Viral marketing

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Viral marketing. A case study from LinkedIn

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Abstract

The aim of this paper is to explore the path of a social media campaign that became viral and to shed light on the reasons why this content drove thousands of shares and comments amidst an extensive online dialogue about Facebook's change of logo. We explored the time course of post reactions and new followers and analyzed the post comments with a text analysis software (LIWC) to identify the emotions generated among users.

Keywords: Social media, crisis management, viral content, crisis communication, crisis emotion, Pass-on behavior.

Introduction

On October 28th, Facebook launched a rebranding and released the logo of its new company, called "meta". It adopted its -now famous- infinity loop symbol. Instantly, there was a flood of conversations on social media about the change, triggering a rise of user-generated content elaborated around two pillars. First, the new logo received heavy criticism because it was perceived as unimaginative and banal. Many users teased Facebook about the new logo by comparing it to a German pretzel, a Pringle chip, IBM's design thinking loop, Microsoft Visual Studio's old avatar and the list is never-ending. That resulted in many companies from all over the world getting into the discussion and publishing posts with a new logo very similar to the Meta logo. Second, exactly because this infinity symbol was not innovative, there were a few companies who were threatened by the new logo, as they had a great degree of similarity. In this landscape, a German app called M-sense Migräne by Newsenselab, developed to treat migraine, stood out, and got viral growth. In this paper, we aim to understand the reasons why this piece of content emerged by reviewing the theories behind shareable content and with a glance on the emotions this post elicited.

So far, while the virality of online content is a popular topic and well researched, the virality of LinkedIn content is under-researched. The authors have found no academic papers about this relationship. This gap is important because there may be different patterns of sharing in each social media platform (Heimbach, Schiller, Strufe, & Hinz, 2015).

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Second, emotions are well known to drive virality, but again there is little research studying emotions in the context of LinkedIn posts. One study (Tellis, MacInnis, Tirunillai & Zhang, 2019) has concluded that emotional content is not shared in LinkedIn as much as in other social media, because the platform is business-oriented, and the content shared there is more informational. However, these researchers had focused their study on the sharing activity of YouTube video ads across social media networks. Last, the time course of viral content has seldom been researched. The reason behind this is obvious, since researchers gather this type of data retrospectively, only after the campaign has already gone viral. While this methodology permits us to gather big amounts of data, it often loses temporal data, of interactions as they evolve day by day.

As an initial step towards addressing these gaps, we were searching for company/brand LinkedIn posts that were going viral. As a starting point, we observed the activity of a single piece of viral content as its redistribution was happening. We then analyzed its performance, the effect on the brand in terms of LinkedIn page followers and branded searches in Google. Afterwards, in our exploration of the drivers of success, we described the emotions conveyed by the post and then analyzed the thousand users' comments, to understand if emotions triggered by the post are in line with the emotions transmitted. While the post had a positive tone in the text, the underlying irony, and the conflict framing ("they go low, we go high") resulted in a mix of positive and negative comments. It is noteworthy that most negative comments were not addressing the negative emotion to the brand which published the post. On the contrary, the brand seems to have gained positive visibility and virality as well as media coverage.

Literature Review

We use the term "Virality" to indicate the high probability of redistribution of content. It is characterized by a distinct form of information sharing, the speed at which the information spreads, and the reach of the content (Nahon & Hemsley, 2013).

Content is the most important factor driving engagement and diffusion in social media. The question of what types of content drive virality has been regularly researched during the past decade. It appears that content with emotional impact is more shareable and has higher viral potential (Borges-Tiago, Tiago & Cosme, 2018; Berger & Milkman, 2010) and the reasoning lies in that people who feel something unique want other people to feel it too. According to Phelps et al. (2004) emotion "enhances information processing and increases memorability" which in turn stimulates sharing. When looking for virality factors, we can also take the valence of the emotional content into consideration. Positive content seems to trigger social shares more frequently (Berger and Milkman, 2010; Wu, Tan, Kleinberg, Macy 2011) as it "reflects positively on the sender and it is also likely to make recipients feel good" (Schreiner, Fischer, Riedl, 2021). On the other hand, some researchers have found the negatively valenced content to be shared more (Zillmann, Chen, Knobloch, & Callison, 2004).

Apart from the emotional valence, the dimension of arousal also affects viral results, in that content that triggers arousal emotions (versus relaxation) is more shareable (Borges-Tiago, Tiago, Cosme, 2018). The mechanism with which emotion influences engagement is that advertisements that contain emotional content transfer emotional stimuli to the audience and ignite similar emotions in the users, thus implying a direct transferability, according to Pieters, & de Klerk-Warmerdam (1996) whose results were also supported by Li, Chong, and Ch'ng (2015). A conflict framing of the message also plays an important role, because they bring an emotional tone which is often negative.

Apart from emotion, there are other factors influencing the decision of whether the user will share the content or not. Wu et al (2011) have concluded that content of high complexity has cognitive demands and therefore will not be easily shared. In line with this view, Botha & Reyneke (2013) have found that simple, general content tends to become viral more easily and that marketers who aim for virality should create content that will allow more consumers to feel an emotional connection to it, instead of creating specific content, on the grounds that people have a stronger emotional reaction to content with which they are familiar. Borges-Tiago, Tiago and Cosme (2016) analyzed the dimensions of content that drive virality and found that there are four key characteristics: storytelling, amusement, triggers, and reaction. They concluded that storytelling is the most effective for creating engagement.

The speed at which content is distributed is another measure of virality. Wu et al (2011) measured the temporal patterns of information diffusion and they have stated that content with a lifetime of more than twenty-four hours is "more likely to receive consistent waves of attention".

Kaplan and Heinlein (2011) described the basic conditions of virality, and they noticed that one of them is "to be in the right place at the right time". The other two conditions are to create memorable and interesting content and to select the right messengers at the early stages. According to Kaplan and Heinlein, the result of whether a piece of content will be viral is a product of two dimensions: the initiator of the content (company or users) and the outcome (positive or negative).

**Image 1:** The four groups of social media viral marketing campaigns by Kaplan and Heinlein, 2011.

"Triumphs" are viral campaigns initiated by the company and with a positive outcome, while "strokes of luck" are viral campaigns initiated by the customers and with a positive outcome. When the company starts the campaign but with a negative outcome, it becomes a "homemade issue" and when users start a viral campaign with a negative outcome, it is called a "Nightmare". In the following case study of M-sense, we posit that the campaign was a triumph, because of the positive results for the brand (in terms of shares, comments as well as the branded searches that were typed in Google) and due to the fact that the content was created by the company.

Method: The case of M-sense Migräne by Newsenselab

We used observational data collection to gather available data about a single LinkedIn company page. The specific company page was selected because of the viral potential of the post, and only after it had gathered hundreds of comments and shares. Because LinkedIn does not provide historical data on the performance of a page and post, unless we are administrators of the page, we observed the performance of the post (likes, comments, shares) and the page (followers) every 24 hours and in some cases in between. However, this means that we do not have data on the very first hours that it went viral. From the historical performance of the page, we found the starting point of the follower base. After we gathered all data, we calculated new page followers and we downloaded all comments written on the post, to further analyze them with the software Linguistic Inquiry and Word Count (LIWC).

Results of the viral post

M-sense is a digital migraine treatment program delivered in a mobile app (M-Sense, 2022). On October 29th, 2021, soon after the rebranding of Facebook, M-sense published a post on its social media platforms LinkedIn, Facebook, Twitter. Up to that point, the app was only in the German language as its audience consisted of mainly German citizens. In addition, its social media presence was also in German, apart from some scientific articles in English. Their LinkedIn page, which is our case study, had 919 followers before the content went viral. The company published the post on its other social media pages, and it received a great degree of attention on both Twitter and Facebook. The reason we put emphasis on LinkedIn is that it is not researched extensively, and it is seldom mentioned as a channel that drives virality.
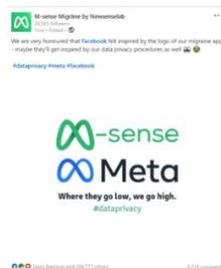
Image 2: The first published post of M-sense on LinkedIn on 29th October 2021 (source: https://www.linkedin.com/company/newsenselab-gmbh/posts/?feedView=images).

The results of this content were the following: First, the single post on LinkedIn received 300.000 reactions and generated 6.117 comments. Consistent with Wu et al. (2011) findings, the major volume of engagement happened in the first 24 hours. (Figures 1 & 2). The post was published on 6pm local time (GMT+2) which is not the ideal time to post on LinkedIn, given that the audience of the page was mainly from Germany. However, it was 12pm EDT time, that was indeed in the optimal time range for LinkedIn, according to social media platform Sprout Social (2022). Therefore, it was in line with the "ideal" times to post on LinkedIn. We don't know whether this happened on purpose, to adapt the timing to the time zone of the US audience according to the best practice, or it was spontaneous. Detailed data hour by hour tracking, instead of day by day, would shed light on the exact path of shares and would inform us if the first shares were made from the audience of the page and then the post went contagious or if the first shares came from the global audience, because it was a trending topic.

There was a spike of all engagement metrics on day two and it kept bringing high levels of engagement up to day 8. It's worth mentioning that in the meantime, the company has posted one more time, and that post went well, but it was not viral. So, a small part of these engagement actions is owed to that second post. The increase in engagement increased page followers (Figure 3 - Daily stats of new followers). We notice that there is a pretty small increase during the first 6 hours when the page received only one hundred twenty new followers, during the first day they received three thousand followers and during the first five days in total they received 25766 followers (28X follower growth), which is the 96% of their current follower base.
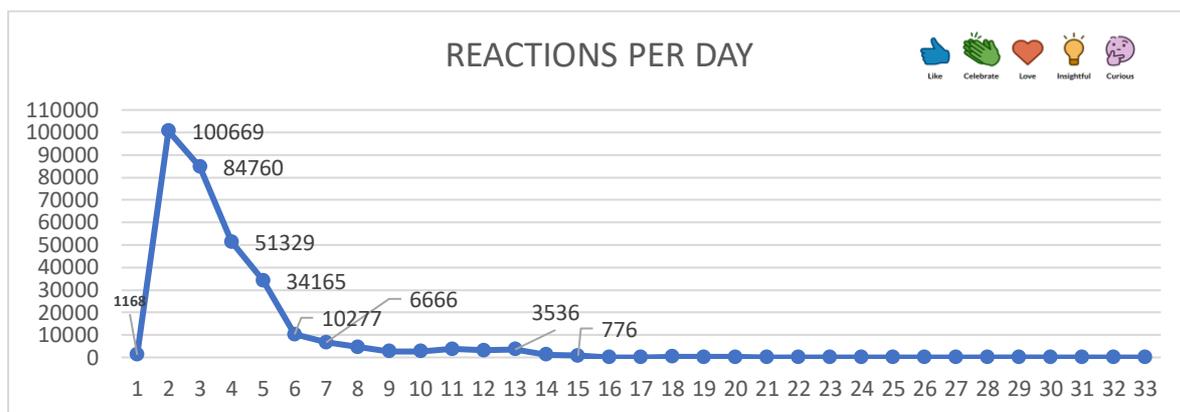

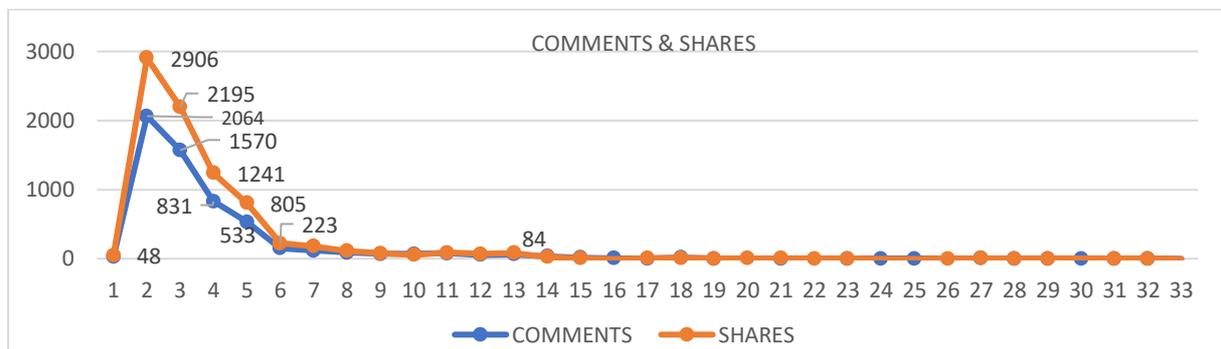**Figure 1:** Post Reactions per day, starting 29th October.
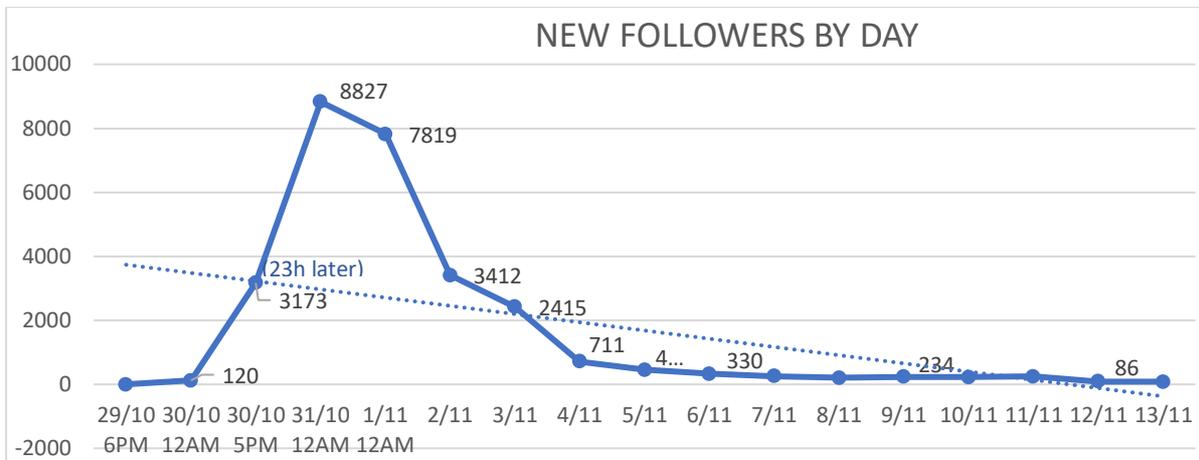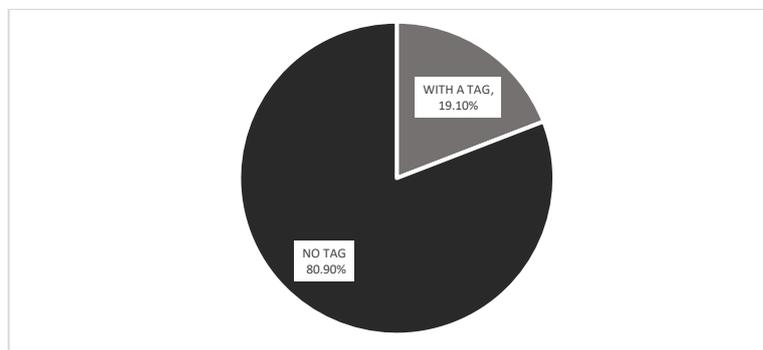

**Figure 2:** Page Comments & Shares per day, starting 29th October.

Figure 3: LinkedIn page new followers per day. Distorted view to depict the first hours.

In total, the page received 313.024 reactions, 6.117 comments and 8.144 shares. Approximately 19.1% of the comments contained a tag to a friend (Figure 4), which is an indication of the intention to share with friends.

Figure 4: Percentage of comments containing tags to friends

Another interesting fact is that not only did they have 28 times follower growth in LinkedIn, but this virality originated branded searches in Google. More specifically, there were 41.900 Google searches, of which 14.800 (35%) happened during the first two days after the post and the rest 27.100 (65%) happened in the next month. If we wanted to calculate the estimated value of these searches, we could check how much it would cost at that time to reach 41.900 people searching for migraine apps with Google search ads, and this would be approximately 193.000€. However, as we notice in Google Trends (Figure 5), a tool that measures the search trends, this effect was not maintained in the next months. A spillover effect can also be observed, with an increase in searches for the general term "migraine app", which climbed from 600 searches per month to 1900 searches per month. The effect on online PR is notable, with over 1450 articles written for the case of m-sense and more than 8.400 search results containing the name "m-sense".
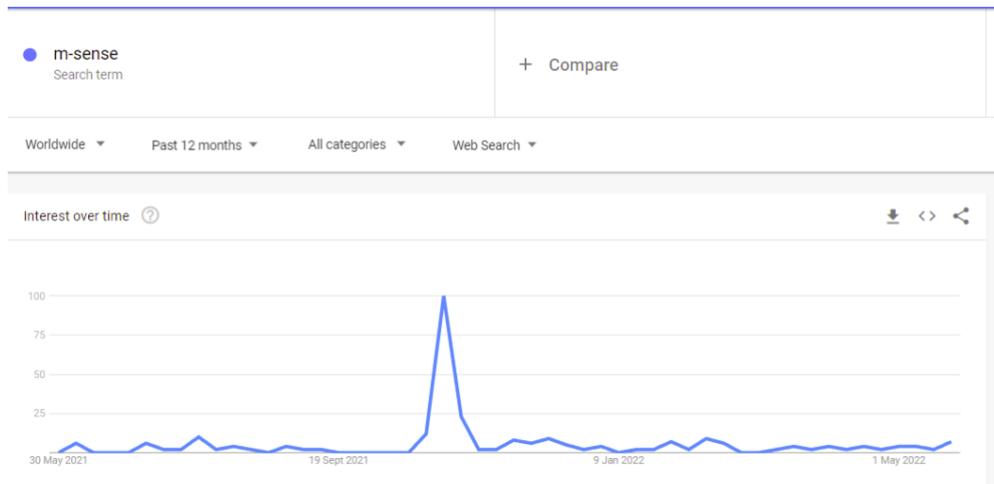
Figure 5: Worldwide interest about the brand of m-sense as it was depicted in Google Trends for the branded term "m-sense". In line with the theory about how to classify a piece of content as viral, the post of m-sense ticks all the boxes to be considered viral.

Welker (2002) proposed that viral efforts be measured in terms of velocity (the rate at which it spreads), persistence (how long it lasts), and transmission ease (simplicity in regard to mental barriers, costs and handling). M-sense's post spread very fast (in the first 24 hours), lasted approximately 14 days (the last day of multiple shares) and it was easy and free to consume and to share across all platforms, with a simple design and text with low cognitive load.

Deconstructing the viral content

The goal of this work is to answer why this particular post stood out and generated thousands of comments and reactions. The explanations could lie in timing, time of publishing, graphics and copy. Looking back into the theoretical background to understand the reasons of this post's success and grounding our analysis on the work of Reichstein & Brusch (2019) who made a review of all factors of virality, we noticed that the factor of content is the main driver of success, as the credibility of the source, the communication channel and the value do not differentiate much from the other pages that engaged in the conversation about Meta's new logo. Also, some of the factors reported in that work are irrelevant or not used in this case.

In terms of content, it also satisfies most of the factors found to evoke shareability. For example, the headline is simple, precise, striking and expressive to attract attention as mentioned in Nwala & Umukoro (2017), uses short words and emotions (Kuiken et al, 2017) and it may have also aroused curiosity in line with Kourogi et al (2015), with 41 comments explicitly containing the word "curious".

In terms of emotional valence, the post is very carefully written to be entertaining despite dealing with a potentially serious issue, as the company would be damaged by meta's logo choice, and this is in line with the findings of Chen & Berger (2013) who claimed that excessively controversial content would result in people hesitating to share it. The chosen words and emojis mostly transmit positive emotions ("honoured" "inspired" and a use of a

smiley, smart emoji) such as humor, and increase the intention to share (Hsieh et al, 2012) as well as improve the attitude for the brand (Eckler & Bolls, 2011) which explains the increase of followers and branded searches.

At the same time the post might have ironic and sarcastic connotations (the use of "inspired" instead of "copied" or "stole" in the phrase "Facebook felt inspired by the logo of our migraine app"). However, irony and sarcasm are perceived as less negative when they are used instead of literal criticism (Pickering, Thompson, Filik, 2018; Filik et al, 2016), although not all researchers agree with this view. For example, Colston et al (1997) found that a sarcastic message has an enhanced negative effect, because there is a contrast between what actually happened and the positive way the sender presents it. Pickering et al (2018) state that sarcasm & irony may also be perceived as humorous exactly because of this disparity and together with the "surprise of hearing a comment that is the opposite to what is expected". Last, it also makes an ironic reference to the data privacy issue ("maybe they'll get inspired by our data privacy procedures") and it reminds the audience of the pre-existing conversation about the data privacy policies of facebook.

Our view is that this last phrase made all the difference since the majority of posts during those days were humorous and ironic. However, the post of m-sense differentiated because it seemed to have been published not only to get into the social media conversation but to inform the audience about a real threat to their business. By getting also into the data privacy conversation and the possibility of losing revenues and brand value due to facebook's logo, they had positioned themselves as the moral "David" in the David versus Goliath battle, which could result in sympathy towards their brand and negative emotions about facebook's moral standards. Brady, Crockett, Van Bavel (2020) have researched the role of moralization in the diffusion of content, and they found that moral content is easily shared because people have a tendency to share moral and emotional content, and because the social media platforms make it easy to spread such issues.

In total, the post of m-sense had a combination of positive and negative emotions which has been shown to drive virality (Brown et al. 2010). To understand whether the transmitted emotions were indeed felt by the audience, we scraped and analyzed the posts comments with the scientific research tool Linguistic Inquiry and Word Count (LIWC). LIWC is a meaning extraction tool. With the use of dictionaries (e.g., cognitive words, emotional words dictionary, anger words dictionary etc.), it "accesses each text in your dataset and compares the language within each text against the LIWC-22 dictionary" (Boyd et al, 2022). After deleting comments containing no words, comments with tags only and comments in other languages, texts were submitted to LIWC and the output file was analyzed with excel & SPSS. We analyzed 4518 comments to understand if the audience used words about sentiment and emotions and which emotions specifically. The LIWC tool was recently updated to include separate calculations for tone and emotions. The "tone" dictionary includes a broader list of words about emotions and the emotions themselves (e.g., happy, joy, sad, angry, birthday, beautiful, kill etc). The

"emotion" dictionary includes a list of words that describe emotion per se. Unfortunately, this tool cannot assess irony and sarcasm, which would be one of our target emotions, so we could only observe these emotions empirically.

When we tested for a positive tone ($\alpha = .61$), we found that 38% (1726 comments) had a positive tone, and testing for a negative tone ($\alpha = .62$), 27,4% (1238 comments) had a negative tone. Looking only at these percentages of positive versus negative comments, would result in doubts about whether this viral post was indeed favorable for the company that published it. However, taking a closer look at the nature of negative comments, we would see that the biggest part of the negative comments was related to Facebook-Meta practices and not the German app (e.g., "A pathetic attempt to pull people's attention the other way!"). This is of crucial importance, because it turned out that this comparison with Meta's practices drove sympathy among users to a German health app they would not know otherwise (e.g., "This might be one headache you can't get rid of"). Some users suggested in their comments that the company should sue Facebook ("Infinity? Is at a real loss...The lawsuit will be infinite!"). There were even comments with negative tone that in fact were written as a compliment (e.g., "This is brutal but nicely done").

Testing for the presence of pure emotional words ($\alpha = .61$), we found that 41,2% of the comments included an emotional word, and 19,54% included texts with positive emotions ($\alpha = .52$), while 22,27% included negative emotions ($\alpha = .52$). Analyzing further for the presence of anger, it was present in 1.39% of the comments. However, the internal consistency of this scale is very low (anger's a=.31). We also noticed that there was a 4,58% of comments containing moralization words (wrong, honor, judge, etc) and 2,57% containing conflict words. Content about moralization is known to drive diffusion of content in social media, although it is researched mainly on political and social content (Brady, Wills, Jost, Tucker, Van Bavel, 2017). The overall idea is presented in table 1 below. Given the low Cronbach a indices, results should be studied with caution. Although the LIWC is updated, it does not cover all words and metaphors, and it does not test all emotions. In our case it would be very helpful to test for irony, sarcasm, justice but they were not provided in this tool. In fact, our own secondary analysis showed that many comments were not categorized at all. (e.g., the comments "sue them!", "Are your products used by 3.6 billion users too?", "lol", "Big Oof moment", "be surprised", could not be classified in any category.

Table 1: Analysis of emotion and tone for comments containing only English text.

LIWC TEST	Number of comments	Percentage
POSITIVE TONE	1726	38,20%
NEGATIVE TONE	1238	27%
EMOTION WORDS	1782	41,20%
POSITIVE EMOTIONS	883	19,54%
NEGATIVE EMOTIONS	1006	22,27%
ANXIETY	48	1,06%
ANGER	63	1,39%
SADNESS	50	1,11%
MORALIZATION	207	4,58%
CONFLICT	116	2,57%

The secret sauce of success

We believe the recipe of this post's success is based on 4 pillars. First, m-sense got into the debate of whether this logo is an imitation of their logo or not. There were already comments emphasizing on how meta used a very generic logo, as if they took it from a stock photo website, so this part was easy and they did not initiate the discussion, they became a part of it. Second, they used humor. We know from other studies that content that evokes emotion has higher viral potential than content that does not. What they did was to use humor and irony without using aggressive language or negative words. They use the words "felt inspired", not "copied", with a subtle irony and in line with other studies which show that positive content has been found to hold higher viral potential than negative content. This was depicted in the users' comments which contained positive and negative sentiments at the same time, as well as judgments on whether this was indeed a conflict or not. Third, they made this post personal. They did not just randomly create a post about logo similarities to get in the conversation, but they highlighted potential risks for their business. Fourth, they also got into the long-standing online conversation about how Facebook treats data to create more hype and they made several posts later, trying to show that the data privacy concerns about meta would damage their own reputation as a health app with lots of personal, sensitive data. We understand that they got into both conversations at the same time, both the new logo debate and the data privacy issues. This created a moral tone of the post. Instead of creating another humorous post about the "stolen" or unimaginative logo of Meta, they created a "Good versus bad data protection practices" post which put the post in a moral discussion with a conflict framing. All of these together resulted in a simple, short, and sweet story of how a small company from Germany is threatened by the giant company Facebook. In turn this story of David VS Goliath, made the audience relate to the company and generated hundreds of comments from users with concerns about data privacy and kept the conversation rolling.

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Conclusions & Discussion

Producing positive viral content for a business can be a stroke of luck or a triumph. In the case of m-sense app, it was a triumph as the content produced accounts for most of the success. Despite having published the post at a time that is not the optimal for social media and having an initial following base of only 919 people, it managed to generate thousands of shares and comments by sticking to the rules of viral content. First, the company got into a conversation about a trending topic (Facebook's logo change) and leveraged the preexisting data privacy concerns of the audience to its advantage. Second, the content itself was short, simple and with low cognitive demands. Further, it used humor and irony and managed to elicit positive and negative emotions to the audience, as the comment analysis showed.

We previously mentioned that observing other similar posts that were published simultaneously on the occasion of Meta's logo release made us realize that the main reason that could have possibly driven virality lies within the informational part of this post. Since most of the posts those days were humorous and ironic, this post made a difference because it informed its audience about a possible threat to their business. If this is true, it would probably add to the findings of Tellis et al. (2019), that in LinkedIn content is mostly informational and business-oriented and this makes it difficult to have viral effects of emotional content. It would also be linked to the work of Lee, Ma & Goh (2011) who concluded that in terms of human motivation, information seeking is what drives virality the most. We do not know if this is true though as we would need to run the same campaign without the informational part and monitor the results.

On the other hand, our own analysis of the comments shows a substantial number of emotional comments shared. Our view is that it is expected to have emotional content published in LinkedIn, because afterall, its business audience is in fact humans logging in the platform with different needs (finding a job, building their brand, get information, etc). To put it with Hermida's words (2014; p.1) "People are not hooked on YouTube, Twitter or Facebook but on each other. Tools and services come and go; what is constant is our human urge to share."

By looking at the situation before this post went viral, we may also exclude some reasons that are believed to contribute to virality and validate other research findings. Watts and Dodds (2007) and Zhang, Zhao, Xu (2016) explored whether diffusion of content is created by influencers/opinion leaders or by the mass, and they concluded that it is the mass that makes content viral. Older research (Bobkowski, 2015) had found that opinion leaders drive increasing distribution. In our case, the German health app had only nine hundred followers before this post went viral, and it had been publishing only business content and most of the times in German. Given the small number of followers and the nature of the business, we may assume they did not have any celebrity or famous endorser that drove the very first moments of virality. It must have been the "simple" users.

The content itself was of big importance to the overall success. Indeed, looking back at the literature, the text comprised of short and sentimental words, both characteristics that drive effectiveness according to Kuiken et al (2017) who studied headlines of newspaper articles in a digital environment.

A topic of great importance would be the next steps of the company. How did it handle all this sudden fame? Did it capitalize on this viral post? Did they change their content strategy to address the needs of the new follower base? Although we do not have inside data to evaluate the performance in terms of growth and revenues, looking at the company's next steps on how they capitalized on the virality, and how they handled all this sudden increase of media coverage and followers, we notice some obvious changes in their social media strategy. First, they are now more extroverted, and they publish interesting and funny content as well as scientific news. Before the viral post, they were only posting about medical conferences, as if their LinkedIn audience mainly consisted of doctors. It is noteworthy saying that after the buzz, they created another social media campaign asking users to post about ideas on their new logo, and then re-shared the ideas in their social media accounts. The second obvious change is that they started posting in English. Before the buzz, they were posting only in German, with only a post per year in English. Now, half of their posts are in English. What's more, they translated their website, that used to be in German only, creating monetization opportunities in the global audience. Third, they increased their posting frequency shortly after the buzz, with a post every two days, but then they reduced the frequency to one post per month.

To sum it all up, while the viral success of the post can be considered a "triumph", most of it is owed to the content itself. Using all the attention gained in a smart way, keeping the momentum to drive interest and attention several weeks after the buzz, and making strategic moves to monetize from this viral content is what drives now m-sense's social media growth.

From a theoretical point of view, this case study could add to the question whether it is positive or negative emotional content that drives virality. Previous research did not agree with the findings. This post is a good example, first, that the same piece of content may comprise of positive and negative emotional words, and second, that users' reactions may be positively or negatively valanced for the same piece of content. Therefore, maybe the whole idea of dichotomy is not right when we try to understand the reasons of virality. In addition, this post also adds up to the idea that users seem to react and share more when the content is framed as a conflict.

Regarding the managerial implications of this study, first, it shows that marketers could include LinkedIn in their digital marketing channels when they want to amplify their message, if it resonates with their audience. The assumption that LinkedIn is a business network with pure informational content is not the whole truth. Furthermore, to increase the probability of the content being shared in LinkedIn, content has to be short in length, comprised of short words and include mostly positive emotions but not exclusively. Irony and conflict could also enhance

the message and make it easily shareable. At the same time, because of the nature of the network, marketers should also add value to the conversation or provide information, instead of simply producing emotional content for the sake of distribution. In informational content, setting a conflict frame also helps the redistribution, even if it is negatively valenced.

Limitations and future research

This study only deals with a specific case study; therefore any results cannot be generalized. In this context, we observed and analyzed emotions in text comments to understand whether the post transmitted the hypothesized emotions. The analysis was made only for comments containing English words, so all other languages that were present disqualified. Comments consisting only of emojis were excluded too. However, an additional analysis of these options would give a clearer idea of emotions.

The presented company m-sense created this post across many social media platforms. Twitter, Facebook, LinkedIn were used, and the post became viral in all of them, with more than 11.100 shares in twitter and 2.900 shares in Facebook. Additionally, there was great media coverage. For the purpose of this paper, we analyzed only the viral post in LinkedIn. Analyzing the same post across social media platforms, and the use of emotions and sentiments and if they differentiate at all, would be of great interest.

Last, it would be very interesting to analyze the comments in a different way, searching for the existence of both positive and negative emotions in the same comments. The co-existence of both types of emotions would add to the idea of mixed feelings in the emotional "nature" of content.

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