman, 2012) and high-arousal emotions drive people to action. Hereby it is important for marketers to focus on feelings, and not just the functionality. The idea is to craft messages and ideas that make people feel something (Berger, 2014).

The results of my research indicates that combining social currency with emotion will not have a significantly effect on the virality. This means that the focus needs to be either on social currency or emotion of the corresponding online content.

Furthermore, when managers need to choose between implementing social currency or emotion into their strategy to make online content viral, it is better to focus on the level of social currency than on emotion since social currency has a larger impact on its virality.

6.3 Limitations and Directions for Future Research

This research is facing four key limitations. The first limitation is that the respondents might be biased by facing all manipulated online content during the experiment. Although the online content has been randomized, respondents still might have made their decisions based on the previous answers and/or online content. To continue with, since the manipulation check showed that the respondents did not reported a big difference between the high- and low emotion online content, the

results may not be very valid containing the emotional manipulation. Furthermore, I did not check the *actual* virality of the online content, but the probability that the respondent would share the high/low social currency and emotional online content on their Facebook page. The last limitation for this research is that I did not do fixed effects or random effects since the sample size was too small.

Since I examined only two of the six by Jonah Berger proposed determinants of virality of online content of the STEPPS framework, further research is needed to explore the other four determinants (trigger, public, practical value, and stories) more intensively. Since there is not a moderation effect of social currency and emotion on virality, there might be one between two other determinants of the STEPPS framework. For example, the moderation effect of emotion and stories.

Since research showed that content with positively valenced emotions are more viral than content with negatively valenced emotions, for this research I focussed on positive emotions. However, another direction for further research might be to examine the impact of negative valenced emotions when determining the virality with, for example, the moderation effect of social currency.

Furthermore, since I have not measured the exact virality of the content, further research might examine the direct virality of online content that evokes high/low social currency and high/low emotions. Hereby the examiner could search for viral online content, measure the social currency and emotional level of it, and determine the impact of the independent variables on the virality of it. Another option would be to set up a campaign which involves social currency and emotion and test the actual virality of the online content.

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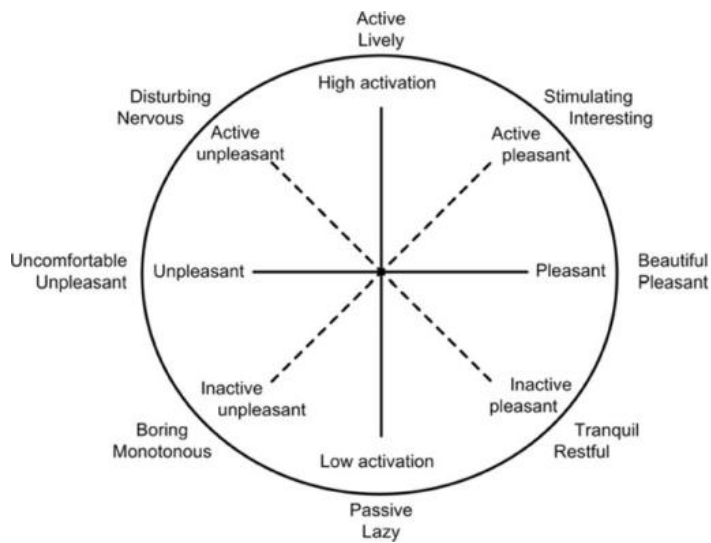
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Appendix

Appendix 1: Circumplex model of emotion (Russell, 1980) (Larsen & Diener, 1992)⁵



Appendix 2: Detailed description manipulation experiment

Group 1: high emotion versus high social currency. For the first group, I created content with the emotion excitement and with high positive image. The content contained a Facebook message of a favourite brand of the respondents with the texts: *Thumbs up for being a gold member of your favourite brand! To celebrate this, we are happy to send you a unique coupon that allow you to try the new exciting product that you love.* This was followed with a picture of the text: gold status. Underneath the picture I explained the respondent that the message was posted on the Facebook page of a clothing brand that they and their close friends love and by sharing the content, they will let their friends know about their gold status within the brand. The coupon that they will receive is of a product that they really love and they are excited to try it.

The online content contained game mechanics elements that ensured that the content would be perceived as having 'high social currency', namely they could show of their high score at a prestigious reward program. The content contained 'high-arousal' with the emotion excitement because the message excites the participant to try a product that the participant loves.

⁵ https://openi.nlm.nih.gov/detailedresult.php?img=PMC3485791_i-perception-2-969-g0005&req=4

Group 2: high emotion versus low social currency. For this group, I created content with the emotion excitement and low positive image. Hereby, the content contained a Facebook message of a new clothing brand with the text: *Sign up NOW for our brand's reward program and receive loads of benefits. To start with, you will receive a coupon to try a new exciting product that we are sure you will love.* The picture the respondents saw was a big red heart. I explained the respondents that the message was posted on the Facebook page of a new clothing brand that the respondent and his/her friends didn't know yet and the respondent haven't achieved any scores at the reward program yet. Nevertheless, the receiving coupon is of a product they really love and are excited about to try.

The online content contained game mechanics element that ensured that the content would be perceived as having 'low social currency', namely they can sign in for a reward program, but they haven't received any scores yet. It contained 'high-arousal' with the emotion excitement because the message excites the participant to try a new product that the participant loves.

Group 3: low emotion versus high social currency. For this group, I created content with the emotion contentment and with high positive image. The content contained a Facebook message of a favourite brand of the respondents with the text: *Thumbs up for being a gold member of your favourite brand! Please use this coupon to try our latest product, which has several features that will help you in your daily life.* The text was followed with a picture with the text: discount coupon. I explained the respondents that the message was posted on the Facebook page of a clothing brand that he/she and his/her close friends love and with sharing the content the respondent will let their friends know about their gold status within the brand. Furthermore, the coupon is nice to have, but they will receive a product that they do not know.

The online content contained game mechanics element that ensured that the content would be perceived as having 'high social currency', namely they could show of their high score at a prestigious reward program. The online content contained 'low-arousal' with the emotion

contentment because the coupon satisfied the respondents to try a new product, but the coupon wasn't that special for the respondent.

Group 4: low emotion versus low social currency. For the fourth group, I created content with the emotion contentment and low positive image. The content contained a Facebook message of a new clothing brand with the text: *Sign up NOW for our brand's reward program and receive loads of benefits. Please use this coupon to try the new product of this new brand with features that will help you in your daily life.* This continued with a picture with the text: sign up now. Like the other three groups, I explained the Facebook post of a brand that the respondent and friends didn't know and that there haven't been achieved any scores yet. Also, the coupon was for trying a product that the respondent didn't know.

The online content contained game mechanics element that ensured that the content would be perceived as having 'low social currency', namely they can sign in for a reward program, but they haven't received any scores yet. It contained 'low-arousal' with the emotion contentment because the coupon satisfied the respondents to try a new product, but the coupon wasn't that special for the respondent.

Appendix 3: The Survey

Introduction

Hi social media user!

Thank you very much for participating in this survey. Responding to my survey will cost you only 5 minutes and will help me graduate for my master Marketing at the Erasmus University Rotterdam.

The survey is about what people drives to share social media messages. You need to rate your likelihood to share the illustrated social media message. After that, there are a few questions regarding your social media usage and some other general questions.

Your answers will be anonymous and the results will only be used for my thesis.

Kind regards,

Jolijn van der Heijden

Four content groups

Questions per content group:

1. *What is the likability that you would share the message above on your social media page?*

Certainly, very likely, probably, even chance, possibly, unlikely, impossible

2. *Do you think the message is emotionally charged?*



No, not emotional at all - 1,2,3,4,5,6,7 – Yes, very emotional



3. *Would sharing this content make you look good among your friends, family and colleagues?*

No, not at all- 1,2,3,4,5,6,7 – Yes, a lot

Table 1: four content groups

Group 1	High emotion and high social currency
	<p>Imagine that your favourite clothing brand – a brand that several of people you care deeply about also love and see as prestigious – sent you the following message:</p> <p>Thumbs up for being a gold member of your favourite brand! To celebrate this, we are happy to send you a unique coupon that allow you to try the new exciting product that you love.</p>

	 <p>The message is posted on the Facebookpage of a clothing brand that you and your close friends love. Sharing this content will let all your friends know about your gold status within this brand. The coupon that you will receive is of a product that you really love and you are excited to try it.</p>
Group 2	High emotion and low social currency
	<p>Imagine that a new clothing brand sent you the following message:</p> <p>Sign up NOW for our brand’s reward program and receive loads of benefits. To start with, you will receive a coupon to try a new exciting product that we are sure you will love.</p>  <p>The message is posted on the Facebookpage of a brand that you and your friends don’t know yet. You haven’t achieved any scores at your reward program yet, but the coupon that you will receive is, indeed, of a product that you really love and you are excited to try it.</p>
Group 3	Low emotion and high social currency
	<p>Imagine that your favourite clothing brand – a brand that several of people you care deeply about also love and see as prestigious – sent you the following message:</p> <p>Thumbs up for being a gold member of your favourite brand! Please use this coupon to try our latest product, which has several features that will help you in your daily life.</p>

	 <p>The message is posted on the Facebookpage of a brand that you and several of your friends see as very good and prestigious. Sharing this content will let all your friends know about your gold status within this brand. The coupon is nice to have, but you don't know the product yet.</p>
Group 4	Low emotion and low social currency
	<p>Imagine that a new clothing brand sent you the following message:</p> <p>Sign up NOW for our brand's reward program and receive loads of benefits. Please use this coupon to try the new product of this new brand with features that will help you in your daily life.</p>  <p>The message is posted on the Facebookpage of a brand that you and your friends don't know yet and you haven't achieved any scores at your reward program yet. Also, the coupon is for trying a product that you still don't know.</p>

Social media usage

Q1: Have you ever shared an online message, comparable with the previous four messages in this survey, on social media?

Yes/no

If yes → Q2&3

If no → Q4

Q2: On which social media platform did you shared the message? (Multiple answers possible)

Facebook/Twitter/Instagram/YouTube/LinkedIn/Snapchat/Other.....

Q3: What kind of message did you shared and why?

(open)

Q4: Which social media platforms do you use? (multiple answers possible)

Facebook/Twitter/Instagram/YouTube/LinkedIn/Snapchat/Other.....

Q5: How many times per day are you approximately checking social media?

- a) More than 10 times per day
- b) 5 to 10 times per day
- c) Less than 5 times a day

General questions

Q6: What is your gender?

Male/female

Q7: What is your age?

(open)

Q8: What is your nationality?

Dutch/Other EU/Non-EU

Q9: What is your highest finished education?

Primary school/High school/Bachelor's degree (HBO)/Bachelor's degree (WO)/Master's degree/ Professional degree

Closing

Thank you for your participation!

Appendix 4: Results of robustness check (multiple regression model)

Manipulation	Coefficients ^a	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
<i>Gold Status</i> ^b	(Constant)	1,233	,256		4,823	,000*
	Emotion	,173	,078	,257	2,207	,029**
	Social Currency	,412	,076	,272	5,442	,000*
<i>Heart</i> ^c	(Constant)	1,583	,258		6,130	,000*
	Emotion	,158	,073	,186	2,174	,031**
	Social Currency	,235	,078	,257	2,999	,003*
<i>Discount</i> ^d	(Constant)	1,274	,222		5,739	,000*
	Emotion	,184	,067	,210	2,731	,007*
	Social Currency	,350	,064	,424	5,504	,000*
<i>Sign Up</i> ^e	(Constant)	1,179	,184		6,405	,000*
	Emotion	,265	,071	,314	3,734	,000*
	Social Currency	,112	,070	,135	1,603	,111***

a. Dependent Variable: Virality, df=142, *= $p < 0.01$; **= $p < 0.05$; ***= $p > 0.1$ (not sig.)

b. $R^2=0,320$; Adjusted $R^2=0,310$

c. $R^2=0,140$; Adjusted $R^2=0,128$

d. $R^2=0,292$; Adjusted $R^2=0,281$

e. $R^2=0,149$; Adjusted $R^2=0,136$