

UNIVERSITY OF TWENTE.

Being green on Instagram

A qualitative study on how green influencers are composing their messages and arguments of sustainability in their Instagram posts

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Bachelor Thesis

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26th of June 2020

Abstract

Aim: The study that is described in this report, had the goal of getting insights into how green influencers are composing their messages of sustainability and related topics in their Instagram posts. Related to that it gives a closer look towards the engagement techniques used and the products promoted by green influencers. Also based on prior literature, the framing of the posts has been analysed, as there are research showing that negative framing is more effective.

Method: A qualitative content analysis of 80 Instagram posts made by ten green influencers was carried out. During the analysis, the frame and goal of the post, the engagement techniques, the shown products and the discussed topics were analysed. Additionally, whether the posts were sponsored or made in collaboration with a brand and whether the influencer could be seen on the photo were also taken into consideration.

Results: The analysis shows that most green influencers focus on a certain topic related to sustainability. The topics of the content are often a combination of green topics and more ordinary matters. Most posts are framed positively and are aiming to explain information and educate followers. All green influencers use engagement techniques to interact with followers. Green influencers are posting more content that is not sponsored, that content that is sponsored and they also limit the products they promote or show in their posts. Moreover, a very frequent topic among green influencers is activism, as they either take their followers along when they are active or show them activism at home, also through social media. Besides these findings, differences between micro-, macro- and mega-influencers could be observed. For example, in the way of framing and the amount of sponsored posts.

Conclusion: This rather new group of green influencers are informing their followers on topics related to sustainability, in order to raise awareness and tackle the problems of, for example, climate change or waste issues. This study shows that the influencers are communicating with their followers and speak out for issues they deem important and want their followers to be aware of.

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1. Introduction

In this research two, very current and constantly evolving topics are combined and analysed, social media influencers and sustainability, or rather environmental conscious behaviour. Over the last years, a rise of environmental aware influencers could be observed. Especially after Greta Thunberg started her school strike in the summer of 2018 more and more other social media influencers decided to use their platform to raise awareness regarding the environment, climate change and how to behave more sustainably.

In 1990 the IPCC published their first assessment on climate change. Already back then, they summarised that 'emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases' and that it is causing a greenhouse effect, enhancing the warming of the earth's surface (IPCC, 1990). This report has been published 20 years ago, in 2019 IPCC has published numbers showing that the earth temperature has increased by 1.53°C in the last century (IPCC, 2019). The significance and role of this problem was not commonly realised back then, and also nowadays many people are still struggling to come to terms with it. A study conducted in 2019 by the Pew Research Center shows that, from the 20 analysed countries, the median lays at 20% for considering global warming a minor threat and 9% even say it is not a threat at all. In Russia for example 58% see no threat or a minor threat in global warning (Fagan & Huang, 2019). So, there is a definite need to educate people about the problem of the earth warming up and the consequences that follow. Creating awareness is another important step into the right direction, not only about climate change itself, but also how further damage can be prevented and how to live more sustainably and less harmful to the earth.

A group of so called 'green' influencers has developed, dedicating their content to these matters. The use of the word 'green' in regard to topics related to sustainability or environmental awareness is very common. Nowadays consumer can often choose between traditional products and energy-efficient or 'green' products (Griskevicius, Tybur & Van den Bergh, 2010), like 'green' energy or 'green' electric appliances that use less energy. When the first influencers concerned with the environment and sustainable behaviour started to become more popular, they were called green influencers (The Top 10 Sustainable Blogs & Green Living Influencers, 2017). These influencers can be divided into different groups specifying on certain

topics. Baklanov (2019) for example established four groups that most green influencers can be grouped into; climate change, zero waste, plastic free and sustainable living. According to him the most popular themes are zero waste and sustainable living, but it is rather difficult to actually group the influencers together. As these groups should not be mutually exclusive, many influencers focus on multiple themes and are quite diverse in regard to green topics. Baklanov (2019) also does not mention influencers focussing on veganism or sustainable fashion. On the one hand they could be categorized into sustainable living, but on the other hand, it seems like a rather broad concept, enclosing multiple different topics, that also could be seen as their own group.

The core audience of green influencers are women between 18 and 34 years old (Baklanov, 2019), this age group can be considered to be part of the generation of millennials. According to Ross, Rouse & Mobley (2019) 'millennials offer promise for the future in addressing climate change as young adults of all political persuasions are more accepting of climate change science than older adults' (p.2637). Therefore, it makes sense why they are also seeking for information and content about climate change and sustainability on their social media networks.

In general, the topic of sustainability and climate change is discussed regularly and to a great deal in media but also scientific research. Moreover, the phenomenon of influencers has been touched upon by many prior studies, but the combination of both themes has not been done to a satisfactory extent. Okua, Scholtz & Snow (2019) discuss the topic in their work but are only basing their observation on prior research on 'normal' influencers. Therefore, it sounds rather promising to investigate the green influencers methods using a more practical approach, by analysing their posts on Instagram. A content analysis on Instagram posts offers the possibility to get insights into the desired topics, especially research in regard to the composition and the textual and visual communication can be effectively done. It enables an unobtrusive way of analysing the data and provides the analysis of one of the most accurate data sources linked to this topic, the Instagram post itself. It presents the best option to get an overview of the used methods, products and the overall composition of posts. Accordingly, the following research questions have been formulated:

RQ 1: How are green influencers composing their messages and arguments of sustainability in their Instagram posts?

Sub-RQ 1: What techniques are green influencers using to engage their audience?

Sub-RQ 2: What kind of products are green influencers promoting?

In the following chapters the messages of green influencers will be discussed. Firstly, an overview of all theoretical implications regarding this topic will be given, including insights into social media, influencer marketing as well as details on how to communicate sustainable behaviour and what persuasion methods could be used. Secondly, the description and justification of the used method will be explained. Thirdly, the analysis will take place and the results of the actual research will be discussed, after which they will be interpreted and evaluated, leading to the discussion and limitations. Lastly, final conclusions are formulated.

2. Theoretical Framework

In the following the theoretical bases for this research will be discussed. First, social media in general is described, as well as the advantages and disadvantages it has. As social media is the base for this research, it is considered necessary to provide some more information on it. This is followed by a more detailed description of Instagram, as it is the social media platform examined in this research. Moreover, influencer marketing, a marketing strategy where social media influencers are used to market certain products, is explained. Afterwards, different ways on how to communicate sustainable behaviour are summarized and explained. Lastly, persuasion or to be more specific message framing as well as emotional appeal are characterized.

2.1. Social Media

Social media has a big influence and is considered an important marketing tool, as it is used in many campaigns and provides the possibility to use personalized advertisement. However, as it has grown bigger over time, it is also more difficult to find a clear explanation of what it really contains. In the following opportunities, and challenges of social media will be discussed.

As a first step it is rather helpful to define social media. Kaplan and Haenlein (2010) explain that 'Social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content.' (p.61). Examples for Internet-based application are Facebook, Twitter or Instagram, which can also be called social media network sites. User generated content means users produce their own content but also consume content of others and it was enabled through the growth of Web 2.0 (Ritzer & Jurgenson, 2010). The ability to share own content is what makes social media quite unique. Information can easily be published and shared with others, which offers multiple opportunities for social media users. Information sharing helps to stay in touch with people worldwide, whether that is friends or family or internet acquaintances. Besides sharing text, many social media networks also provide an option to share media, which is a great advantage not only for regular users but also corporations (Wang, Pauleen & Zhang, 2016). Obar and Wildman (2015) speak about a 'new form of socialization' (p.749), as it simplifies communication, instantly transmits information and also helps people in different regards. However, there are not only positive sides to social media, as it also facilitates multiple problems. With

the advantage of being anonymous, social media users perform cyber-bullying or online stalking. Additionally, issues regarding transparency and privacy regulations occur in the world of social media. On the internet, it is more difficult to give restrictions users will meet, which is the reason social media is associated with violation of 'privacy, speech rights, intellectual property, antitrust, government surveillance, employer surveillance of employees, protection of children and older minors and consumer protections' (Obar & Wildman, 2015, p.747). Troubling to many social media networks are security issues, monitoring inappropriate content, which could referable to the size of these sites (Kaplan, 2015). Furthermore, the government generally allows unlimited actions and only intervenes rarely, if at all. According to Nakaya (2015) authorities are demanding the corporation behind the social media networks should be responsible themselves and organize supervision and the implementation of rules. Currently, they are able to function very freely and can change things without restrictions.

All in all, social media networks are a tool to instantly communicate and transfer information, textual and visual. However, as mentioned above with using social media there are also multiple risks that should be taken into consideration, that can affect or hurt the user, for instance, privacy issues or cyber-bullying. Nevertheless, many users consider the advantages to be significant, as it offers many opportunities for users and corporations.

2.1.1. Description of Instagram

As mentioned before, there are multiple different social network sites. One of them is Instagram. With more than 1 Billion monthly active users (Clement, 2019), it is the second biggest social network (Global Instagram Users 2019). Instagram is used to share photos and videos. Originally intended to take pictures and directly upload them, to connect to friends, family or colleagues (Herman, 2014). 'The platform is primarily visually based with the emphasis on large, creative images. Instagram also offers a variety of filters for both photos and videos that allow users to edit and enhance their posts for maximum appeal' (Herman, 2014 p.1). The use of these features has increased over the last years, to use the platform for storytelling and advertising purposes. The site also takes an important role in the lives of many millennials and gen z, as they are looking for self-gratification, self-expression, surveillance of others and entertainment (Muhammad, 2018).

2.2. Influencer Marketing

With the rise of social media, social media influencers also gained a lot of attention. To understand the following concept of influencer marketing, it is first defined what a social media influencer is. Enke and Borchers (2019) describe it 'as third-party actors that have established a significant number of relevant relationships with a specific quality to and influence on organizational stakeholders through content production, content distribution, interaction, and personal appearance on the social web' (p. 267). According to the Interactive Advertising Bureau (2018), social media influencers are defined as those who 'have the potential to create engagement, drive conversation, and/or sell products/services with the intended target audience; these individuals can range from celebrities to more micro-targeted professional or nonprofessional peers' (p.5). To summarize, it can be said that the most important element of a social media influencer is the engagement of an audience through online content creation and the influence they have on the target group.

With these attributes, social media influencers are able to use influencer marketing. The reasons for its fast development are related to the rise of social media and the need to use it as an advertisement platform (Woods, 2016). It can be described as a 'tool for the marketers to influence the target audience through influential personalities' (Ranga & Sharma, 2014). Moreover, Tapinfluence, one of the leading influencer marketing companies describes it as 'a type of marketing that focuses on using key leaders to drive your brand's message to the larger market' (Tapinfluence, 2017). It has formed out of Word of Mouth and could be described as a virtual version of it and as a tool for the marketer to affect the target audience through influential personalities (Ranga & Sharma, 2014). In other words, organizations can hire influencers to promote their products on certain social network sites. Influencers can be specialized in a certain area and are therefore more suited for products related to their specialisation.

The success of influencer marketing is dependent on multiple factors. Erdogan (1999) mentions 'celebrity attractiveness and credibility, product-celebrity match, message and product type, level of involvement, number of endorsements by celebrities, target receiver characteristics, and overall meanings (e.g. personality, values, standards) attached to the [influencer]' (p.308). Khamis, Ang & Welling (2017) discuss social media influencers need to be authentic and that through the

postings the follower gets a feeling of realness, which makes them and their marketing accessible and intimate. The brands, influencers choose to corporate with should be in line with their general way of life, 'by introducing the product as an organic versus commercial content. Social media users are more likely to be receptive to a promotional message when it is considered as a genuine message of the influencer'. (Kim & Kim, 2020, p. 2). Therefore, many social media influencers carefully choose who to corporate with as their livelihood and fame are dependent on what they market towards their followers (McQuarrie, Miller & Phillips, 2013).

For influencer marketing to be successful, trust and authenticity are the key elements. As followers trust influencers on what they like and recommend, they can also quickly lose their trust, so their authenticity is the most important aspect regarding successful influencer marketing.

2.3. Ways to communicate sustainable behaviour

Multiple influencers are using their platform online to raise awareness for more serious topics. A new wave of so-called green or environmental aware influencers have become more popular over the last couple of years.

Before social media and influencers even became popular, sustainable communication was introduced. Whereas the author intended it for corporate organizations it can also be applied to the case of influencers. McDonagh (1998) explains that it 'could be one of the processes facilitating the move to sustainable consumption and making the environment culturally significant in the public domain' (p.599). Additionally, he explains that thanks to the trust the organization can build with 'the use of green, eco or environmental communication', can show what the world could look like if humanity would not destroy the planet. Sustainable Communication does focus mainly on ecological sustainability and not the prosperity of society (Kilbourne, 2004).

Johnstone & Lindh (2017) recommend to 'communicate any social projects or CSR work to [the target group] through [the organization's] communications' (p.136). Which can be done through social media influencers that focus on sustainability and environmental awareness, as they use sustainable communication to raise awareness to topics like climate change, fast fashion or zero waste.

Other methods used by social media influencers to raise environmental awareness, were discussed by Okua, Scholtz & Snow (2019). As there was limited prior research on this topic, they mainly focused on methods used by 'regular' social media influencers. As one result of their research, they composed a list of techniques social media influencers use for engaging the public, which consists of direct engagement, collaborative tagging and hashtags, the use of emoji for engagement, social timing and content curation and the use of incentive appeals.

Some similarities can be found in Moser's (2016) reflection on climate change communication. She also mentions the need for a dialogue instead of one-way communication and that climate change communication needs a narration and works better with the use of storytelling. It is discussed that the explanation or the problem and the education about the results and the issues itself are still very relevant and important but are not enough of an incentive to change actual behaviour. Multiple other studies cited by her concluded that the communicator should be 'enabling and empowering action' (p.351) and practical implications.

2.4. Persuasion

Online influencers can communicate their message through different styles. Depending on how a message is explained or framed, different opinions can be formed through it. 'Even though the information within the message may be the same, it can be presented in different ways, which can lead to a different understanding of the same message' (Dillard & Shen, 2013, p.). One way to do this is message framing.

2.4.1. Message framing

Rothman and Salovey (1997) as cited in Cheng, Woon & Lines (2011), explain that message framing is the 'technique of manipulating the receiver's perceptions of the outcomes of behaviours in terms of its benefits (gains) or costs (losses)' (p.51). Dillard & Shen (2013) go more in detail by saying that 'message framing refers to the persuasive strategy either to highlight benefits and rewards from compliance with the message advocacy (i.e., the gain frame) or to emphasize the costs and punishments associated with non-compliance (i.e., the loss frame)' (p.28). Which way of framing is more successful, depends on the type of message (Cheng, Woon, Lynes, 2011).

However, Davis (1995) explained that regarding environmental behaviour loss framing is more effective. In line with these statements, White, Macdonell and Dahl (2011) study shows similar results as positive consumer intentions were developed more when negative or loss messages were communicated. Thus, multiple sources agree that, in order to change behaviour towards more sustainable and environmental aware behaviour, negatively framed messages are more productive. Whether sustainable influencers are using these methods to achieve the intended outcome has not been researched yet.

These negatively framed messages can go as far as promoting shame towards certain, most likely not-green, behaviour and shame 'makes them prone to engage in pro-environmental behaviours' (Amatulli, De Angelis, Peluso, Soscia & Guido, 2019, p.1125). Over the last years, the phenomenon 'flight shame' or the shame of flying, has developed. It describes how humans feel ashamed of flying as it produces a lot of greenhouse gases and is seen as 'bad' for the environment (Korkea-aho, 2019). This can be seen as one example on how shame can change human behaviour in regard to environmental aware behaviour. Flight shaming is only one example, plastic shaming for instance has also become a more popular concept (The Guardian, 2019). Some influencers execute these shaming techniques, as a motivation for their followers, to behave more sustainable. But influencers have to be rather careful, in order to actually motivate and not hurt others through their statements (McMullin, 2019). Therefore, it could be time to rethink this strategy, and instead of shame people for doing something 'bad', empower people for doing something 'good'. Already in 2001 Koestner, Houlihan, Paquet and Knight concluded that regarding recycling they 'must feel that they are doing it because it is personally important and related to their values, not because they feel guilty' (p.2558). Thus, it is rather interesting how green influencers decide to approach this topic and communicate green behaviour.

2.4.2. Emotional appeal

Another form of persuasion, especially often used in advertisement, is emotional appeal in which brands develop advertisement that appeal to the audience's emotions. The aim of using this technique is to create an emotional response. By creating an emotional bond between brand and customer, the brand attitude towards it becomes more positive. This can bring, for instance, advantages related to purchase intentions, as 'consumers with an emotional bond with the brand are

found to be less price-sensitive' (Panda, Panda & Mishra, 2013, p.18). Also, on social media generating emotional appeal has become a popular and effective method. Swani, Milne and Brown (2013), have investigated whether emotional sentiments in Facebook posts of B2B and service marketers are effective. Their results show that the presence of emotional content does increase the number of likes, as the number of the estimated mean of likes doubles when emotional content is present, in comparison to posts without emotional content. Alhabash, McAlister, Quilliam, Rifon and Richards (2012) study confirm these results as they also have found out that emotional appeal has a significant effect on attitude towards the issue and viral sharing intentions.

It has also been researched whether emotional appeal is effective when communicating facts or advertisement related to environmental awareness. In regard to green brand positioning, the attitude formation is mostly an interactive play between cognitive as well as emotional processes, as both are rather relevant for the decision-making process (Hartman, Apoalaza Ibáñez & Sainz, 2005). The findings of Hartman, Apoalaza Ibáñez & Sainz (2005) suggest that 'a combined strategy, which appeals to both environmental consciousness and emotional benefits, will yield a stronger attitudinal effect than either functional or emotional positioning strategies on their own' (p. 21). The formations of attitude towards green positioned brands are an 'interaction between cognitive and emotional processes' (p.20). Therefore, it could be rather interesting to look further into the use of emotional appeal on social media, and especially related to influencers.

3. Method

This research aims to investigate how green influencers are composing their messages and arguments of sustainability in their Instagram posts. The method chosen is a qualitative content analysis. By analysing the content of the different Instagram posts, comparisons and conclusion can be drawn. The program Atlas.ti 8 was used to code all the text, by extracting it from the Instagram posts and copying them into the program. Moreover, the program is also used to code the pictures posted by first describing them and then coding the description. All articles were coded manually by the researcher and intercoder reliability was ensured through a prior pre-test.

3.1. Sample and Corpus

To perform a content analysis a corpus needs to be accumulated first, which, in this case, is a collection of Instagram posts. As these posts are supposed to be made by green influencers, first a sample of green influencers was compiled. To be considered for this research, the influencer had to meet certain criteria. Firstly, the influencer had to be outwardly sustainable and environmental aware, secondly their Instagram profile needed to be public, thirdly most of their content should be in English. Lastly, the influencer had to be well-known enough to be written about, either in online magazines or blogs. This last criteria was included, because the sample of green influencers was accumulated through cross-referencing multiple popular articles (Top 13 Sustainability Influencers on Instagram, 2020; Murray, 2019; Heathman, 2020; The absolute best environmental influencers on Instagram (LONG list), 2019). In total, a list of ten green influencers was composed (see Appendix A). In order to collect a diverse group of influencers who specify in different sustainable topics, it is rather difficult to combine them into groups with similar topics or specialisations, however it can be said that in general the topics zero waste behaviour, sustainable fashion, veganism, and climate change in general are the topics mostly communicated by the ten influencers. To choose which posts would be analysed, there is one main condition. The post had to be related to sustainability or environmental conscious behaviour, as the research goal is to analyse how these messages are composed. In order to confirm, that this condition is met, the researcher started with the most current shared post on the influencers profile and worked back in time through every post. If the post met the above-mentioned condition it was considered for the corpus. The described method was executed until

either the maximum of nine posts was reached for that influencer, or the posts the researcher arrived at were made too far in the past, as the focus was made on posts published in the last two years. This procedure took place between the 22nd and 29th of April 2020. Additionally, the researcher tried to balance out the frequency of the times the influencer was seen on the photo, or the photo was showing something else. Therefore, seven to nine posts were chosen per influencer to be analysed, which resulted in a corpus of 80 Instagram posts made by green influencers. Below, two examples can be found that are part of the corpus analysed in this study.



Figure 1. Example post by green influencer (@blueollis, 2020)



Figure 2. Example post by green influencer (@trashisfortossers, 2019)

3.2. Codebook

A deductive approach was taken to conduct this content analysis, meaning that prior established categories (see table 1) were systematically organized in a codebook (see Appendix B). After reading through the relevant literature multiple relevant codes were added to the codebook, and therefore based on earlier research. As the goal of this research is to answer how green influencers are composing their Instagram posts, in line with answering this question other categories and codes were added to the codebook as well.

The following three categories are based on prior literature. The first category 'frame' has the goal to give a general overview (White, Macdonell & Dahl, 2011) whether the social media influencer is using a positive frame, for example, raising awareness to a positive change or positive political decisions regarding environmental topics or a negative frame, for example raising awareness towards a problematic situation like the fires in the Amazonian rain forest. The second category 'goal' is supposed to give an overview of what the influencer wants to achieve with this post, is it only related to educating and spreading information or is its purpose to encourage people to change their behaviour by for example giving tips on how to

implement sustainable behaviour in everyday life (Moser, 2016). The third category 'Engagement Techniques' focusses on the methods used by influencers to engage followers. They can be applied, when the influencer is using one of or multiple of these techniques like using hashtags or use emojis to further illustrate their message (Okua, Scholtz & Snow, 2019).

Additionally, after open coding other codes were added that were relevant to this research and in line with answering the research questions. In the category 'Engagement Techniques' the code 'Use of posters' was added, as multiple influencers use self-written posters to communicate their messages. The fourth category 'Product' is also taken into consideration, to answer the second sub-question. It will give insights into what products are mostly used and presented by green social media influencers. They were categorized into groups, to not have single-use codes. The fifth category 'Advertisement' was added to the codebook, in order to investigate whether green influencers are collaborating on their posts with other brands, and whether they get paid for it. The sixth category is called 'Presence of Influencer' and gives an overview whether the influencer is seen on the posted photo and whether he or she was posing or whether it was more a snapshot. Lastly, the seventh category outlines the 'Topics' covered by the Instagram posts. The codes of all categories, besides 'Advertisement' and 'Presence of Influencer' are not mutually exclusive and multiple codes can be assigned to the same portion of text.

Furthermore, it is important to mention that it was decided not to code the likes each post has generated. The main reasoning behind this decision, is that Instagram has disabled the display of the number likes for some of their users. This was also the case for the account and device used to compile the sample and corpus for this study. The amount of comments were indirectly coded, as the answering of comments by the influencers, was part of the 'direct engagement' code, and the number of answers to comments was always presented with the total number of comments for that post.

Table 1

Overview of Categories in Codebook

Category	Description
1. Frame	Means that different formulations of the same content influence the behaviour of the recipient differently, in this case it positively and negatively framed content
2. Goal	Gives an overview of the purpose of the posts, in this case whether it is more educating or more enabling
3. Engagement Techniques	Influencers use multiple methods to engage with their followers for example Direct engagement or collaborative tagging
4. Products	The posts include products the influencers are either promoting or using.
5. Advertisement	Are influencers getting paid to make this post?
6. Presence of Influencer	On some picture the influencers are posing, on others it more of an accidental photo, and other times they are not shown on the photos.
7. Topics	Green Influencers communicate a wide array of topics, this category is supposed to give an overview of them.

To make sure the codebook is reliable and valid, the intercoder reliability had to be tested. An often-used tool to calculate the intercoder reliability is Cohen's Kappa. To explain, 10% of the corpus has to be coded with use of the codebook by two researchers independently to make sure they are both in accordance with the codebook. Cohen's Kappa had to be calculated for each category. This is a crucial step in the coding process since it gives insight into the reliability for the codebook. It is deemed reliable when each score exceeds 0.6. The scores for the categories can be seen in table 2, and they all exceed 0.6. The Cohen's Kappa Calculation Tables can be found in Appendix B. It can also be seen in table 2, that the categories 'Advertisement' and 'Presence of Influencer', both have

a Cohen's Kappa of 1. The codes 'paid advertisement' and 'gifted', which are part of the category 'advertisement', were solely given, when the post was explicitly marked as that, therefore there was no disagreement between the two coders, when the code should be applied. Additionally, the category 'presence of influencer' consist of 'influencer is posing', 'influencer is not posing' or 'no influencer', again there was no discussion whether there is no influencer, as that is rather clear to see. Furthermore, there were also no differences between the two coders in regard to 'influencer is posing' and 'influencer is not posing'. That is the reason why the Cohen's kappa for both categories is 1.

Table 2

Intercoder Reliability

Category	Cohen's Kappa
1. Frame	0.73
2. Goal	0.71
3. Engagement Techniques	0.97
4. Product	0.82
5. Advertisement	1
6. Presence of Influencer	1
7. Topics	0.73

4. Results

In the following section, the results of the content analysis will be presented. First some general results regarding the composition of Instagram posts from green influencers are provided, followed by a closer look at the engagement techniques used. Afterwards the results related to the code framing are displayed. Then some interesting results related to the group of micro-influencers, macro-influencers and mega-influencers are outlined, to give a better understanding of the differences between these groups. Afterwards an overview of the result regarding the product topics presented in the analysed posts, is given.

4.1. Composition of Instagram posts

The analysis of Instagram posts made by green influencers showed how they are composing their messages. First of all, even though some of them are specialised in a certain topic they all post about all kind of topics regarding sustainability, meaning there are quite versatile. @timsilverwood, for example, mainly focusses on topics regarding the ocean, but he does not limit his content to only that. He either links other topics to his speciality, for instance waste or trash in the ocean (*'Plastic production is increasing exponentially with the bulk used for single-use & disposable products. It's no wonder we're drowning in the stuff', 10-05-2019*) or just focusses on another topic completely (*'@climatestrike is a campaign led by young people to put pressure on the Morrison Government to stop threatening their future & take #climateactionnow! Would I be striking if I was a young person in 2018 - HECK YES!!', 27-11-2019*). Other influencers behave similarly, for example @going.zero.waste, she mainly emphasises subjects regarding waste and zero-waste. But in the analysed posts, she was also covering topics such as water consumption (*'Do you know how much water it took to make your favorite pair of jeans? On average, it uses the same amount one person could drink over 7 years! (UN) Most of the water we use we don't even see. It's called virtual water. It's water that's used in the production of our products like jeans and t-shirts.', 16-11-2019*). The other influencers have no main point of focus and are very multifaceted in general. Example for that is @edkashi or @blueollis, who cannot be put in a certain group, regarding the topics they communicate.

Green influencers find ways to connect topics of sustainability to other subjects that are not traditionally part of the sustainability theme but make it more relatable for their followers. @madeleineolivia writes:

'Am I doing enough? This is a question that goes around my head all the time. Am I doing enough towards reducing my carbon footprint? Am I doing enough for my career? Am I doing enough around the house? In my relationship? Friendships? With my family? With those I work with? For myself? For my body? For my mind? These thoughts pop up sometimes as a push to improve and do better.' (18-10-2020).

She explains how she questions herself, not only in regard to her behaviour with sustainability but also other things happening in her life, which is a regular occurrence for many people and therefore they can connect towards this better.

@tollydollyposh also acknowledges what she cannot achieve and where she still can improve her behaviour. In one of her posts she writes:

'Today marks the beginning of Plastic Free July (...) just like last year, I won't be taking part, although I will of course be staying mindful Why? Because I honestly find it incredibly difficult to avoid plastic and I'm not in a position where I can commit to living without it even if it's just for a month. In fact, although I've been open about this before, I still feel a bit of 'eco-shame' around this (01-07-2019).'

Also making a connection between a topic of sustainability, in this case, using less plastic, and the reality of not being able to do everything she wants and that everyone fails once in a while, which her followers can relate to as well.

Another important way to encourage followers to change their behaviour is to show activism, of course being a green influencer is also a form of activism and giving tips on how to implement a more sustainable lifestyle is also part of being active. One example is @sustainably_vegan, who is demonstrating in her backyard, she is holding up a poster into the camera and is criticising H&M in her description (*'It's a disgrace that a problematic company as large as they are can abuse their power and spread misinformation. This is why some consumers think they're making a 'better' choice by choosing a brand like H&M.'*, 24-04-2020). Another way to show activism is to take followers along when the influencer is joining demonstrations or other political activities, also @tollydollyposh and @treesnpeace are two influencers who make regular use of that, as they are both part of extinction rebellion, who call

themselves ‘an international movement that uses non-violent civil disobedience in an attempt to halt mass extinction and minimise the risk of social collapse.’ (About Us., 2020). They share pictures of them demonstrating and standing up for something they think is not right. Also, @gretathunberg is a good example for that, her Friday school strikes have become a worldwide occurrence and she is sharing pictures of herself in Sweden but also from school strikes all over the world.

In most of the posts the influencers are explaining and educating their followers. In addition, they also often include numbers to give evidence for their statements (@going.zero.waste 19-02-2020: *‘The average American family sends 1,500 plastic bags to the landfill every year’* or @trashisfortossers 07-01-2020: *‘But did you know that over 6% of America's waste is textiles (mainly clothing)!?’* 🤯), and therefore it more likely the followers believe these statements, and also to recall the numbers.

Furthermore, the analysed corpus of 80 posts of 10 different green influencers were mostly non-paid posts, to clarify the posts were not made in collaboration with a brand and the influencer was not paid to promote a certain product. If the influencer was working with a company it did fit with their general narrative and the brand communicates similar norms and values like the influencer presents.

4.2. Engagement Techniques

The engagement techniques the influencers used were quite aligned with what prior research already concluded. In this research, the code ‘Use of posters’ was added, as multiple influencers were holding up posters into the camera to convey certain messages, for instance, @treesnpeace who was holding up a piece of cardboard with the words ‘climate justice now’ (03-04-2020).

Overall, ‘Collaborative tagging and hashtags’ were used the most by the green influencers. Most often, it was the case that they tagged the company they were working with for example @Riverford, @hollandandbarrett or @tomsuk. Others tagged companies they were reporting about, example for that are @topshop or @hm. Also, very common were tags for the organizations they either partnered up with or they are part of, @extinctionrebellion, @wwf_uk or @climatestrike are just a few of them. Additionally, the photographer was also regularly tagged, which sometimes also included themselves. Regarding hashtags that were used by green influencers, these were most of the time rather specific and related to the content of

the post. For instance, #fridaysforfuture, #climatecrisis, #zerowaste or #stoptrashingwaves but other times it was even as specific as #teesforgood or #FluSeason.

Another important aspect is direct contact with the followers, nearly all influencers used this technique. Many of them were having direct contact through the comment section, by answering comments of their followers. That happened in 45 of the 80 analysed posts. A second method is to address the followers directly, which mostly is done with questions. @madeleineolivia, for example, is asking her followers: *'Who here used to be addicted to fast fashion?'* (02-12-2019) and is following up with her experience regarding fast fashion or @timsilverwood *'Hands up if you're committed to 'taking it up a notch' in 2020?'* (17-01-2020), asking his followers about their sustainable contribution in 2020.

Also a very common tool that is added in description of Instagram posts are emojis, also green influencers make use of them. It can be observed that the emoji is either supporting the statement made, because it easily visualizes the topic there are currently discussing (@trashisfortossers 27-08-2019: This year, I started a little garden. 🌱) or it is more used as a form of eyecatcher (@blueollis 08-03-2020: '🧼 How do you clean your bathroom? 🧼').

4.3. Framing

Another important aspect is to look at the framing of the Instagram posts, as current literature is not all on the same opinion. In general the frame of most posts were positive, as Instagram posts are frequently about the influencers own experience, it was a mixture of personal stories told in a positive frame. For instance, @trashisfortossers:

'One of my favorite things about going to my grandmother's home is seeing her use her mother and grandmother's items when she cooks. I hope that my kitchen tools will be used by my children in the future, and I know the materials that they are made of will stand the test of time (without being plastic!).' (08-09-2019)

or @madeleineolivia:

'I'll be in Truro, Cornwall from 10:30 today to strike with students to get world leaders to LISTEN about climate change and the climate crisis. Where around the world will

you be striking today? And if you can't make it, then raise awareness online and get the conversation going with friends, family, co-workers and anyone you see today'
(20-09-2019).

Table 3 shows the co-occurrences between frames and goals. It can be seen that the goal 'explaining & educating' is communicated both in negative and positive frames in equal measure. Whereas the goal 'enabling & empowering' is more conveyed positively framed, for instance @madeleineolivia writes

'I'll be in Truro, Cornwall from 10:30 today to strike with students to get world leaders to LISTEN about climate change and the climate crisis. Where around the world will you be striking today? And if you can't make it, then raise awareness online and get the conversation going with friends, family, co-workers and anyone you see today'
(20-09-2019).

Combining the encouragement to do something or change your behaviour with more positively framed text, is rather logical, as the influencers are trying to encourage their followers to change their behaviour, which can be better done by bringing positive examples and information.

Table 3

Co-Occurrence frames and goals

Code (frequency)	Explaining & Educating (83)	Enabling & Empowering (25)
Positive (73)	38	11
Negative (45)	37	2

Table 4 displays the co-occurrence of frames and the before mentioned engagement techniques. Direct engagement, collaborative tagging and hastags as well as use of emojis, are more frequently framed positively than negatively. @madelienolivia posts for example:

'So keep going and give yourself a break for the things you aren't able to give up. Give yourself time and focus on what matters. Look at your individual strengths. I am certainly not perfect. And remember that there are so many things we aren't in control

of, that only governments and large companies can change. And for that you should not feel guilty! (02-08-2019)'

As all of these techniques are used to engage with the audience a more positively framed text makes sense, but direct engagement, for instance, could also be stimulated by more negatively framed information to foster discussions in the comment section.

Table 4

Co-Occurrence frames and engagement techniques

Code (frequency)	Direct Engagement (121)	Collaborative tagging and hashtags (178)	Use of Emojis (97)
Positive (73)	17	29	27
Negative (45)	8	19	7

It was also observed that the frequency of positive or negative frames change, related to the amount of followers the influencers have. Micro-influencers (less than 100k followers) especially often, post their content in positive frames (see table 5) (@timsilverwood: *'Tomorrow is #WorldOceansDay - a day to celebrate and respect the source of life on our precious blue planet - the ocean. 07-06-2019'*), meaning they are describing solutions or positive experiences. It could be concluded that influencers with not as many followers, focus more on positive topics, to not start a discussion with their followers and other users, as well as, preventing criticism about the content they post. Macro-influencers (between 100k and 1m followers) and mega-influencers (over 1m followers), in comparison to micro-influencers use a higher percentage of negative framed posts (see table 5) (@edkashi: *'California's drought contributes to its fires as dry conditions kill vegetation in the area, providing dry material as fuel.'*, 09-02-2020 or @trashisfortossers: *'For anyone that hasn't heard, New York City is halting municipal composting starting May 4. Unfortunately, this is my birthday. This is not a good birthday present.'*, 20-04-2020), which could be traced back to the fact that they are already more established with their followers, and are not as concerned with raising discussion or receiving criticism.

Table 5

Co-Occurrence frames and influencer group

Code (frequency)	Micro-influencer (48)	Macro-influencer (23)	Mega-influencer (9)
Positive (73)	54	16	3
Negative (45)	26	14	5

4.4. Micro-, Macro- and Mega-Influencers

The group of influencers with less than 100k follower, also called micro-influencer, are using the engagement techniques to gain more followers. Especially often used by them, are collaborative tagging and hashtags. By using hashtags and tagging others on their posts, their current followers are more likely to participate by liking the posts and commenting it, for instance, @tollydollyposh who encourages their followers to join the movement she follows:

We need to talk about it. Join your local XR group; join a Youth Strike. Please, please be part of this. Thank you @extinctionrebellion @ukscn @youthstrike4climate @gretathunberg' (01-05-2019)

Part of the group of micro-influencers analysed in this study are @tollydollyposh (12,9k follower) and @treesnpeace (23,5k follower), both of them are based in the UK, young women and are part of the movement extinction rebellion, which was mentioned beforehand. Especially interesting is how they use their online platform to take their followers with them on demonstrations and promoting the movements or organization they follow or participate in, such as extinction rebellion. Many of their posts are linked to their activism work, for example @treesnpeace:

'We are not criminals! Thousands of ordinary citizens have been arrested last week during the Int. Rebellion - and this will continue. We come from all walks of life... we come together for the climate crisis. We stand against those that promote & fund the climate crisis; we rebel against ecocide. We are not criminals. We breach certain laws by using non-violent civil disobedience as our last resort to demand change -

the social contract is broken as the government is not doing their job: ensuring the wellbeing of its citizen. The law has to be changed: criminalise ecocide.’, 14-10-2020

or @tollydollyposh:

‘Because there are a myriad of reasons why many people can’t take to physical forms of activism (such as swarming, blocking roads and taking part in strikes and marches). Responses to a recent IG Story I posted made this very clear and although it would be wrong of me to offer solutions, I do believe I can help share ways to support direct action, indirectly. Some examples include...

ARRESTEE SUPPORT (E.g: Attending court hearings and meeting activists at police stations), ART & DESIGN (E.g: Painting banners and creating graphics), SOCIAL MEDIA (E.g: Sharing events and helping tell the truth about the climate crisis), OUTREACH (E.g: Running stalls and flyering), WELLBEING (E.g: Emotional support and providing food), FINANCES (E.g: Donating to movements and to legal costs)’,
29-09-2019.

Additionally, both of them were the only influencers in this study, who addressed the topic of shaming, to be more concretely fly shaming, or eco shaming in one of their posts. @tollydollyposh explains in one of her posts that she *‘feel[s] a bit of “eco-shame”’* (01-07-2019) because she is still using plastic. Therefore, she links the ‘shame’-phenomenon to her own experience and explains that she is actually feeling this shame. @treesnpeace on the other hand encourages her followers to perform shaming (*‘Flygskam, fly shame/shaming! This can be about yourself and/or others. Tell stories how and why you don’t fly, or if you do what that means for the world. Call-out high-consumerism of flights, demanding us all to act on the climate emergency. This calling out applies to individuals, companies, ads and policies (eg: why is airplane-fuel not taxed but train companies are?)*, 12-01-2020)’ and even turns the narrative around and explains *‘train-bragging[!] Tell more stories about your train journeys. Tell them about what you saw, who you met, what you did... to encourage others. Document the journey, enjoy the views. Give feedback to companies. Advocate for public transport’*, 12-01-2020. It seems, in her perspective shaming is nothing negative but another way to raise awareness and inform people about the impact their choices have. So very similar influencers based on the content they normally share, do have a different perception on ‘shaming’ and also report about it in different ways to their followers.

Macro-influencers are influencers with a follower count between 100k and 1m, in the researched sample were three macro-influencers. In every post of a macro-influencer, the goal of the post was one of explaining and educating their followers, for instance, @going.zero.waste writes: *'Do you know how much water it took to make your favorite pair of jeans? On average, it uses the same amount one person could drink over 7 years! (UN) Most of the water we use we don't even see. It's called virtual water. It's water that's used in the production of our products like jeans and t-shirts.'* (16-11-2020)

From the 23 posts made by macro-influencers analysed in this study, only one was a paid advertisement. But in the group of macro-influencers is also @trashisfortossers who has her own company @packagefreeshop, which she regularly tags in her posts but not marks it as a sponsored post.

Regarding topics, macro-influencers mainly focused on topics of (Zero-)Waste.

Which could be reverted to the fact that @trashisfortossers and @going.zero.waste are part of the macro-influencer group, and as their names already say, they specialise on zero-waste content. @edkashi offers more diversity in his posts with topics like droughts (@edkashi: *'@nasa states that droughts in the US Southwest and Central Plains could be drier and longer than #drought conditions seen there in the last 1000 years'*, 20-01-2020) or sustainable behaviour in agriculture (@edkashi: *'A report from the Intergovernmental Panel on Climate Change finds that about 30% of global emissions leading to climate change are attributable to agricultural activities, including pesticide use.'*, 15-12-2019). Topics that were not covered by them are activism, shaming or politics.

It is also rather interesting to look at the only mega-influencer that has been researched in this study, @gretathunberg with 10.2m followers. There may be some other Instagram users that mostly create content about sustainable matters and have over a million followers like @leonardodicaprio, but as they were already well-known before their social media career and in Leonardo DiCaprio's example, are more an actor than a social media influencer, they were not taken into consideration in this research.

Greta Thunberg is also a rather unconventional influencer though, in the sense that she has not risen to fame only through social media but more her activism work that was shared on social media. The choice to use it as a tool to spread awareness

for a topic that is very near to her heart and she advocates for, has helped her rising to the fame she has accomplished now and probably being the biggest green social media influencer.

Looking at the analysis of her posts, most importantly is she is not advertising anything with her Instagram posts, there were no paid advertisements. In line with that, she is showing no products, most posts are either from demonstrations, her climate activism, herself or causes she wants to bring to the attention of others. As she is known for her climate activism, most posts are also related to that, but from time to time she also mentions other topics from the sustainability realm, for example problems regarding the ocean or the excessive amount of trash (*'The problem of plastic pollution in the ocean is even worse than anyone feared. There's actually more microplastic 1,000 feet down than there is in the Great Pacific Garbage Patch'; 08-06-2019*). Also, very interesting is for all or nearly all topics related to climate strikes she also adds the hashtags #climatestrike, #schoolstrike4climate and #fridaysforfuture in her description.

In many of her posts, she is not enabling two-way communication, it seems like there is mostly an informing of her followers about her recent actions (@gretathunberg 04-03-2020 *'Today I'm addressing the European Commission and the European Parliament in Brussels. #ClimateLaw #FridaysForFuture'*), instead of asking or encouraging followers to also participate, like many other influencers do.

4.5. Product topics

Regarding the products green influencers showed or promoted in their posts, it can be said that, that the variety of shown products was rather limited. They are either products that the influencer are promoting or are regularly using, explain how they can be made or are used to bring a point across. Figure 3 gives an overview on the frequency of each product topic.

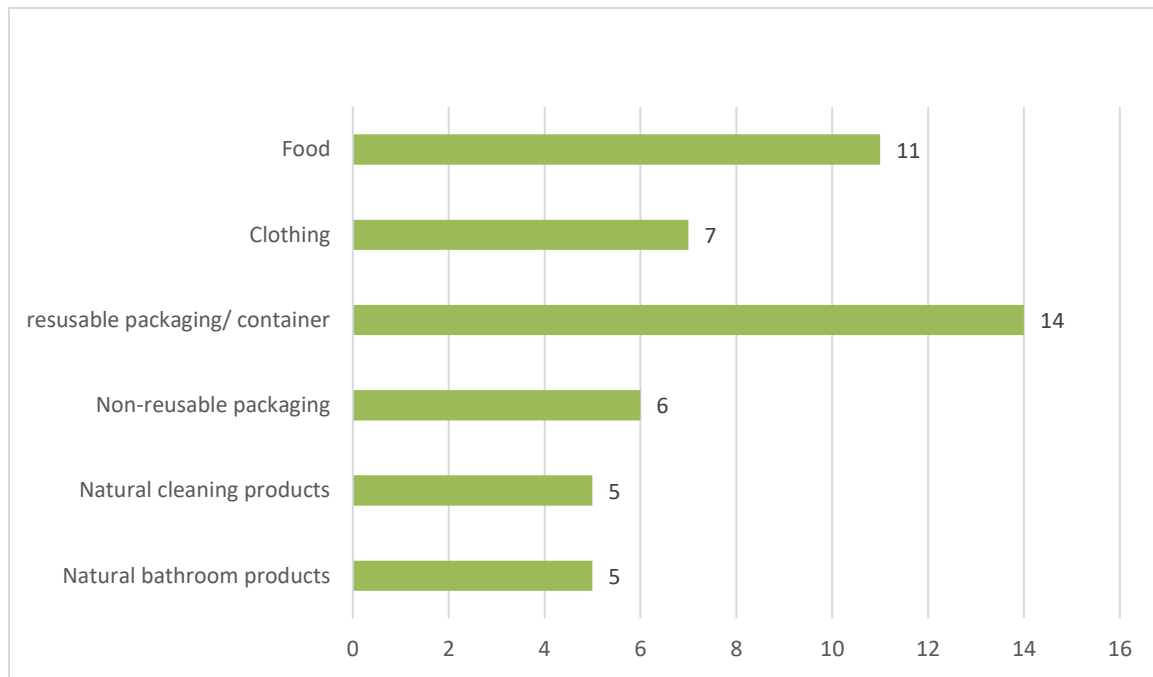


Figure 3. Frequencies of Products

Posts that were depicting food products were often linked to grocery hauls (@sustainably_vegan: *'Mini unpackaged haul from today's trek around London, filming clips for tomorrows video! This stuff is all from @wearegather_uk and @hetu_uk ! Unpackaged tofu, soya chunks, vegan cheese, coffee beans, bread and some cupboard staples.'* 04-03-2020) or food storage (Photo Description of @blueollis post: *'The photo is showing two pantry shelves, both of them are storing glas jars. In the bottom one are more bigger jars, storing things like rice and lentils. On the top shelf are smaller jars storing, nuts and other powders.'* 12-01-2020). Posts with food items included often were posted in collaboration with food related brands, so for example @treesnpeace: *'Got this for £3 from a Green Grocer Shop via @toogoodtogo.uk. It's an app where food businesses have signed up to and sell their leftover food for a lot cheaper to prevent it from going to waste at the end of the day.'*, 21-11-2019. The photo also shows the groceries she bought. Another example is @madeleineolivia: *'I choose Riverford because I care about where my food comes from. Because I want to support local farmers. Because I want to reduce my waste. Because I care about the health of the land. Because I care about the future of our planet.'*, 11-02-2020. Riverford is a food delivery service in the United Kingdom, providing fruits and vegetables from local farmers. In the photo she is holding a piece of salad in her hand and she is also standing in an area where salad is being

cultivated. In comparison to the other product codes, food has been used quite a lot, it is also a topic in the sustainability realm that many influencers have knowledge on, as everyone deals with it on the daily. This means that a lot of influencers posts about food besides their actual focus topic in the world of sustainability. But it also has to be taken into consideration, that food products are a normal appearance in any household, which also could increase the frequency.

The code clothing was mostly used for posts about the influencers wardrobe as an example @sustainaby_vegan writes *'Trying hard to think carefully about my wardrobe. Minimise, only bring items of value into it, thrift where possible, support ethical & sustainable brands, consume less, love what I already own, clothes swap with friends, appreciate things that suit my body not the trends.'*, 27-02-2020 and showing her some of her clothes on a clothing rack. In an other post @trashisfortossers links the product Clothing to the topic of (Zero-)Waste (*'Even in the case of an old stained t-shirt or pair of shredded underwear (like waaaay past the emergency-laundry-day underwear stage) there are plenty of textile recycling programs to keep even the most unwearable items out of landfills'*, 07-01-2020) while showing a bag full of clothes on the photo. The code was used once in co-occurrence with a paid advertisement post. In that case @treesnpeace collaborated with @tomsuk (*'@tomsuk challenged me to revisit a behaviour and make it more sustainable, for the #earthwise campaign. I chose Food, and you can read more about that in my recent post. Well, these shoes in the picture are comfy as hell, and I enjoyed my (social-distanced) walk to the farmers market a lot where I got to know my local farmers 🌿'*, 24-04-2020) and showed the shoes in her Instagram post. All in all it can be said, that similar to the topic food, clothing is also a sub-topic to many influencers. As everyone need clothes, and more sustainable options to fast fashion are rather easily attained it is a topic many have knowledge on and can share experience about.

Reusable packaging/container products were coded most frequently from the product codes. Most often they were coded when used as packaging for food items (@trashsfortossers: *'Skip plastic water bottles. Staying hydrated is important, so if you don't have a reusable water bottle, you can easily use empty watertight peanut butter jars, coconut oil jars, etc. that are lying around and use that to bring water and other beverages with you'*, 10-01-2020; Photo description of @going.zero.waste post:

'The focus of the photo is on a glass jar filled with peas and some pea pods.', 06-04-2020), another example is to use it for holding other types of products (Photo description of @blueollis post: *'The photo shows a brown glass soap dispenser.'*, 24-07-2019). Reusable containers are often presented by green influencers, when there is a more popular no-reusable packaging. They are showing how often there are alternatives that function just as well.

Non-reusable packaging was mainly framed in negative ways and used to raise awareness. Examples for that are @going.zero.waste showing a plastic coca cola bottle in one of her posts and writing: *'This is the first lawsuit to directly take on major plastic polluters right at the source because these companies have known how ineffective plastic recycling is for years.'*, 10-03-2020 or @blueollis who holding a dirty, green plastic straw into the camera and writes: *'The vision of a cleaner world, of communities coming together to create respected spaces, of a connectedness with nature, knowing that which harms our environment also inherently harms us as interconnected life, of consistent peace and nonviolence towards our home and all who live here.'*, 02-03-2020. So they are mainly used as an example of why not to use similar products and explaining the disadvantages. The product topics natural cleaning products and natural bathroom products were not shown much in the analysed posts. It should also be acknowledged that some influencers have not shown any products in their posts, examples for that are @edkashi and @gretathunberg.

5. Discussion

5.1. Discussion of findings

In order to answer the research questions discussed in the introduction, it is of importance to summarise the relevant results for each of the questions. The first sub-question (*What techniques are green influencers using to engage their audience?*) concerns the techniques green influencers use to engage their audience. The most commonly used technique was 'Collaborative tagging and hashtags', as using certain hashtags ensures that the photos also show up on peoples feed when they follow the hashtag and therefore even a broader audience can get reached. Moreover, tagging other Instagram users is a regularly used method, as users can check the photos other users have been tagged in. Direct engagement was also commonly used by nearly all analysed influencers, especially through answering comments or asking (rhetorical) questions, with which they build two-way communication with their followers. Both methods were used especially often by micro-influencers, as already mentioned in the results section, they could gain more followers and notability. The results regarding the engagement techniques are very much inline with other research on this topic and using different techniques to engage with followers is not only commonly done by green influencers but are techniques that are frequently adapted by most users of social media networks. Furthermore, the codes for the category engagement techniques were replicated from prior research, only the code 'use of posters' was added, but did not show any intriguing results.

The second sub-question (*What kind of products are green influencers promoting?*) regards the kind of products green influencers are promoting. In general, it can be said that both, the amount and the variety of products promoted by green influencers is rather limited. Most often food items or services were promoted through brand collaborations. In addition, reusable packaging/ container were also an often-seen product group, but they were not featured in any sponsored posts. Other products topics did not show any relevant results. Therefore, it is rather difficult to make connections to already existing research, however it can be said that green influencers show a variety of different products in their Instagram posts.

The main research question of this study is: *How are green influencers composing their messages and arguments of sustainability in their Instagram posts?* In addition to the composition elements discussed with regards to the sub-

questions, most influencers try to focus on a certain topic, for example zero-waste, so most of their posts are related to that speciality. However, there are some exceptions, who communicate a broader range of topics. Something that could be observed quite regularly are the influencer making the post more relatable to their followers. This was done, for instance, by linking the topics of sustainability or their topic of specialisation to other topics, to which their followers can relate to. Examples mentioned in the results section were work problems or mental health issues. Being a green influencer is already a form of showing activism, however multiple influencers even go a step further and take their followers with them when they actively go on the streets, for instance, demonstrating against climate change. Furthermore, it can be said that most of the analysed posts were formulated in a positive frame and had the goal of explaining and educating the followers. The amount of sponsored posts was relatively low, which could be traced back to the limitations the influencers have in green companies they can collaborate with. As there has not been any studies on how green influencers are composing their messages of sustainability on Instagram, these results give insights into how green influencers communicate.

Other interesting findings, related to the different groups of influencers, are the preferences of micro-influencers. Macro-influencers and mega-influencers in comparison used somewhat of a more negatively framed narration for their Instagram posts. This could be related to the fact that they are established in the world of social media and can use their reach to also convey more negative topics or messages, without losing footing or followers online. As mentioned before, influencers portray much of their everyday life online, therefore criticism for online behaviour can also be translated to offline behaviour and influence the influencer even more. As a more respected influencer, the risk of being criticised for spreading negative framed content is reduced.

Lastly, the mega-influencer that was analysed, Greta Thunberg was in general quite different compared to the traditional influencer. On the one hand in her way to fame and on the other hand also in the composition of posts, as she used direct engagement much less than the other analysed influencers. Additionally, she does not advertise products in her posts and she promotes activism in her content, which show some similarities to other green influencers.

5.2. Theoretical Implications

As already mentioned in the theoretical framework, not much prior research has been conducted on this topic beforehand. Okua, Scholtz & Snow (2019) did compose a list of engagement techniques that are used by influencers, of which nearly all techniques described in their research paper were also used in this study. The exception is 'social timing', as Instagram's settings do not allow users to see at what time a post was published. Added in the category engagement techniques was the method of using posters in their Instagram posts, as multiple influencers used them to communicate certain messages. Generally, it can be reflected that all techniques were used, however there were bigger differences regarding the frequencies. Especially content curation was not as much applied as the other approaches.

According to Moser (2016) a successful communicator should enable and empower the listeners, in order for it to be successful climate change communication. As the goal of this research was not to research whether these methods were successfully used but only which ones were actually used, there cannot be any comment made on this. However, it can be said that the green influencers aimed more towards informing their followers than empowering or enabling them.

Furthermore, mentioned in the theoretical framework and quoted from Davis (1995) and White, Macdonell and Dahl (2011), is that negatively framed messages are more successful, especially when linked to environmental behaviour. With this research no assumptions about the success can be made, as this was not explored. However, regarding frequency, positively framed messages occurred way more than negatively framed messages. There was a difference within the different groups of influencers though, especially micro-influencers posted in more positive frames, whereas macro- and the mega-influencer also shared more negatively framed posts. Reflecting on the prior research, there are quite some differences as a lot of posts are also positively framed. In this respect, this study has added to the literature by focussing specifically on investigating the methods green influencers make use of and apply to their Instagram posts.

Additionally, activism is playing a big part in the Instagram posts of green social media influencers. Digital activism has risen to popularity over the last years (Sivitanides & Shah, 2011) and nearly everyone has heard of a hashtag activism campaign before (Yang, 2016) like #blacklivesmatters or #metoo campaigns. Green

influencers are also sharing content about activism, such as the extinction rebellion movement or Fridays for future.

5.3. Practical Implications

Multiple practical recommendations emerged from this research, which should be taken into account in the future. Green influencers should consider that it is rather important what they do outside of social media. As most influencers share parts of their life online, the behaviour they present on social media should be in line with their actions in real life. Otherwise there is a discrepancy between the two worlds, causing the influencer to be less relatable. Greta Thunberg, for instance, has recorded her activism journey on social media and the combination of both efforts is what helped her rise to fame. Thus, to become a successful green influencer, it is not only important what you are doing online but also what you are doing offline. Most followers are looking for credibility in the influencers they follow, as they are trusting them to be honest and, for instance, only promote products they actually enjoy (Schouten, Janssen, & Verspaget, 2019).

For brands or companies wanting to collaborate with green influencers, the influencer's focus topic should be taken into consideration. Many green influencers focus their means on a certain topic regarding sustainability, for example fashion or reducing waste. When looking for an influencer to work with, this should be taken into consideration and linked to the topics the influencer is communicating about to their followers. In addition, collaborating with an influencer on a campaign does not automatically mean it will be successful. Likewise, the number of followers does not necessarily indicate on the success. According to Wellman, Stoldt, Tully and Ekdale (2020), authenticity is probably the most important aspect in the success of an influencer. This authenticity also plays a role in when a brand is looking for an influencer to collaborate with, as well as the match between the brand and the influencer. This implies the views of the brand and influencer should be aligned and if a product is promoted, as followers should believe that the influencer is authentically promoting this product.

5.4. Limitations

Although this study has contributed to new insights on how green influencers are formulating their messages of sustainability on Instagram, it also has limitations. Firstly, the sample of green influencers was limited. Even though the sample of high-profile green influencers analysed in this study, was decided on through cross-referencing multiple articles, there could be some influencers that were not considered as there were no reports on them, because, for instance, they have not been a green influencer for as long.

Secondly, the group of green influencers are only now starting to become more popular on social media. As there is no knowledge on whether this group is growing and, if yes, to what extent green influencers will stay a niche group of influencers for the foreseeable future. This lack of knowledge on how this group will evolve in the future could mean there is less relevancy for this study.

5.5. Future research

For future research, it could be considered valuable to add on to this study a quantitative study and analyse whether the used techniques are successful. This could be done by looking at the number of likes and comments made by followers. Likes on Instagram often are a way to imply something about the success of a post and therefore could give insights into whether the results of this study, so the composition of Instagram posts from green influencers, are actually well embraced by their followers. For the profile and device used in this research the function of seeing the number of likes was disabled, and therefore could not be researched.

Moreover, the perspective and opinions of the followers of green influencers could be investigated through a qualitative study, for example with interviews or focus groups. It could give insights into what content followers like to consume, what kind of information they are looking for and how they would describe the influence that these green influencers have on them. Additionally, it would be another way to measure the success of these posts, as the responses to the posts and green influencers could be captured. Followers could give in depth information on how they perceive certain posts and explain their opinions in detail.

Other directions could be analysing which social media network is most used by green influencers, as well as, which social media network is the most successful. Consequently, arguments could be formulated about the preferred format of content followers like to consume.

Additionally, it would be rather interesting to draw a comparison between 'normal' influencers and green influencers and analyse where the biggest differences in composing their messages lay. This comparison could also be done with a content analysis. The comparison between the amount of sponsored posts and the framing aspects of their messages seems rather promising and could give interesting insights.

6. Conclusion

The aim of this study was to investigate how green influencers compose messages of sustainability and other topics in that domain in their Instagram posts. This was accomplished by analysing these posts and capturing what they are composed of. Green influencers often focus on certain topics and therefore are more knowledgeable in that area (e.g. zero-waste, fashion). There are some green influencers who do not focus on a certain topic but have a broader array of themes they post about. Green influencers often combine different topics that are either related to sustainability or sustainable topics with something very different, which could also be interesting to their followers. As influencers they often report about personal experiences or adventures. It could be observed that these experiences were most often framed positively and had the goal of explaining and educating their followers. Moreover, engagement with the followers was common occurrence with green influencers as, they often used hashtags and tagged other Instagram users in their posts, to reach more Instagram users. Another typical way to communicate to followers is to ask (rhetorical) questions that could be then answered in the comment section and would encourage their followers to participate in certain discussions. Additionally, some differences between the influencer groups (micro, macro and mega) could be observed. The group of micro-influencers used collaborative tagging and hashtags the most repeatedly, which could be drawn back for their wish of getting more followers. Furthermore, the group of micro-Influencers contained two influencers that frequently take their followers along on their activism and promote their activist behaviour. In comparison, macro-influencers reported more negatively and had nearly no sponsored posts. The mega-influencer discussed in this study is a more untypical influencer and therefore drawing a comparison between her and other influencers is rather difficult. Nevertheless, interesting to note, she is not promoting any products and not collaborating with any brands in her posts.

Over the last couple of years, a group of green influencers has formed that inform their followers about all kinds of topics in the realm of sustainability. All of them try to engage with their audience and use their platform to raise awareness regarding topics like climate change or zero-waste. Raising awareness is the first step to make a change. As mentioned in the introduction some do not know about climate change, which also goes for other issues. Therefore, spreading knowledge is a very important stage in changing people's behaviour.

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Appendices

Appendix A

List of green or environmental aware social media influencers (14-04-2020)

1. Trashisfortossers (379k)
2. GretaThunberg (10,2 Mio)
3. TollyDollyPosh (12,9k)
4. Sustainably_vegan (70,8k)
5. Blueollis (23,2k)
6. Madeleineolivia (73,3k)
7. TimSilverwood (11,3k)
8. Edkashi (301k)
9. Going.zero.waste (149k)
10. Treesnpeace (23,5k)

Appendix B

Table 6

Codebook

Category	Code		Description
1. Frame	1.1.	Positive	Discusses solution, positive development or experience
	1.2.	Negative	Discusses issue, negative development or experience
2. Goal	2.1.	Explaining & Educating	Giving information
	2.2.	Enabling & Empowering	Encouraging change in behaviour
3. Engagement Techniques	3.1.	Direct engagement	Two-way-communication with followers and encouraging communication
	3.2.	Collaborative tagging and hashtags	Tagging brands or other users and use of hashtags

	3.3.	The use of emojis	Illustrating message
	3.4.	Content Curation	Content gathered from other sources
	3.5.	Use of incentive appeals	Persuasive messages
	3.6.	Use of Posters	Posters in the photo, displaying certain messages
4. Products	4.1.	Food	All content related to food items
	4.2.	Clothing	All posts regarding clothing, or clothing brands
	4.3.	Reusable packaging/container	All content showing or discussing reusable packaging products
	4.4.	Non-reusable packaging	Plastic packaging
	4.5.	Natural Cleaning products	
	4.6.	Natural Bathroom Products	
5. Advertisement	5.1.	No advertisement	There is no payment involved, in the post.
	5.2.	Paid advertisement	The influencer is paid to post the photo.
	5.3.	Gifted	The product or service was gifted to them by the

company, but no additional money was paid.

6. Presence of Influencer	6.1.	Influencer is posing	The influencer is posing for the photo.
	6.2.	Influencer is not posing	The photo was taken more accidentally or a snapshot.
	6.3.	No influencer	The Influencer is not seen on the photo.
7. Topics	7.1.	(Zero-)Waste	Waste in general and zero waste.
	7.2.	Food	Everything related to food, from veganism to food shopping
	7.3.	Fashion	All topics regarding fashion and clothing
	7.4.	Climate Change	Posts related to climate change and global warming
	7.5.	Activism	Posts about activism
	7.6.	Shaming	Influencer posting about some form of 'eco'-shaming
	7.7.	Pollution	Topics related to pollution
	7.8.	Politics	Posts by influencers talking about politics
	7.9.	Drought	Posts regarding water shortage

7.10. Ocean	All posts about the ocean
7.11. Sustainability	Posts discussing other sustainability topics

Appendix C

Cohen's Kappa Calculations

Table 7

Cohen's Kappa Calculations for Frame

1. Frame	1.1 Positive	1.2 Negative	9 Other
1.1. Positive	8	2	0
1.2 Negative	0	5	0
9 Other	0	0	0

Note: Cohen's Kappa is 0.73.

Table 8

Cohen's Kappa Calculations for Goal

2. Goal	2.1 Explaining & Educating	2.2 Enabling & Empowering	9 Other
2.1 Explaining & Educating	6	1	0
2.2 Enabling & Empowering	1	6	0
9 Other	0	0	0

Note: Cohen's Kappa is 0.71.

Table 9

Cohen's Kappa Calculations for Engagement Techniques

3. Engagement Techniques	3.1 Direct Engagement	3.2 Tagging & Hashtags	3.3 Use of Emojis	3.4 Content Curation	3.5 Incentive Appeals	3.6 Poster	9 Other
3.1 Direct Engagement	11	0	0	0	0	0	0
3.2 Tagging & Hashtags	0	14	0	0	0	0	0
3.3 Use of Emojis	0	0	6	0	0	0	0
3.4 Content Curation	0	0	0	1	0	0	0

3.5 Incentive Appeals	0	0	0	0	7	0	0
3.6 Poster	0	0	0	0	0	2	0
9 Other	0	0	0	0	1	0	0

Note: Cohen's Kappa is 0.97.

Table 10

Cohen's Kappa Calculations for Product

4. Product	4.1 Food	4.2 Clothing	4.3 Reusable packaging/ container	4.4 Non-reusable packaging	4.5 Natural Cleaning products	4.6 Natural Bathroom Products	9 Other
4.1 Food	1	0	0	0	0	0	1
4.2 Clothing	0	1	0	0	0	0	0
4.3 Reusable packaging/ container	0	0	5	0	0	0	0
4.4 Non-reusable packaging	0	0	0	1	0	0	0
4.5 Natural Cleaning products	0	0	0	0	3	0	0
4.6 Natural Bathroom Products	0	0	0	0	0	1	0
9 Other	0	0	0	1	0	0	0

Note: Cohen's Kappa is 0.82.

Table 11

Cohen's Kappa Calculations for Advertisement

5. Advertisement	5.1 No Advertisement	5.2 Paid Advertisement	5.3 Gifted	9 Other
5.1 No Advertisement	8	0	0	0
5.2 Paid Advertisement	0	1	0	0
5.3 Gifted	0	0	1	0
9 Other	0	0	0	0

Note: Cohens Kappa is 1.

Table 12

Cohen's Kappa Calculations for Presence of Influencer

6. Presence of Influencer	6.1 Influencer is posing	6.2 Influencer is not posing	6.3 No Influencer	9 Other
6.1 Influencer is posing	6	0	0	0
6.2 Influencer is not posing	0	1	0	0
6.3 No Influencer	0	0	3	0
9 Other	0	0	0	0

Note: Cohens Kappa is 1.

Table 13

Cohen's Kappa Calculations for Topics

7. Topics	7.1 (Zero-Waste)	7.2 Food	7.3 Fashion	7.4 Climate Change	7.5 Activism	7.6 Shaming	7.7 Pollution	7.8 Politics	7.9 Drought	7.10 Ocean	7.11 Other Sustainability Topics	9 Other
7.1 (Zero-Waste)	4	0	0	0	0	0	0	0	0	0	0	1
7.2 Food	0	1	0	0	0	0	0	0	0	0	0	0
7.3 Fashion	0	0	1	0	0	0	0	0	0	0	0	0
7.4 Climate Change	0	0	0	3	0	0	0	0	0	0	0	1
7.5 Activism	0	0	0	0	1	0	0	0	0	0	0	0
7.6 Shaming	0	0	0	0	0	2	0	0	0	0	0	0
7.7 Pollution	0	0	0	0	0	0	2	0	0	0	0	0
7.8 Politics	0	0	0	0	0	0	0	1	0	0	0	0
7.9 Drought	0	0	0	0	0	0	0	0	1	0	0	0
7.10 Ocean	0	0	0	0	0	0	0	0	0	1	0	0
7.11 Other Sustainability Topics	0	0	0	0	0	0	0	0	0	0	2	0
9 Other	1	0	1	0	0	0	1	1	0	0	0	0

Note: Cohen's Kappa is 0.73.

Appendix D

Mandatory Literature Study Log

Table 14

Literature Search Matrix

Constructs	Related Terms	Broader Terms	Narrower Terms
Social Media Influencer	guide, specialist, endorser	Influencer	YouTuber, Blogger, Instagrammer, Mega-Influencers, Macro-Influencers, Micro-Influencers, Nano-Influencers
Sustainability	green, environmental aware, renewable		Environment, natural resources
Instagram	Facebook, Twitter, instagrammable, instagrated	Social Media, application	photo sharing mobile application

Table 15

Examples of search actions and results

Number	Date	Source	Search terms and strategies	Hits
1	20-03-2020	Google Scholar	"Social Media Influencer" AND Sustainability	433
2	20-03-2020	Google Scholar	"Social Media Influencer" AND "Environmental Awareness"	23
3	20-03-2020	Scopus	Influence* AND sustainability	19,630
4	20-03-2020	Find UT	Influencer AND "going green"	291
5	23-03-2020	Scopus	Influencer AND "Environmental Awareness" OR Sustainability	76

6	23-03-2020	Scopus	Instagram AND sustainab* AND influencer	3
7	23-03-2020	Find UT	Instagram AND sustainab*	126
8	23-03-2020	Find UT	Instagram AND influencer AND Green	52
