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**The perceived role of the Instagram algorithm
in gender inequality**

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**Analyzing the public discourse around
the case of Nyome Nicholas-Williams**

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Abstract

Social media algorithms have come to have more social power than ever, and with this power, the question of discriminatory actions targeted at specific users based on algorithmic bias has risen. The objective of this study is to analyze the different perceptions of the Instagram algorithm in the case of plus-size model and activist Nyome Nicholas-Williams' posts being removed from Instagram due to this alleged algorithmic bias. The research includes a critical discourse analysis of utterances by different stakeholders of the studied case. It relies on the combination of new media studies and gender studies, as it connects questions of algorithmic bias to those of gender studies concerning intersectionality and representation. The results of the analysis include two main notions: the differences in perception of the controllability of the Instagram algorithm, and the agreed upon perception of the alleged bias's effects on intersectional gender inequality. These results show the variety in the perceptions of the algorithmic bias on Instagram, but also give insights into its intersectionally prominent effects on gender inequality.

Keywords: gender equality, social media, algorithmic bias, Instagram

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1. Introduction

In the late-summer of 2020, British model and activist Nyome Nicholas-Williams' posts on Instagram continued to get deleted, allegedly due to the algorithm of Instagram discriminating against its 'plus-sized' black users. Nicholas-Williams spoke out on her Instagram account about her posts getting effectively deleted off the site, which led to her becoming the founder and inspiration for a feminist social movement and online petition to stop Instagram from favoring "slim white women" while censoring "plus-sized [women] of color" with their algorithm (Ryder, 2020). This social movement was executed mostly in August of 2020 with the hashtag #IWantToSeeNyome, which now has over 1000 posts under it demanding the end of pictures being deemed inappropriate only due to their depiction of women who do not fit what can only be described as the outdated Western 'ideal of beauty'. The case of Nyome Nicholas-Williams can be seen as a prime example of social media algorithms having a role in the actualization of gender inequality in the current media landscape.

In our contemporary world, where social media platforms are becoming an integral part of any person's day-to-day professional and personal lives, the companies behind them have inevitably become to hold immense social power. Therefore, it is of great importance to investigate the in- and exclusion they promote, affect, and secure with their actions, and more specifically the algorithms these platforms are running on. Among other social media platforms, Instagram is one that has repeatedly been accused of having algorithms which discriminate against some of its users based on their gender, physical appearance, sexuality, and ethnicity, both in news reporting and academic research (Joseph, 2019; Ians, 2018; Columbia University School of Engineering and Applied Science, 2018). Many users have claimed to have been affected negatively by the alleged algorithmic bias of the platform in past years, sharing stories about their posts getting removed and accounts being deactivated for reasons which do not seem to be in line with the guidelines or public rules of the platform (e.g., Carolina, 2019). Instagram has publicly and privately admitted a level of bias, which has caught the attention of news sources. Due to algorithms rarely being available – let alone comprehensible – to the

general public, there is indisputably value in analyzing this public discourse on the topic, i.e., asking the question of what role social media algorithms are seen as having in gender inequality. The specific angle this research presents for this debated topic, is the inclusion of three stakeholders in an online discourse not specifically focused on algorithms themselves, but a larger phenomenon of discriminatory actions on and by social media platform Instagram, targeting its users, and more specifically black plus-sized female users.

Whereas looking into the technical side of the Instagram algorithm is an object worthy of academic analysis, this public discourse described above, surrounding the issue of alleged gendered algorithmic bias, participated in by users, Instagram, and news sources, has the potential to give more insight into the users' encounters with social media algorithms. This is due to these utterances presenting the perceived effects of the algorithm in the context of a specific phenomenon, in this case that of Nyome Nicholas-Williams' posts being removed from the platform. This context helps analyze the perceived algorithm better, as algorithms can be said to only have power when in context of other things. An algorithm always works within a context, and by itself, without data or other contributing factors, does not hold as much power. By looking into different stakeholders, I will aim to map out the different perceptions of the Instagram algorithm in relation to gender inequality.

From this presented basis, the research question that this study aims to answer comes to be: **What are people's different perceptions of the Instagram algorithm's role in fostering gender inequality, as seen in the public discourse around the case of Nyome Nicholas-Williams?**

To answer this research question, as well as allow it more in-depth answers, I will be asking the following sub-questions, which allow me to form a comprehensive analysis on the stakeholders' perceptions from the microlevel of singular utterances concerning the case at hand, to the macrolevel of gender inequality.

1. How do stakeholders perceive the Instagram algorithm as a biased agent on the microlevel of these utterances?

2. How do these perceptions relate to the macrolevel of gender inequality fostered on social media?
3. How do the utterances by different stakeholders differ and what does this imply?

In this research, I will be focusing on the discursive phenomenon of algorithmic gender bias on Instagram by looking into the public discourse surrounding the case of Nicholas-Williams, focusing on what will be called 'human-algorithm encounters'. The term human-algorithm encounter refers to the different ways and situations in which we have social encounters with algorithms in society, where algorithms are a part of the everyday, and which could influence those they encounter, all of which the case of Nyome Nicholas-Williams is a prime example. This definition of human-algorithm encounters is largely based on the works by Taina Bucher (2016), who argues that algorithms have a social presence beyond their technicality, in addition to power to affect those they encounter and the society they function in. Bucher's premise lays in the argument that media can no longer be considered as a mere part of life, but that life itself is increasingly happening within an algorithmic media landscape. (Bucher, 2016, p. 31—33; Bucher, 2019, p. 1—5, 93—96) In this research, I will be focusing on the gender equality aspect of this life Bucher argues as happening within algorithms, in addition to the everyday life algorithmic power.

The academic contribution I attempt to make with this research, is to connect debates of gender studies concerning intersectionality and representations to the new media studies questions about algorithmic bias. The discourse around the case of Nyome Nicholas-Williams can be seen as part of both the research focusing on human-algorithm encounters as well as the current gender debates in relation to new media. In order to map out the current state of the perceptions of social media algorithms' role in gender inequality, I have chosen to analyze three stakeholders participating in the public discourse determined above; utterances by Nyome Nicholas-Williams herself, by head of Instagram Adam Mosseri, and by news sources covering the story, using Critical

Discourse Analysis adjusted from the work by van Dijk (2001). These three stakeholders, their relevance, and the methodology will be introduced in detail in chapter 3.

2. Human-algorithm encounters through the lens of gender

In order to map out the current state of the public discourse around the Instagram algorithms' perceived role in gender inequality, this research utilizes studies on human-algorithm encounters, focusing on the power of algorithms on social media. Mapping this power is vital when defining the role of algorithms, as gender inequality itself is – before all – a question of power. In the following chapters, I will first be discussing theories relating to human-algorithm encounters, and second, cover debates of gender studies most relevant to this research. Due to this research focusing on the public discourse participated in by the three stakeholders mentioned in the previous chapter, I will introduce Critical Discourse Analysis as the used methodology in chapter 3. While I will be using human-algorithm encounters and the lens of gender as interlaced as possible, it is still of importance to present both these aspects separately, to ensure a deep enough understanding of both for this research.

2.1 Algorithmic power

When looking into algorithms, technology-focused research often takes precedence over humanities research. However, as presented in the previous chapters, this study aims to investigate the perception of social media algorithms' role in gender inequality by critically looking into the power relations they entail and embody, through the analysis of the public discourse concerning it. Whenever critically looking into the concept of power, one should begin by assessing the type of power that is in place. I will next explore the concept of human-algorithm encounters by moving from algorithmic power to what effects it can have on the people it encounters.

One of the researchers to have contributed to the study of algorithmic power is David Beer, who proposes that algorithms and their power should not be seen as only technical objects, but as important factors in the discourse of 'normal', as algorithms can be seen as the discursive synonym for the "desired and efficient". (Beer, 2016, p. 9) Beer dissects the social power of algorithms by bringing attention to its duality. He suggests that

algorithms' social power should be looked from two perspectives. Firstly, how the algorithm itself, in its material form, deploys functions which create ways of power in society by presenting how things are to be done, and secondly, how the algorithm as a notion has power beyond its technology, because it can be used to promote certain values. (Beer, 2016, p. 4—10) Beer refers to Foucault's concept wherein the production of truth is held as central concept in the understanding of power (Beer, 2016, p. 9; Foucault, 2003, p. 24—25). Beer connects this to his suggestions of the dual nature of algorithms' social power, by noting that algorithms have the capacity to produce truths firstly through material interventions, and secondly in a discursive manner, by presenting algorithms as discursive agents themselves. Thus, according to Beer, the power of algorithms does not solely lie in the "impact and consequences of code", but also in the ways in which the notion of algorithm moves around and creates ideas in our social world when encountered with a human. (Beer, 2016, p. 2) What is also noted for this research, is Beer's statement that this social power of algorithms can be understood only when detached from the technical and material forms as which it is often seen. (Beer, 2016, p. 9—10) I have achieved this detachment in my research by concentrating on the discourse of people's encounters and opinions of the Instagram algorithm, as opposed to its technological aspects.

Whereas the work of Beer (2016) can be seen as a basis for the study of algorithmic power in the research at hand, in order to adapt it to my case study of the Instagram algorithm, it must be connected to the context of new media more concretely. In her book *Algorithms of Oppression* (2018), Safiya Umoja Noble investigates the automated suggestions of the Google search bar, and how they can reveal/present the bias and discrimination behind the algorithm of that automated search. As an example, she uses the autofill for the phrase "Why are black women so" and shares the suggested results finishing the sentence, including 'angry', 'loud', 'annoying', and other adjectives with generally negative connotations. Noble makes a strong argument about algorithms which create these suggestions as not being objective and neutral beings but in fact created by people with their own values and thoughts. (Noble, 2018, p. 15—23; 37) This is a concept which can be argued to be true to many algorithms in new media, which is

why it is essential to this research. Noble moreover brings up the important instance in which, when confronted about what could in this case be characterized as racist and sexist search algorithm that is ran, Google's representatives have responded claiming that a computer or other 'un-controllable' factor is at fault and therefore cannot be fixed, which again feeds to the allegedly false idea of search algorithms being neutral beings. (Noble, 2018, p. 80) The notion of algorithms being in fact human-made, in addition to Google's response Noble brings to light, can be adapted to this research as a large part of it handles with utterances made by Instagram's representatives concerning their algorithm, which can be seen as somewhat corresponding to those of Google.

Furthermore, Noble introduces the view that search results (here: on Google) are not neutral and/or providing the 'best' information to the user, but in fact ranked by the amount of commercial value they have (Noble, 2018, p. 24). She proposes that algorithms ranking entities according to their profitable potential "compromise our ability to engage with complicated ideas", referring to how a certain view of the world can be purchased for showing quite easily (p. 112—118). She also states that commercial search engines create their own material reality, which does not represent the real world (p. 99—101; 147—149). According to Hall (1997), this is of immense importance, as he states that we in fact produce the reality we live in with representations (Hall, 1997, p. 8—9). So not only can representation create their own material reality, but strongly partakes in the production of our actual reality.

Whereas Noble's work has nuances of activism and even protest, intertwined with legitimate academic research, as well as being focused more on search engine algorithms of new media, I still find it to be relevant by adapting it to the world of social media algorithms and the commercial companies behind them. Whereas Noble focuses more on ethnic inequality, she does include the aspect of gender strongly enough for it to be applicable to this research, which leans heavily on the concept of intersectionality, as will introduced in chapter 2.2.1. Adapted to the focus of this research being the Instagram algorithm, Noble's arguments can be recognized in posts being taken down or not promoted on Instagram not as the result of a neutral algorithm working on a neutral code, but a constructed entity built by humans to work the way it does. In addition, her

notion on algorithms and the companies behind them creating their own reality is something which relates strongly to their representational power. Instagram deleting or banning posts of certain people creates an alternative reality in which those people do not exist or at least do not have as much value as others. This can be seen as one of the main points in the study of representations, as it can be seen as Instagram directly affecting the social and political values of our society. In addition to the introduced notion by Hall (1997) arguing that representations produce our reality, multiple studies have found that representations play an essential role in identity building, with findings stating that the experience of being misrepresented or excluded entirely can have severe negative consequences on a person's sense of belonging in the world (Caswell et al., 2016; The Opportunity Agenda, 2011).

Adding onto the representational aspect of algorithms, the work by Taina Bucher (2017) examines the algorithmic imaginary, which she derives from the concepts of cultural imaginaries and the "ordinary effects of algorithms". By algorithmic imaginary, Bucher refers to the way in which people perceive, imagine, and experience algorithms and what they then do with these imaginations. As mentioned in the Introduction chapter, Bucher mainly focuses on the day-to-day encounters between users and algorithms, bringing attention to the social side of algorithms, and the moods and sensations they can generate, in contrast to the mostly technical research of algorithms' affects. (Bucher, 2017, p. 31—33; 39—42) One of the social sides she speaks to, is what algorithms can do to the sense of self as they become increasingly more intensified and ubiquitous in the typical social media user's everyday life. Bucher argues that algorithms create a 'cybernetic relationship to identification' by constructing categories for identity for its users, which may however often differ from the identities users feel about themselves (Bucher, 2017, p. 35—36; 40—42). Whereas Bucher mainly refers to factors such as age and relationship status with this argument, it can also be taken into consideration when looking into the gender and ethnicity of users. Users are being categorized, but what are the values and qualities which these assumptions are based on? This notion of representational power connects to Beer's (2016) suggestion of enriching the study of algorithms by including the concept that algorithms can be powerful in "shaping decisions,

influencing behavior and ushering in certain approaches and ideals” (p. 9—10) as well as Noble’s notion of the creation of an alternative reality through algorithmic representation (Noble, 2018, p. 99—101; 147—149). I will further deliberate on the concept of representation in chapter 2.2.

Bucher speaks about research on the ‘algorithmic awareness’, or lack thereof, and even goes to say that the word ‘awareness’ itself does not do justice to the range of the topic, the depth of the human-algorithm relationship, there is to be studied. In this research, I will aim to add onto the conversation started by Beer, Noble, and Bucher, by connecting social media algorithms’ power in the discourse of ‘normal’ to representation, another concept strongly connected to the sense of self, by looking into the discourse of encounters between user and algorithm. Within this, I focus on bias the Instagram algorithm is thought to contain and its perceived role in gender inequality. Whereas Bucher directly analyzes the concrete expressions of that relationship by looking into utterances of experiences with the Facebook algorithm, and Noble by empirically studying search engine suggestions, the aim of this study is to map out the public discourse concerning the algorithmic bias, not to understand the algorithm itself, but how it can affect social issues; here, on gender equality. Another differentiating factor is that the material of this research is not discourse explicitly focusing *on* the algorithms, but on a case where algorithms merely play a part and are therefore brought into the discussion. I believe this gives additional value to the research on human-algorithm encounters, as it works to fill a gap in the research as it currently stands.

2.2 Critical feminist theories

To provide more theoretical context to the aspect of this research concerning gender, as well as to enable the connection to the case of Nyome Nicholas-Williams on a more profound level, I will next be connecting the aspects introduced in the previous chapter with critical feminist theories.

Critical feminist theories, as stands clear from their name, are of a critical approach. The critical paradigm in media and communication studies is based in the Frankfurt school, which saw media as an instrument of power (Scolari, 2009, p. 946—947). The main goal of these critical theories can be defined as transforming the society as a whole, so that social injustice can be uprooted, as well as understanding how communication can be and is used to oppress. Critical theories foster the ideas of not taking things at face value, challenging power, and making oppression visible, and for these reasons are considered one of the most important approaches to media throughout its modern history. (Fuchs, 2016, p. 5—27; Foss & Foss, 1989, p. 64— 72; Scolari, 2009, p. 947) One of the theories which has had a strong influence in the expansion and growth of the critical paradigm in media and communication is feminism, alongside of postcolonialism and postmodernism. Feminist theories in connection to media can be used to expose and challenge the communication of the social structures. Whereas critical theories always target oppression and social injustices, feminist theories focus on gendered oppression, as well as the social structures where power is based on gender and other qualities of an individual which affect their status in society, such as race, ethnicity, and religion (Zaborskis, 2018). For this specific research, two of the most essential concepts from feminist theories are intersectionality and representations. I will next introduce these concepts by utilizing the works of Stuart Hall (1997) on representation, as well as Rosemarie Buikema, Gloria Wekker, and Iris van der Tuin from the collection of texts edited by Buikema, Plate, and Thiele (2018) for both representation and intersectionality.

2.2.1 Intersectionality

What is typical for feminist studies, is to not see gender as a separate factor from other social and biological qualities of a person, but to look at these qualities through an intersectional lens – looking at gender in combination with other ‘defining’ qualities. Coined in 1989 by Professor Kimberlé Crenshaw, intersectionality is a term which originally referred to the field of gender studies, where mainly North American feminists of color would investigate the mutual effects and operation of gender in combination with

ethnicity, social class, sexuality, and other socially significant qualities, such as age, nationality, and religion. (Wekker, 2018, p. 72—74) In current feminist studies, intersectionality is seen as the way in which other socially significant qualities are taken into consideration when looking into gender, as opposed to a separate field of study. Wekker (2018) explains the concept further by introducing the notion of these other attributes influencing the way in which gender acquires meaning and brings attention to the privileges and significance of sometimes seemingly unrelated qualities. During the last three decades, intersectionality has continuously gained more importance in the field of feminist studies and has even been called the most meaningful theoretical and methodological contribution of the field. (Wekker, 2018, p. 72—73)

The concept of intersectionality is an essential one for my research, as the focus is the case of Nyome Nicholas-Williams, the discourse by and around who is not focused only on her being a woman, but a plus-sized black woman. Whereas Wekker (2018) does include race, ethnicity, sexuality, class, etc., in attributes that should be taken into consideration when looking into gender, I will adapt her theory to add the notion of physical appearance, as my case study is specifically related to the discourse around the case of a plus-sized black model. Looking into the Instagram algorithm allegedly works biasedly against specific types of bodies, it can be analyzed whether it creates a notion of the 'desired' and 'right' type of body for a person, or more specifically a woman, to aspire to have.

2.2.2 Representation

Whereas intersectionality works as a grounding basis for how gender is looked at, representation can rather be seen as one of the studied objects in this research. As a broad and multifaceted concept, representation has been shortly defined as the creation of meaning with language and signs (Hall, 2013, p. 1—5). In the field of gender studies, representations have been an object of study for decades, first focused on by the individuals in the second wave of feminism in the 1960s, who worked towards forwarding the representation of women in public, art, and culture. To reach this, feminist

organizations attempted to achieve women's right to vote, receive a higher education, and work, in addition to finding remarkable women in the history different fields who had been disregarded by history books. Most notably for this study, this movement focusing of the representation of women included research about how a woman can be described, referred to, and discussed about without harming the importance of their presence. (Buikema, 2018, p. 81—83)

In contemporary Western society, due to developments in women's rights and opportunities, feminist studies study representation in a different way. Currently, instead of looking into the sheer amount of representation of women, studies focus on the way in which these representations appearing in media and different cultural artifacts can affect the norms of gender and gender identity. (Buikema, 2018, p. 89—91) A simple example of this, presented by Buikema (2018), is the way in which our society affects the gender identity of a baby before they themselves can have any understanding of sex and/or gender, by creating different meanings for gender. Whereas boys being dressed in blue and girls in pink can at first hand seem somewhat insignificant, the symbolic meanings of intelligence, kindness, strength, and other traits connected to those colors are what give reason to state that the gender of a person is built through different external factors and meanings – representations – and not solely through one's own experience and identification. (Buikema, 2018, p. 90—91) As stated in previous chapters, representations matter not only in identity-building, but in the production of reality and therefore have vast influence in societal norms, and in the actualization of equality.

These kinds of influential representations present in contemporary new media are abundant, whether in tv-series, sports, news, advertisements, or elsewhere, which is why it is of great importance to investigate them from a critical perspective. Whereas study of gender representations in media is often more focused on the visual and textual aspects of e.g., tv-advertisements and programs, I argue that a social media algorithm, such as the one of Instagram, has strong representational power, as it can be perceived as fostering the idea of the 'correct' and 'desired'. As stated by Bucher (2017), algorithms are an inseparable part of our lives, and therefore should be taken into closer examination for their representational power in future feminist studies. As I have presented in the

previous chapter, the notions made by Beer, Noble, and Bucher prove that algorithms, similarly and in parallel with representations, have the power to dictate the meaning of 'normal', to showcase a certain view of the world and therefore partake in producing it, and to affect the sense of self of the person encountering them (Beer, 2016, p. 9; Noble, 2018, p. 112—118, 99—101, 147—149; Bucher, 2017, p. 35—36, 40—42). In my analysis I take into consideration the representational power of algorithms from a feminist perspective, and attempt to define the significance of Instagram's algorithmic bias from a representational perspective of gender.

3. Methodology

The methodology for this research consists of Critical Discourse Analysis, which is a fitting method when conducting a research in the intersection of gender studies and new media studies, as it allows exclusive focus on the discursive constructions of algorithmic bias, power relations, and inequalities. Critical Discourse Analysis, or CDA, whereas in this research primarily used as a method, has the dual character of being known as having both theoretical and methodological aspects. For this reason, I will be further explaining its theoretical relevance to this specific research, in parallel to introducing the methodological side of CDA. My take on CDA is influenced by Teun van Dijk's take on CDA, as presented in his article *Critical Discourse Analysis* (2001). After introducing the used method, I will be introducing the research material which will be analyzed.

3.1 Critical Discourse Analysis

The main notion of CDA is that discourse has a strong role in the actualization and persistence of power (in)equalities, which is why it is a fitting method for this research, where gender power (in)equalities are one of the main focuses. CDA relies on the fact that by having power, institutions have control with which they can influence public discourse of the topic in question, by having control over the context and topics of the discourse itself. Another object of control created by this kind of power is influencing the opinions and actions of other (less powerful) groups. (van Dijk, 2001, p. 355—356) In this research, Instagram is considered the one with power, both as partaker and a key voice in the public discourse, as well as creator of the discussed powerful algorithm. By looking into both these notions, I aimed to find the role which the Instagram algorithm plays in gender equality, by influencing the opinions of its users as well as having control over the notion of 'normal'.

Van Dijk uses Fairclough's critical discourse analysis as a basis for his theory/method and takes it to another level by further emphasizing the concept of power. Van Dijk stresses the point of CDA not working to merely describe discursive practices and structures, but

rather to explain them in term of social structure and interaction. Based on the work of Fairclough and Wodak, van Dijk introduces the basis of CDA by establishing its main tenets, most important of which for this study are CDA's focus on discourse constituting society and culture, and discourse being a form of social action in itself. (van Dijk, 2001, p. 352—353) In my research I will place these notions on the discourse at hand, by seeing the public discourse, as well as the algorithm itself as parts of the discourse constituting to society, as well as the utterances by all three stakeholders as social actions in themselves.

In order to adapt van Dijk's CDA to this research and take into consideration the importance of context of the discourse at hand, I have included the works of Bouvier and Machin (2018). Partly in response to van Dijk's theory, they have brought out the important notion of how social media has changed the patterns of public discourse, as it allows information to move in multiple directions, instead of merely up-down as Van Dijk argues. (2018, p. 4—5) Though mainly focused on news as a genre, Bouvier and Machin agree on van Dijk's notion that in order to perform a CDA on social media discourse, not only the text but the context and who has control over this context all must be taken into consideration. (2018, p. 4—7)

3.2 Research material

In this study, I will be analyzing the perception of the Instagram algorithm's role in gender inequality by looking into the public discourse concerning the alleged bias of the algorithm. After some tentative research of fitting cases with broad enough public discourse, I found the case of Nyome Nicholas-Williams to be most fitting for a comprehensive analysis. To arrive at this conclusion, I paid attention to the number of stakeholders taking part in the discourse, as well as their diversity. To map out and analyze this discourse in a comprehensive way, looking through the lens of gender and studies about the human-algorithm -relationship, I have decided to analyze three stakeholders representing three sides of the discourse. The chosen stakeholders are Nyome Nicholas-Williams herself, Head of Instagram Adam Mosseri, and news media stations The Guardian,

Independent, Yahoo, and Cosmopolitan. I see these stakeholders as representing the entities which are affected by those with social power, those who can be described as controlling that power, and the mediator between, also with different relationship to social power. By this, I refer to the fact that the news media stations can be seen as discoursing between the two other stakeholders, by not being involved themselves in the case at hand. I want to point out, however, that the line between these roles is not simply defined, as all stakeholders can be seen in each role in some way due to the complexity of direction of communication. Academic stakeholders could have value in this research, but as it focuses on the everyday encounters between humans and the Instagram algorithm, I see the selected three stakeholders participating in the discourse on the topic more impactful than academic research on the matter. I am, however, paying attention to whether the three stakeholders refer to terms, concepts and ideas that coincide with what academic research has included in the debate of algorithmic bias in relation to power, discrimination, and gender inequality.

Firstly, I will be analyzing utterances by Nyome Nicholas-Williams posted on her public Instagram account. Nicholas-Williams represents the stakeholder affected by the Instagram algorithm's bias, and thus indirectly by the social power of Instagram. Nicholas-Williams is an example of many discontent and critical voices raised against Instagram's algorithm and governance. For this research, I have selected six utterances by Nyome Nicholas-Williams from her Instagram profile (@curvynyome), posted between July 30, 2020, and August 20, 2020. This timeline is the approximately the most active part of the movement #IWantToSeeNyome, during which Nicholas-Williams posted about and received attention relating to the discrimination by Instagram she was experiencing. These six posts do not include all of Nicholas-Williams' post during this timeline but are specifically selected with the criteria of whether they include mention of Instagram, censorship, algorithm, or refer to acceptable bodies to display on the platform.

Secondly, I will be analyzing the utterances by Head of Instagram Adam Mosseri, in order to analyze the party behind the algorithm in question. From the similar timeline of Nicholas-Williams' case, I have selected six utterances by Mosseri, two posted on the Blog-section of the website of Instagram and four on his personal account on the platform.

During my tentative research into utterances by Instagram, I quickly found that most of the utterances concerning accusations and/or social issues were presented as being written by Mosseri himself, and not e.g., a publication team of Instagram. For this reason, I found the participation of Instagram in the discourse best represented in the utterances by Mosseri himself. In addition to two public statements from the company website of Instagram involving the topic of equity on the platform, I chose to analyze the posts on the personal profile of Mosseri on the platform itself. The additional four utterances were selected for this analysis based on the criteria of whether they aligned with the case of Nicholas-Williams temporally, whether they included the topic of algorithmic bias, accusations/responses to posts on the platform being removed without reason, as well as Instagram's stance on handling political issues relatable to the case of Nicholas-Williams.

As the final stakeholder, I have selected to analyze utterances by news media stations to analyze a participant of the public discourse around the alleged algorithmic bias of Instagram not directly affected by it, like the two stakeholders introduced above. In addition, I see additional value in including utterances from outside the platform to examine a broader variety of possible contexts. I have selected four pieces of news from August 2020 concerning Nicholas-Williams and/or the algorithmic bias of Instagram. Though many media stations participated in the public discourse around this topic, utterances by The Guardian, Independent, Yahoo News, and Cosmopolitan represent the more in-depth pieces of news covering the phenomenon. The former two are typically regarded as well-established, globally respected news sources, often used as sources for reliable information in news, as well as academia, whereas the two latter can be seen as corresponding, well-established stations categorized in the field of entertainment. However, whereas I have made the point of the former two news stations being labeled as more reliable and serious, and the latter as more entertainment-focused, in the current media landscape the line between these two is becoming continuously more undefined. Therefore, the once seen as 'entertainment-only' news stations should not be disregarded in academic research as relevant sources. In addition, the target audience for

Yahoo and Cosmopolitan, though obviously broad, has characteristics which can be seen as corresponding to the study at hand.

While I recognize that the inclusion of a fourth stakeholder of the public voices on social media, meaning the users supporting Nyome Nicholas-Williams and participating in the #IWantToSeeNyome campaign, would be of value to this research, I have chosen to zoom in on the presented three stakeholders in order to achieve a more qualitative research with more in-depth results. In addition, the three selected stakeholders can be considered as voices with authority in the studied case, whereas analyzing the utterances by the general public would require a different approach. I however see potential to broaden this research by implementing its findings to public utterances by users and the publicly perceived image of the Instagram algorithm.

The utterances by all three stakeholders have been published on public platforms, and there is no conflict of private data being used. I believe these three stakeholders to lead to a successful mapping out and analysis of the public discourse around the case of Nicholas-Williams. In the following chapter I will further introduce my method, Critical Discourse Analysis, in connection to this research material.

3.3 CDA in the case of Nyome Nicholas-Williams

CDA works in between the micro- and macrolevels of social order analysis, the former referring to discourse, language use and communication and the latter to power, dominance, and inequality (van Dijk, 2001, p. 354). In the case of this research, the microlevel of the analysis can be seen as the singular utterances by Nyome Nicholas-Williams, Head of Instagram Adam Mosseri, and the mainstream news media stations covering the case, whereas the macrolevel is considered as the perceived role of social media algorithms on gender inequality. The goal of CDA is to bridge the gap between these levels, which I aim to do by utilizing van Dijk's 'actions-process' -continuum, in which social actions of individuals are seen as part of social processes, here: singular utterances as building, fighting and/or spreading awareness of gender inequality on Instagram (van Dijk, 2001,

p. 354). It must be taken into active consideration, however, that the micro- and macrolevels should not be analyzed as separates but two ends of a continuum, each with complex qualities. For example, Nicholas-Williams' utterances can be seen as representing a larger, more macro-level collective, as well as algorithms having micro-level qualities in their everydayness. Also, as mentioned before, social media has changed the type and direction of public discourse, which has led to the identifying of the dominant and less powerful groups becoming vastly more difficult, which is why Instagram cannot without examination be considered as the dominant in the discourse at hand (Bouvier & Machin, 2018).

Based on the theory on CDA by van Dijk, as enriched by Bouvier and Machin, the method, with which I aim to answer my research question and analyze the research material, will focus on textual and contextual levels of the microlevel utterances in order to bridge the gap to the macrolevel of the discourse in question. By textual, I am referring to word choices, tone of voice, and the implications of the studied utterances, and by contextual, when and where the utterances were posted, what visual elements are attached to the utterances, and what relation the utterances have to the current discourse of the larger issues presented. On the microlevel, I will firstly be focusing on what textual factors are present in the examined utterances relating to the alleged bias of the Instagram algorithm. Beyond the notion of algorithm, I will be focusing on any textual factors relating to the aspect of gender, seen from an interdisciplinary perspective. In addition to the textual aspect, I will be focusing on what contextual factors these utterances include, as explained by van Dijk, Bouvier and Machin. These factors include the direction of communication, the authorship, and other power relations present in the context of the utterance in question. After this, I analyze what these different stakeholders see the role of the Instagram algorithm as being when looked through the lens of gender equality.

4. Results

I will next differentiate the findings of my analysis from both textual and contextual perspectives of each stakeholder, answering the first and second sub-questions of this research, after which I will answer the third sub-questions by comparing the findings. All three stakeholders offer insights into how they perceive the algorithm, but as will be found in the following chapters, these perceptions are very much intertwined with the perspective of Instagram as a whole, as well as social injustice and gender inequality.

4.1 Nyome Nicholas-Williams

4.1.1 Textual level

In her utterances concerning the alleged bias of Instagram, Nyome Nicholas-Williams' stance is strongly critical of Instagram as a whole, not the algorithm per se. She describes the act of her posts being taken down with strong word choices including being "shut down" (see Image 1.), "censored" (see Image 1.), and "policed" (@curvynyome on Instagram, August 7, 2020), which connote to this action being perceived by Nicholas-Williams as a systematic attack of sorts. What can be deducted from the findings, is Nicholas-Williams seeing Instagram as an active party in the process of her posts being taken down, instead of the culprit being a non-controllable algorithm.



Image 1. @curvynyome on Instagram, August 4, 2020.



Image 2. @curvynyome on Instagram, August 8, 2020.

What is apparent when looking from the textual perspective, is that Nyome Nicholas Williams sees Instagram as virtually a personified entity, which is attacking her personally. This is apparent from wordings used by Nicholas-Williams such as “Instagram has a lot to answer for” (see Image 2.), “[p]lease sort it out” (@curvynyome on Instagram, August 3, 2020), and “I just got off the phone with Instagram” (@curvynyome on Instagram, August 20, 2020). Moreover, Nicholas-Williams can be described as ridiculing Instagram’s attempts to address the situation with sarcastic tones in her posts, including belittling the actions taken by Instagram to reinstate her deleted posts, with wording such as “Okay great Instagram has put [my] picture back up – but I am getting so many messages from my followers letting me know that they still cannot post up the images in support” (@curvynyome on Instagram, August 7, 2020).

Looking through the lens of gender and critical feminist studies, Nicholas-Williams actively connects the issue of being shut down and policed with feminist issues. She mentions these actions by Instagram happening due to her being “black and fat” (@curvynyome on Instagram, August 3, 2020), as well as bringing light to the issue of white plus sized bodies being seen as acceptable whereas black not. She also mentions the concept of societal body standards by name, which can be directly seen as a connection to the representational aspect of feminist studies.

Nicholas-Williams can be seen as having an emotional connection to the issue at hand by referring to the removal of her post in emotional word choices including being tired of getting shut down, using a ‘we-voice’ to make her followers a part of the “fight” (@curvynyome on Instagram, August 4, 8, and 20, 2020), and by connecting her own struggles to the larger societal context of societal body standards for black women. This can also be seen from her choice of words including hyperboles like “Why is my body always being censored?” (see Image 1.) and “Nothing of [Instagram’s pledge to amplify black voices] has come to fruition, -- if anything it has gotten worse” (see Image 2.)

4.1.2 Contextual level

From a contextual standpoint, Nyome Nicholas-Williams' utterances relate the bias of the Instagram algorithm to a broader feminist question of societal body standards in media from an intersectional perspective. Even when not mentioning the intersectional aspects by name, she partakes in this debate by posting her utterances with the context of semi-nude pictures of herself – a plus-sized black woman – which could be affected by the algorithm as well (see Image 3.). This can be seen as a further act of resistance towards Instagram, as many of these images are from the same photoshoot as the post which was originally removed.



Image 3. @curvynyome on Instagram, July 30, 2020.

From both the textual and contextual factors of the posts of Nyome Nicholas-Williams, it can be concluded that she perceives the Instagram algorithm as taking part in the gender inequality by censoring and policing black (plus-sized) bodies, while letting white and

thinner bodies be posted freely. She also appears to perceive the algorithm as a part of the personified entity of Instagram, not as a separate ‘non-controllable machine’, as can be seen in the examples presented in chapter 4.1.1. These wordings showcase her perception of Instagram as someone, rather than a company / technological entity alludes to disregarding of the technological aspects of the platform. This perception is deeply related to the perception of Instagram as a singular entity which is actively working under discriminatory values, and which Nicholas-Williams sees as being fixable by the people behind it, not the algorithm itself.

4.2 Adam Mosseri, Head of Instagram

4.2.1 Textual level

From a textual standpoint, Adam Mosseri’s utterances can be divided into references to the technical side of the alleged bias, the effects of these technical parties, as well as what can be done about them. As for the technical aspect of the bias, Mosseri described the activity leading to post removal depending on multiple different factors which are repeated multiple times with some changing word choices, including “policies, tools and processes” (see Image 4.), “filtering content” (Adam Mosseri, *Ensuring Black Voices are Heard*, June 15, 2020), “AI”, and “algorithms” (@mosseri on Instagram, June 19, 2020). He refers to these technical aspects as actives controlled by the people of Instagram – “we have built” (@mosseri on Instagram, June 19, 2020), and content “we have taken down” (see Example 1.). However, he also states that “our system mistakes [posts for bots]” (see Example 1.), where the once controlled activity is now blamed on the system, not the people behind it. This launches a contradictory description of the algorithm, as it is mentioned to having been built by ‘us’, referring to the people at Instagram, but also working on its own as ‘the system’.



Image 4. @mosseri on Instagram, June 15, 2020.

“I’m sure a lot of you are frustrated with Instagram right now. Some of you think that we have taken down content we should not have. Others of you probably think that we should take down more content than we have. -- Sometimes activists bump into what we call rate limits. So they post and comment so frequently that our system mistakes them for bots. That’s on us, we have to get better. We will fix that.”

Example 1. @mosseri on Instagram, June 26, 2020.

The aspect of the algorithm not being controllable by the people at Instagram is strengthened by Mosseri’s utterances regarding what could potentially be done to fix the algorithmic bias. He uses fairly passive and broad wordings throughout his utterances, such as “looking into it” (@mosseri on Instagram, June 15 and 19, 2020), and “addressing it” (@mosseri on Instagram, June 15, 2020), as well as “trying to make less

mistakes” (@mosseri on Instagram, June 26, 2020) and “hoping” for change (@mosseri on Instagram, June 15, 2020). These choices of words coming from the Head of Instagram give the impression that the algorithm, in its many names, cannot be directly changed but merely looked at and addressed. In addition, the notion of “hoping” for change leads to believe that some aspects of the algorithm are not adjustable, but in fact changes depend on the algorithm itself.

Mosseri describes the algorithmic bias as “filtering content”, “limiting people’s reach” (Adam Mosseri, *Ensuring Black Voices are Heard*, June 15, 2020), and “disproportionately taking down content” change (@mosseri on Instagram, June 19, 2020) and refers to this coming to existence through “subconscious bias” (Adam Mosseri, *Ensuring Black Voices are Heard*, June 15, 2020), “bias in product development” (@mosseri on Instagram, October 16, 2020), and “systems we’ve built” (Adam Mosseri, *Ensuring Black Voices are Heard*, June 15, 2020). In addition to the more general description of what is happening, Mosseri refers to the policies, tools, and processes as impacting Black people per se by suppressing their voices, as well as underserving and disproportionately taking down content from “certain groups of people” (@mosseri on Instagram, October 16, 2020). Whereas he does not directly refer to black women or women in general, Mosseri refers to the groups which are affected by this bias as “underrepresented groups of people” (@mosseri on Instagram, June 19, 2020), which can be seen as including women and the intersectional aspect of black women.

4.2.2 Contextual level

Looking from a contextual perspective, Mosseri’s utterances on the topic of the algorithmic bias are without exception combined with other societal issues, including voting in the U.S., pride month, and the BlackLivesMatter-movement. By contextualizing the algorithmic ‘flaws’ with these other issues, Mosseri can be perceived as contextually proposing that even though some bias is in fact in place, Instagram is actively pushing for equality and social justice with its other efforts. It can however be argued that by not speaking on the algorithmic and policed bias in a separate post, but instead connecting

it to other, what could be considered larger social issues, in addition to personal anecdotes, Mosseri is understating the effects of the algorithm and possibly even distracting his audience from it.

Through the textual and contextual aspects of Mosseri's utterances about the bias in place in the Instagram algorithm, it can be concluded that the perception he has, is one where the algorithm though built by people, has many uncontrollable qualities. It must however be taken into consideration, that Mosseri represents the entirety of Instagram in his utterances, and therefore can be assumed as not only sharing his perception of the algorithm and its bias, but also trying to sell a certain perception to his audience. In relation to the question of gender inequality, Mosseri's perception is that underrepresented groups are impacted and underserved by the bias. He does not however differentiate gender as a defining factor of being underrepresented, but for this research, where intersectionality is seen as a key factor in the definition of gender, the wordings by Mosseri can be seen as including women as well.

4.3 News stations

4.3.1 Textual level

In the utterances by all the analyzed news media stations – The Guardian, Independent, Yahoo, and Cosmopolitan – the events leading to the #IWantToSeeNyome campaign are explained in a rather similar way. All stations begin their articles by shortly explaining what has happened in relation to Nyome Nicholas-Williams' images being taken down by Instagram. All four stations refer to the algorithmic bias of Instagram by name, in addition to describing the events as the photos being removed due to them "violating IG's community guidelines". In three of the four articles, this technical aspect is followed by an argument bringing light to the fact that there are Instagram employees working to review posts manually, in addition to the AI and algorithm doing so automatically. The responsibility for these biased acts is placed on Instagram and its CEO Adam Mosseri himself.

This phenomenon of photos being deleted off the site are described by the news stations directly in the context of discriminatory bias through wordings such as “censorship” (The Guardian, Cosmopolitan, Independent), “policing” (Yahoo), “discriminating” (The Guardian, Independent), and “targeting” (The Guardian, Yahoo). These wordings are often related directly to the impact made on black users specifically, which makes clear the intersectional lens these stations are describing the issue through. Moreover, stations bring attention to the controversy of the algorithmic bias coming to public attention only after it had affected a white plus-sized user, further emphasizing the impact targeted on the black users of Instagram (see Example 2). This argument is strengthened by the stations including quotes from Nyome Nicholas-Williams and the photographer behind the original pictures speaking on the racially unequal actions by Instagram, even though Instagram has not been included with a voice of their own in two of the four articles.

“When a white plus size model's photo was also later removed, a petition was started regarding the censorship of plus size women generally. Following this, Nyome shared her disappointment that it had taken efforts away from her original cause that highlighted the censorship of Black bodies specifically, on social media -- ”

Example 2. Cosmopolitan, August 24, 2020.

4.3.2 Contextual level

The contextual level of the utterances by the news stations heavily influences the contents of said utterances. All media stations include quotes from Nyome Nicholas-Williams herself, as well as two including quotes from other people experiencing similar effects of the algorithmic bias of Instagram and/or who have been affected in this particular case as well. These quotes are presented in the form of interview answers, as well as direct cross-channel linking of Nicholas-Williams’ Instagram posts and post captions relating to the issue. By including these external voices, the stations are strengthening their argument of this algorithmic bias acting on discriminatory basis as they showcase

the effects of the algorithm as described by the impacted users themselves. In this way, the stations also include statements strongly criticizing Instagram, such as describing the issue as a “[systemic problem of Instagram] actioning discriminatory censoring against plus-sized people, especially people of color, even though they don’t go against their community guidelines” (Gallagher, August 24, 2020) as well as “Millions of pictures of very naked, skinny white women can be found on IG every day – but a fat black woman celebrating her body is banned? – I feel like I’m being silenced” (Iqbal, August 9, 2020).

Through the analysis of both the textual and contextual levels of the utterances by the news stations, it can be concluded that the mainstream media discourse on the topic of the algorithmic bias is heavily directed to the ways in which it feeds racial and gender inequality, with some focus on the technicality of the algorithm and Instagram as well. I note that whereas these articles include utterances by Nyome Nicholas-Williams’, they are considered as utterances by the news stations and not Nicholas-Williams herself, as the control over context and quotation is in the hands of the stations.

4.4 Comparison and discussion

When comparing the results from the analysis of the utterances by the three stakeholders presented above, there are multiple comparable factors which can be regarded as building the perceptions of the Instagram algorithm’s role in gender inequality. I compared these factors with the intent to find both similarities and differences between the stakeholders. I will next present the two most significant comparison points to have risen from this analysis: the perception of the algorithm’s controllability, and the relation of the Instagram algorithm to intersectional gender inequality.

Beer (2016) presented that the duality of the algorithm, firstly as a machine of intelligence and an example of how things are to be done, and secondly as a notion promoting certain values, is key in the analysis of algorithmic power. Though my analysis presented a duality in the character of the Instagram algorithm, it did not correspond that of Beer. One of the subjects to have emerged on multiple occasions during the analysis of the

public discourse surrounding the case of Nyome Nicholas-Williams' post being taken down, is the controllability and uncontrollability of the Instagram algorithm.

Whereas all three stakeholders express a perception of the technicality and controllability of the Instagram algorithm, there is a clear difference between the three stakeholders. Both Mosseri and the news media stations mention the duality of the algorithm in the sense of its controllability. Mosseri refers to the algorithm as being built by people, and content being taken down by people, but contradicts this by blaming the system for mistakes leading to what can be perceived as biased post removals. He describes the changes to be made to better these mistakes in a vague way, creating the notion of the algorithm being difficult to control. On the other hand, the news stations bring attention to the fact that though posts are being reviewed by an algorithm and AI technology, there are thousands of employees of Instagram manually reviewing posts as well, and therefore the blame for mistakes and biased actions cannot be placed on the algorithm. Therefore, both stakeholders are acknowledging the duality of the control over the algorithm's actions, even though from near opposite perspectives. What can be linked to this notion, are the results from the analysis of Nyome Nicholas-Williams' utterances, where she shares a perception of Instagram as an entity, without explicitly separating what can be called the 'controllable' and 'uncontrollable' sides of it. Nicholas-Williams therefore can be seen as perceiving these actions as the responsibility of Instagram as a whole, a combined entity, without making a distinction on whether they are due to technical or human-made actions and does not mention the algorithm by name.

As we can see from this, the perception of the algorithmic bias and whether it relies on uncontrollable technology or humans creating it, as debated by Noble (2018), differs between stakeholders, with however having uniting factors. The analysis of the discourse around the topic of algorithm controllability corresponds to what Noble found in their study about companies behind new media algorithms presenting a perception of them where an uncontrollable machine is making choices and/or mistakes. However, what is different is the acknowledgment by Instagram of on a certain level having people behind the actions of the algorithms, though contradicted by Mosseri himself shortly after.

The second point of comparison, as well as most relevant for this research, is the perceived connection of the algorithmic bias of Instagram to intersectionality. In the set up for this research, I defined intersectionality not only due to its importance in contemporary critical feminist theories, but for its relevance in this study due to the algorithm allegedly targeting a black, plus-sized woman. After the analysis, the significance of the concept became even more apparent. All stakeholders without exception refer to the algorithm's impact on intersectional equality.

Nyome Nicholas-Williams sees Instagram's actions of discrimination as censorship of "black fat women" and as shutting them down. She also brings attention to the societal body standards affecting plus-sized black people in general, not only women per se. Her utterances portray a stance very much leaning on the notions of representation, as defined by Noble, Hall, and Buikema. Nicholas-Williams indirectly states that by targeting the social group of black, plus-sized people, Instagram is actively shutting them down and censoring them, which can be directly linked to Noble's argument of algorithms and the companies behind them, creating their own alternative reality, in which these underrepresented and 'censored' people do not exist or have as much value as other groups.

There are a lot of uniting factors between the perceptions of Nyome Nicholas-Williams and the analyzed news media stations. Whereas Nicholas-Williams presents to perceive Instagram as censoring and policing bigger black bodies, the news stations take this argument a step further by describing the actions of Instagram as discriminating and targeting of its black users, and black plus-sized women. What is noteworthy about the news stations' presented perception, is the evidently active connecting of this discrimination to the broader concept of intersectional gender inequality. All news stations include context to the story by giving a voice to those affected negatively by it, as well as stating facts of not only the unjust removal of posts, but the racially prejudiced backstory, where the issue of bias against plus-sized users only arrived in the public eye after having affected a white woman. Whereas not generally seen as the main topic of the

issue, two of the four stations used the intersectional lens as the hook by including it in the headline and/or subheading. In comparison, very little attention is brought to the technical side of Instagram's removal of these posts. Understandably, it is difficult to know whether the stations made this decision due to perceiving Instagram as affecting intersectional gender inequality as the true issue, or whether this perception is presented as the more clickable option, when compared to focusing on the technical side of the Instagram algorithm. Whichever, or possibly a combination of the two, is the true perception, the influence of the Instagram algorithm to the representation of bigger black bodies and people cannot be denied.

Finally, looking into the utterances of Mosseri through the lens of intersectionality, it is evident that though understandably not as critical of the platform he himself runs, the presence of the inevitable effects of the 'system's mistakes' on intersectional gender equality cannot be negated. Though not described in heavy terms such as censoring, discriminating, and targeting, Mosseri does describe the treatment of different underrepresented groups as underserving, suppressing, and disproportioned. He does not however go into depth on the topic, but clearly focuses on acknowledging its existence and diverts the topic to larger ones, such as elections and pride.

5. Conclusion

In this research, I have analyzed the way in which the Instagram algorithm is perceived as having a role in gender inequality, studied through the Critical Discourse Analysis of utterances concerning the case of model and influencer Nyome Nicholas-Williams' posts being deleted off the platform allegedly due to her being a plus-sized black woman. The analyzed utterances were collected from three stakeholders of the case: Nyome Nicholas-Williams herself, Head of Instagram Adam Mosseri, and four news media stations covering the events. The research leaned on the theoretical framework of algorithmic power, human-algorithm encounters, as well as critical feminist theories.

From the analysis of these utterances, I found the variously perceived role of the Instagram algorithm as having two main debate points: the controllability of the algorithm and its actions, as well as its effects on the intersectional aspect of gender equality. For the controllability of the algorithm, which can be generally defined as whether the algorithm, or people who have created it, have the control and therefore responsibility over its actions. I found the three stakeholders forming a continuum of sorts, from Nyome Nicholas-Williams neglecting the technicality of the algorithm and merely perceiving Instagram as a personified whole to be kept responsible, to the news media stations acknowledging the algorithmic and AI technology aspects of the algorithm's functions, but strongly signifying the human control behind it and its discriminatory actions, to finally Adam Mosseri's perception of the algorithm and policies behind their discriminatory actions as mistakes made by 'the system' itself.

This division in the perceptions of the algorithm partakes in the debate of algorithmic power and human-algorithm encounters, as it showcases the diversity of how an algorithm can or cannot be perceived. Connecting this finding to Beer's argument of an algorithm's social power being truly understandable only when detached from its technical and material forms, it is of value to consider whether a part of the algorithm's power can lie in the difficulty – near impossibility – to successfully detach the technical aspect from the rest of it. As algorithms are continuously becoming more and more an inseparable part of the modern everyday life, the implication of their understandability,

or lack thereof, could be considered disadvantageous to the public recognition of the power they hold.

The second main finding of this research was the effect the Instagram algorithm is perceived as having on intersectional gender equality. Whereas I intentionally included the intersectional perspective including ethnicity and appearance when defining the concept of gender in preparation for this study, it was an unexpected finding to see the perception of the effects of the algorithm on gender equality connected without exception to this intersectional aspect. All three stakeholders could be seen as perceiving the effect of the algorithm as harmful towards the underrepresented groups of black and plus-sized black women, as well as two of the three bringing attention to the differences between the unequal treatment of white to non-white plus-sized women. Though not explicitly mentioned, the notions of representations as showcasing a false reality, as well as building reality itself, were apparent in the utterances of both Nyome Nicholas-Williams and the analyzed news media stations. This finding can be seen as leading to the understanding of the public perception of the Instagram algorithm's bias as increasing the gender inequality, which conversely to the first main finding showcases a stronger awareness of the algorithm's potential social power. From these two main findings, it can be concluded that the publicly perceived role of the Instagram algorithm in gender inequality is highly diverse. What I find noteworthy, are the clear results of the algorithm not being perceived as a separate factor, but something intertwined deeply with the entire platform, including the mere notion of it.

I see the primary limitations of this research in the narrowness and specificity of the case of Nyome Nicholas-Williams. Though connected to larger issues of gender inequality in social media platform algorithms, the restricted case does limit the applicability of the findings to the larger debate on the topic. Therefore, I suggest further research on the topic of social media algorithm's perceived effect on gender equality should take into consideration a larger collection of research material so as to find the role of the algorithm as a more separated factor from the rest of the platform. In addition, as I have found the algorithmic awareness in relation to the perception of its potential power to be on an intermediate level at best, I see value in studying the change of perception and

understanding during the rise of the social media algorithms throughout the second decade of the 21st century. With this research, I have found that these perceptions of social media algorithms are a key element in analyzing and ensuring gender equality in the ever-changing and growing field of new media.

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