

*PRONOUN USAGE IN TWITTER BIOS: Exploring New Channels for the Construction of
Gender Identity and Gender Expression*

Michele Marie Aponte Molina

A final research paper submitted in partial fulfillment of the requirements for the

Degree of:

Master of Arts in English Linguistics

June 19, 2023

Department of English

College of Humanities

University of Puerto Rico, Río Piedras Campus

Approved by:

Dr. Yolanda Rivera

Reader

Dr. Nicholas Faraclas

Reader

Dr. Robert Dupey

Final Research Paper Director

Abstract

Social media has impacted how individuals manage their social self and personal identity. A public social space, provides a place to explore and build an identity separate from one's offline self. Twitter provides a space for online users to express their identity as well as an opportunity to deviate from the offline social conventions of self-expression and identity. A user who wants to signify his or her gender on Twitter is limited due to the social platform's character limitations in tweets and bios. Users and members of social movements and the LGBTQ community have been using personal pronouns to express their gender identity in their bios. This paper explores the relationship between personal pronouns and gender expressions and their relation to the social media platform Twitter. The focus will be on understanding how individuals use social media to present their gender identity and gender expression in their Twitter bios. For these issues the researcher posits the following theory: The queer community utilizes social media platforms as a means of self-expression and identity presentation, prominently featuring their gender identity and expression through the use of personal pronouns in their public profiles.

Key words: Pronouns, gender, gender identity, gender expression, social media, Twitter

Chapter 1: Introduction

Social interaction is a crucial aspect of an individual's life, and social media has dramatically impacted and shifted the way people socialize on a daily basis. Social media platforms serve as tools for communication, advertisement, and publishing; and have become an intricate aspect of people's lives. However, there is a disconnect between people's online identities and their offline lives. People often present themselves differently online, giving them an opportunity to express themselves in ways they cannot do offline. This is particularly true for individuals in the LGBTQ community, who may face rejection and discrimination in offline spaces. Private conversations via Facebook Messenger, WhatsApp, or other forms of dyadic messages may convey more information about 'authentic' emotional states. At the same time, more public Tweets and Facebook status updates are spaces where individuals are more likely to 'perform' happiness to present a particular image of their lives to their presumed audience, as noted by Miller et al. (2016). Social media provides a platform for members of the LGBTQ community and individuals to present and express their gender identity in ways they cannot do offline. Social media has been a resource for people to present themselves, which leads to questions about the difference between their online and offline personas. Other concerns include the appropriate number of friends or followers on each platform and whether networking constitutes any community. (Miller et al., 2016).

How people use language to express themselves and the meaning of the words they convey varies considerably depending on the group of users. The spoken word is the basis of all oral communication (Hogan, Roberts & Gillaspie, 2017). But when it comes to expression in a written manner or, more precisely, on an online social media platform, how language is used and how readers decodify written words depends on their perspective. Socialization also plays a key role in the way language is used by different groups of people. The spaces provided for socialization among individuals have drastically changed in the turn of the

millennium, with the emergence of the internet or, more directly, social media platforms. The way individuals share a public space for interaction in proximity or “offline” has now been impacted by the presence of social media, along with the “online self.” For the most part, social media platforms have shown that social interactions are now mingled between the “offline self” and the “online self”. The ability to have different spaces for social interactions allows social media to present itself as an opportunity for individuals to have more spaces for expression. For a long time, members of the LGBTQ community have struggled to have a more visible public space. Social media platforms provide an important additional space that these groups and other minorities that have not had them in the past.

Social media platforms provide a space for self-expression that does not necessarily correlate to the ones presented to people we know from our daily lives. Public-facing social media platforms such as Facebook and Instagram provide a space for the conscious construction of appearance. They enable people to perform for themselves and, in some cases, their families. These platforms also create an imagined general audience or public, although specific posts may target individuals or groups (Miller et al., 2016). A social media platform, such as Twitter, has provided a space for individuals to express themselves in what is called “bios,” which have a character limit of 160. In these bios, people use the limited space to construct a brief version of themselves to the public on the social media platform. Online anonymity has provided people with an outlet to discuss issues they find difficult to share offline, and the people with whom they share their most intimate secrets may now be online strangers whom they will never know offline. Social media allows users to categorize their contacts into different groups such as "classmates," "colleagues," and "others," which is a useful way of sorting out their social networks (Miller et al., 2016). With the growing presence and active voice of members of the LGBTQ community and “allies,” the use of personal pronouns in Twitter bios has also grown. Lesbian, gay, bisexual, transgender,

transsexual, two-spirit, queer, and questioning identities are commonly referred to using the initialism LGBTQ, which is often used as an umbrella category, along with Gender and Sexual Minority (GSM), as noted by Hogan, Roberts, and Gillaspie (2017). Gender expression and gender identity is not a unique aspect of the LGBTQ community; it also extends to people who do not necessarily identify as members of the community but know how the language is used by the people within said community. West and Zimmerman (1987) proposed that gender is not something people have but rather something they do, a routine accomplishment achieved through interactions in their everyday lives.

This investigation proposes to answer the following research questions:

1. Does social media affect how individuals express their gender online?
2. Do public profiles provide a space for gender expression?
3. Is there a relationship between subject and personal pronouns, such as she/her, he/him, they/them, and queer identity?
4. Are subject and personal pronouns used to signify gender identity in social media?

1.1 Identity

The concept of identity is essential for this paper to understand how it relates to gender identity and expression. Rogers and Jones (2021) discuss the concept of identity, which is defined as the character that an individual presents to the world. This relates to how individuals make an identity to show to those around them and have a different version of themselves for the online world. Rogers and Jones (2021) have defined two versions of identity, Social Identity and Personal Identity. Social identity is a way that individuals define

themselves by group memberships and roles, which provides a sense of belonging. Personal identity is based on individual traits that make them feel distinct from others. The distinction between these two is important since the researcher theorizes that the Social Identity is the one that individuals mostly present to people that surround them in their proximity. The way individuals express their identity or their sense of “self” online and offline may be interconnected through social media platforms. Li, Longinos, Wilson, and Magdy (2020) describe the theory of self-categorization, which posits that self-identity consists of personal identity (what makes me unique?) and social identity (which groups do I belong to?). They also note that social media provides a natural opportunity to study self-identity, as people reveal their self-identity through communication and interaction with the outside world. While some research has shown that online identity presentation is relatively similar to offline identity, other research has suggested that people construct their online identity strategically to conform to an ideal. Stigmatized identities or experiences are often not disclosed online unless there is some expectation of anonymity. (Cisternino & Jones, 2020)

1.2 Gender Identity

Gender identity is not something that is exclusive to the LGBTQ community; it is something that is a part of every individual's life. According to Darr and Kibbey (2016, p.73), gender is a category consisting of two sub-categories, man and woman, determined by social criteria surrounding self-expression. People believe that gender is predetermined by the sex, male or female, assigned to an individual at birth. Gender roles or the norms associated with a specific gender category are other factors that complicate the notion of gender. This definition is not necessarily the only one since this definition does not take into consideration all of the gender identities identified within the LGBTQ community. Gender identity refers to an individual's internal feeling of maleness or femaleness. Gender identity is closely related

to how a person perceives themselves, while gender expression relates to how they present their sense of gender to the larger society. Hogan, Roberts, and Gillaspie (2017) also suggest that many transgender people seek support and acceptance from the gay and lesbian community, where gender norms are typically more inclusive. Nonetheless, gender identity does not limit itself to the gender binary as explored in the paper “My pronouns are they/them: Talking about pronouns changes how pronouns are understood” by Arnold, Mayo and Dong (2021) some individuals who identify as nonbinary often prefer to be referred to with they, although some prefer neopronouns like xe (Bradley et al., 2019; Fisher, 2018). The range of singular they also appear to be expanding and can even be used when the referent is known and identifies with a binary gender. For example, in Arnold, Mayo and Dong (2021, p.1689) work presented the example of a Facebook post that said, “my spouse . . . they,” even though the spouse does not typically use they/them pronouns. Gender identity and how it is expressed by individuals differs as Smith and Smith (2016) explain: “Gender systems are divisive in their structures and are slow to change.”

1.3 Gender Expression

Gender expression is different from gender identity, and the confusion between the two is not uncommon. According to Hollander (2013), "doing gender" involves gender performance and accountability. Individuals are accountable to socially constructed understandings of masculinity and femininity even when they deviate from them, because of these structures of accountability, making "doing gender" compulsory. This gender performance relates to gender expression. According to Hogan, Roberts, and Gillaspie (2017), gender expression is how a person communicates their gender identity to others. Gender expression is often stereotypically male or female, but some individuals opt to combine both male and female expressions. Members of the LGBTQ community are exposed

to violent or aggressive reactions from society if they do not adhere to rigid sex role stereotypes, which is a prevalent source of homophobic and transphobic bullying.

1.4 Personal Pronouns

The group known as personal pronouns constitute one major category of pronouns, one of the eight parts of speech. Radford (2016, p.75) defines pronouns as a class of words which are said to “stand in place of” or “refer to” noun expressions. Along with nouns, both work together hand in hand. Personal pronouns (I/me/we/us/you/he/him/she/her/they/them) are referred to as such not because they denote people but rather because they encode the grammatical property of person (Radford, 2016, p.76). According to Marcoux (1973), English nouns are typically neuter despite having masculine or feminine associations, and rules about pronoun gender agreement are generally presented as without exception. Arnold, Mayo, and Dong (2021) explain that pronouns are marked linguistically for gender, including feminine, masculine, and ungendered options. Pronouns are also marked for number, which can be singular or plural. Darr and Kibbey (2016) explore the historical aspects of subject pronouns in English, explaining that the development of these pronouns reflects sociological and developmental changes in English and other Germanic languages. They also discuss changes in gender and plurality, which have affected the organization of the pronominal system and its derivatives.

For the purpose of this paper, the researcher will focus on the personal pronouns of she/her, he/him, and they/them when referring to the pronouns that are used by the members and allies of the LGBTQ community and online users that want to use them as simple signifiers of their gender in their Twitter Bios.

Chapter 2: Literature Review

2.1 Social Media and Social Interactions

Social interactions between people involve not communicative aspect but require a time and space. Having a place to be able to engage with others is an integral part of how we function as living beings. With the arrival of social media platforms, individuals no longer just interact with the people and environment around them; these interactions are also present on the social media platform of individual's choice. Each platform has different ways online users can share content, and interact within the platform, all of this after creating their own profile. As noted by Cisternino and Jones (2020) in "Societal Pressures, Safety, and Online Labeling: Investigating LGBTQ Self-Identification in an Online Space" social media platforms enable users to connect, share information, and create online profiles. Wills (2016) notes in their work "Social media as a research method" that these profiles provide an opportunity for people to present information about themselves and their interests. To communicate with others in a space online also provides a space for individuals to create online communities. Within these communities, the interactions are limited to the social media platform and socialization then is filtered through the platform's interfaces. In the social media platform of Twitter, using hashtags is a way to share information thus creating the aspect of a community. Wills (2016) argues that a community can be defined by different factors such as membership of an organization, attendance at an event, or a shared disposition towards information. The hashtag plays a dual role in such communities: it labels the content and makes it available to those interested in it. In their paper Cisternino and Jones (2020) also demonstrate the utility of online public profiles in studying identity. They observe the aggregate effect of millions of individual disclosure decisions and note that the presence or

absence of keywords is both an interesting measure and an operational definition of collective willingness to be publicly out.

In social media platforms, individuals are referred to as “users”. In the social media platform of Twitter, these users create their profiles, in which they are allowed a section for personal information that is presented to other users in the public online social platform. These sections are called “bios”, where users have a 160-character limit for their profiles as well as for posting “tweets” in their public page. This space then becomes a place for users to present, within the 160-character limit, the image or information they are willing to present to other users within the social media platform. For the sake of this paper, this is the only aspect of the social media platform of Twitter that will be dwelled on. The user's bio then becomes something like a business card or presentation of the identity of the individual. With this tool in the social media platform, users are then given the opportunity to share parts of themselves or identity. According to Roger and Jones' (2021), if a person has embraced a certain attribute as central to their identity, it will guide their future behavior. Individuals seek to behave in ways that are consistent with their identity; behaviors (and feelings and values) that are perceived as inconsistent will be avoided or suppressed. A person's identity is a constraint on what they are “allowed” to choose, in any given situation (Rogers & Jones, 2021, p14). The ability to cherry pick aspects to present the individual's preferred aspects of their identity in the online social media space may seem like a benefit for those who wish to present a more “ideal” version of themselves or a version of themselves that is difficult to emulate in their offline life.

In the book “How the world changed social media” by Miller et al (2016), the authors state that those who have difficulty in expressing or ‘being’ themselves in face-to-face interactions are more likely to craft what they regard as a ‘real self’ and form closer relationships with people they meet online (p.111). The ability to present the most desired

aspects of oneself online as well as a version of identity which a user might not be able to present offline begs the question of how social media can provide a space for the user to express their gender and identity. Individuals seek to behave in ways consistent with their identity, which can limit their choices in any given situation (Rogers & Jones, 2021).

According to Smith and Smith (2016), gender is closely linked to social interactions and structures, and it can influence a wide range of self-meanings, expectations, and situations. In their paper “What it Means to Do Gender Differently: Understanding Identity, Perceptions and Accomplishments in a Gendered World,” they state that the idea that individuals present themselves as actors on a stage provides a valuable framework for understanding gender displays. Gender displays are informed by culturally defined gender roles, which are critical for replicating gendered structural systems.

In the paper “A matter of style: gender and subject variation in Spanish”, Oliva and Serrano (2015) state that self-presentation on social media continues to be gendered, much like in everyday life offline, as a single part of a person's varied, interconnected identities. This could relate to the fact that despite being provided a space that is not necessarily connected to the offline space, individuals still emulate the gender norms and gender identity of those around them.

Finally, Cisternino and Jones (2020) compare the increase in the prevalence of people identifying as LGBTQ on social media platforms to that in the Gallup survey. This could be due to various factors, such as people feeling more comfortable disclosing on anonymous surveys than publicly online. Donna Haraway provides one of the best-known arguments for this trend, emphasizing the power of technology to transform gender relations and identity (Miller et al, 2016, p.113). Furthermore, because gender could potentially become erased or irrelevant online, this was seen as evidence that notions of gender were culturally

constructed, created through interactions between the social world and the material culture (and technologies) around us.

2.2 Social Media and Self-Expression

As discussed in the previous section, social media presents itself as an alternative place for interaction and connectivity between individuals. Now, moving aside from interaction, this section will focus on how the social media platform of Twitter and the bio section may present a space for self-expression. This self-expression will mainly focus on the 160-character limit space Twitter bios give users on the platform. The researcher theorizes that this space has given users a limited, but nevertheless creative, outlet for individuals to present and even construct a curated version of themselves they want to present to other users. In relation to the theory of the researcher, this also means that users have to find ways in which they can express to other users parts of their identity in short simple phrases rather than statements in their bios. In the paper “Emoji and Self-Identity in Twitter Bios” by Li et al (2020) the presentation of self-identity on social media can be better understood by examining how individuals choose to represent themselves in their Twitter bios, including their use of emoji. Self-identity is a collection of values and beliefs about oneself. In this paper, they focus mainly on the use of emojis to signify identity traits to other users.

Something to consider about how users express their identity online is to think about individual’s identity in their offline lives. Social media platforms may present the tools necessary for the presentation of people online, but these identities do not form in a vacuum, they come from the user’s offline experiences. According to Subrahmanyam and Greenfield (2008) in their paper “Online Communication and Adolescent Relationships,” online communication is believed to be less rich than offline communication because it lacks important features of face-to-face communication, such as gestures and eye contact. Millers

et al (2016, p.21) also notes that relationships formed online were not at the expense of relationships formed offline, and people who were more connected online had more connections offline. Both of these statements may seem contradictory, but the interactions users have online and offline prove to be important for individuals. Miller et al (2016, p.19) presents a study by Lomborg (2016) on how cultural genres emerge through detailed study of social media usage as part of everyday life, and how genres represent a balance between factors such as entertainment, information, and intimacy. Social media not only builds on an individual's previous experiences on the internet for social and communicative purposes but also presents discontinuities with prior uses.

Another aspect to bring forward in the relationship of social media platforms and self-expression of individuals is their gender expression on these platforms. Twitter is already a social media platform known for its users and their discourse on many subjects. The fact that Twitter bios have a limited number of characters for users, being concise is important. Presenting gender identity for users in their bio becomes an act of performance similar to what users may have offline. For Smith and Smith (2016), doing gender is more than just a performance, it requires ongoing work to create and maintain gender identity within a structured world. It involves constant interactions, norms, guides, roles, and other factors that span across contexts and situations. The work of maintaining gender identities is complex and multi-layered. Gender expression in the public social media platforms does not necessarily need to deviate from that in which users have in their offline lives. Miller et al (2016, p.114) notes that social media platforms have emerged as highly conservative and have reinforced established gender roles. However, these platforms also include smaller and more private groups, such as messaging apps, where men and women are less concerned with conforming to gender norms. Online, gender can potentially become irrelevant, showing that it is

culturally constructed rather than biologically determined. However, disruptions of gender norms by social media vary across different field sites.

It is also important to mention the gender expressions that members of the LGBTQ community have on social media platforms. So far in this section it has been stated that in social media users do not bring a gender identity from a vacuum, they often emulate the ones they have from their offline lives. A study by Cisternino and Jones (2020), “Societal Pressures, Safety, and Online Labeling: Investigating LGBTQ Self-Identification in an Online Space” shows that anonymity and the public nature of social media influence the decision to disclose one's LGBTQ identity online. Impression management and strategic decisions about what to disclose and when play a key role in digital identity construction. The potential for a large public audience makes the decision of whether to disclose a stigmatized identity a difficult one, and thinking about disclosure decisions as a component of strategic identity formation is a useful framework. In the same study Cisternino and Jones (2020), state that for members of the LGBTQ community concealing their identity can lead to negative outcomes such as psychological distress and suicidal tendencies. Therefore, the ability for LGBTQ individuals to safely disclose their queer identity online is important. The internet is increasingly used as a tool for coming out, and researchers seek to understand the factors that may influence these disclosures.

2.3 Gender Expression and Pronouns

The previous section of this investigation explored how the social media platform of Twitter may provide a space for self-expression by looking at various studies. Now on to the explanation on how gender expression relates to pronouns. As has been previously presented regarding the grammatical function of English pronouns and how gender identity and gender expression are defined, pronouns are used to avoid redundancy in language. Darr and Kibbey

(2016) they explain that in the English language there are seven personal pronouns that can be used as a subject pronouns: I, you, she, he, it, we, and they. These are categorized into first person, second person, and third person usage for “I and we”, “you”, and “she, he, it, and they”, respectively. How do personal pronouns become an item for gender expression for individuals within and outside of the LGBTQ community? Hogan, Roberts, and Gillaspie (2017) state that according to the queer communities today, the choice of pronoun is each individual's decision no matter how uncomfortable it may be at first to hear and to use this new language.

The importance of language in the construction of identity is immense. Tavits and Pérez (2019) claim in their paper “Language influences mass opinion toward gender and LGBTQ equality” that gender-neutral language influences attitudes and beliefs about gender equality and tolerance toward LGBTQ individuals. The manners in which language and identity are utilized by members of the LGBTQ community may experience backlash online when performing the status quo genders. Smith and Smith (2016) explained that individuals who deviate from traditional gender categories in personal ways perceive the world as less safe and inclusive compared to those who conform more closely to binary gender norms. This distinction is significant because it underscores the idea that "doing gender" differently does not necessarily indicate acceptance of non-conforming identities. The lived experiences and perspectives of individuals outside of traditional gender identities are notably different from those who adhere more closely to defined gender roles.

To conclude this section on pronouns and gender expression, it is important to note despite negative reaction to gender expression through pronouns used online by members of the LGBTQ community and performing gender outside of the known gender binary norms, there has been greater acceptance during recent years. Tucker and Jones (2023) reported in their paper “What it Means to Do Gender Differently: Understanding Identity, Perceptions

and Accomplishments in a Gendered World” a significant increase in web searches related to preferred pronouns, and the sharing of preferred pronouns is encouraged as an act of allyship, especially towards nonbinary and transgender individuals.

2.4 Twitter Bios and Gender Expression

The previous sections of this paper have featured both the design and function of the social media platform Twitter. Users create a profile where they are given a bio to use for a profile preface. This bio is limited to a 160-character limit and is the cover for each user’s public profile. The bio is available to other users in the platform as well as those who do not have a profile. The limitations imposed by Twitter regarding the characters for bios and tweets foster a different social media experience; the profile bios are available to the public, but the platform also has the option of private messages among users. The image users present in their profiles does not necessarily have to be a complete profile of the individual since the bio character limit can only allow the user so much to present themselves to others. Just because users are given the chance to present a curated version of themselves on social media does not necessarily indicate that users will not present authentic parts of their identity in their public profiles.

The opportunity for both self-expression and gender expression in this limited space requires users to be creative as to how they perform their gender. Hogan, Roberts and Gillaspie (2017) note that language constantly evolves, and individual identities change over time due to environmental, cultural, and community influences. Personal pronouns are the language that seems to be most prevalent for users to perform their gender identity within the confines on their Twitter bios.

As stated by Oliva and Serrano (2015), the inclusion of personal pronouns plays a crucial role in how speakers present themselves and shape their social identities. This study utilized transcripts from the Corpus Conversacional del Español de Canarias (CCEC) and the Corpus de Lenguaje de los Medios de Comunicación de Salamanca (MEDIASA). The transcripts consisted of transcribed spoken interactions among individuals from the Canary Islands in various communicative settings. The corpus included both male and female speakers with diverse social backgrounds. The results of this research showed that in the communicative situations analyzed, female speech is particularly inclined to syntactic choices promoting objectivity (or, perhaps more precisely, downplaying subjectivity), particularly second person singular pronouns. The opposite tendency characterizes male communicative styles, which show a stronger preference for first-person indexation (Oliva & Serrano 2015, p.263).

The use of pronouns for gender expression online has become a growing trend over the past few years, with members of the LGBTQ community and nonmembers alike using them. Arnold, Mayo and Dong (2021) have stated in their research that expressing one's pronouns has become a popular social convention that affects how pronouns are understood because cognitive processes are involved in gender representation during pronoun interpretation. The growing use of pronoun by members of the LGBTQ community has contributed to the spread of awareness regarding the importance of gender expression of individuals.

In a paper titled "Societal Pressures, Safety, and Online Labeling: Investigating LGBTQ Self-Identification in an Online Space," Cisternino and Jones (2020) state that the number of adults who identify themselves as members of the LGBTQ community has increased, with estimates rising from 8.3 million in 2012 to 10.05 million in 2016 (p.4). In Cisternino and Jones (2020), the authors emphasize that individuals tend to avoid sharing

stigmatized information online due to concerns about potential harm. However, when they have the option to disclose anonymously or with support from people in their social network, they are more comfortable sharing their stigmatized experiences or identities. Anonymity provides a sense of security, as it allows individuals to express themselves without the fear of judgment or negative consequences. On the other hand, disclosing within a supportive social network reduces concerns and increases the willingness to share stigmatized information.

In an article titled “Pronoun Lists in Profile Bios Display Increased Prevalence, Systematic Co-Presence with Other Keywords and Network Tie,” Tucker and Jones (2023) observe an increase in the number of US Twitter users who have added their preferred pronouns to their bios in 2022 compared to previous years. They found that certain words tend to appear together with pronoun lists in these bios, indicating systematicity in their use. Furthermore, they discovered clustering within the Twitter follow network, on which pronoun users would more be likely to follow and be followed by users with pronouns in their bio. The authors suggest that Twitter bios offer a valuable means of studying how individuals present and perceive themselves beyond the expression of personal identity.

Chapter 3: Methodology

The review of the literature in this paper has explored the comfort level with which individuals express their gender identity using keywords in their Twitter bios. Within this context, the researcher analyzes several scientific and scholarly papers whose focus is the investigation of the influence of language, social media, and societal pressures on gender identity expression. The research problem requires data from multiple sources and theoretical analysis of archival investigations. Hence, the methodology chosen is a thematic literature review with archival data taken from Twitter bios in a Longitudinal Online Profile Sampling, known as LOPS as established by Jones (2021). Jones and other authors such as Rogers, Cisternino and Tucker have utilized a novel sampling method known as LOPS. They treat the Twitter bios as a self-report of users' sense of identity and track how that sense changes over time.

The researcher has adopted a thematic approach in order to analyze the selected research papers. The papers were selected because they encompass the main areas of emphasis within the scope of subjects such as language and gender in English and social impact, gendered and non-binary language in academic literature, and social media, and real life (IRL). Each area of emphasis will be analyzed to identify common themes, including language usage, pronoun usage, gender identity of members of the LGBTQ community, and the influence of social media on gender identity expression. Along with these themes the researcher will utilize the data collected in those studies which have included the LOPS (Longitudinal Online Profile Sampling) results of Jones et al. (2021) in order to establish any important tendencies regarding and recent data from Twitter showing the usage of non-binary language and pronouns.

The researcher is themselves an Assigned Female at Birth (AFAB) Non-Binary individual who has utilized gender-neutral language and chosen pronouns to describe and

introduce themselves for the past ten years and will use their personal experience with the theme of this research investigation, both online and IRL, as a lens through which to analyze the literature selected. This experience allows the researcher a specific theoretical perspective to view the information presented.

The presence of pronoun slash lists and gender inclusive language on Twitter bios implies that members of the LGBTQ community are aware of the phenomenon. This skews the data collected from these specific bios towards a population that is much more likely to include trans and non-binary individuals who would otherwise represent a much smaller part of the sample obtained.

The information in the Twitter bios analyzed only represents the gender and identity of users when the data was collected. This is a limitation of using any online source to collect data. In his LOPS research, (2021), Jones' data includes samples of Twitter bios from 2015 to 2020. This kind of literature review would also need to be redone on more than one occasion to keep up with the ever-changing online landscape. As previously stated, the researcher will be more susceptible to confirmation bias while analyzing the findings within the literature review because of their own identity within the community.

The most salient works analyzed for this paper are research papers which offer empirical data. Based on the data and findings from those studies, the researcher will address the research questions of this paper, while using the rest of the references as a supplement to the information found within these studies. The most salient research studies in this paper are presented in no particular order.

The majority of the research papers and studies that will be mentioned next all used the LOPS tool to gather their data. These works include the following: Rogers and Jones (2021); Jones JJ (2021); Cisternino and Jones (2020); Tucker and Jones (2023); Li, et al (2020); Tavits and Perez (2019); and Smith and Smith (2016).

Chapter 4: Findings and Analysis

The data utilized for the purpose of this investigation is based solely on archival research. Several previously published scholarly investigations concerning the topic of pronoun usage, gender identity and expression have been selected. As mentioned in the previous section, it in this chapter that the most salient and relevant research for this paper will be presented and discussed guided by the research questions presented in the introduction of this paper.

Rogers and Jones (2021) focus their study on data recovered from Twitter user bios to measure the way Americans used specific language that aligned with their self-identity. The study used quantitative methodology by taking Twitter bios samples from 2015 to 2018 to gather their data. Although one might expect that an individual's group's memberships are constructed around pre-existing preferences and behaviors" (p. 3), the authors define social identity as "shaped by an individual's group memberships. The investigation focused on the keywords used in the Twitter bios of the users and observed the change in the frequency of keywords related to the list of explicit and implicit political keywords present in the Twitter user bios to observe the political self-identification and user. The researchers chose these explicit political keywords: Socialist, Communist, Marxist, Anarchist, Leftist, Liberal, Progressive, Democrat, Conservative, GOP, Republican Libertarian, and Alt-right. The keywords for the political implicit language tokens were: Feminist, Woke, Activist, Red pill, Men's rights Deplorable, Nasty woman, LGBTQ, Black lives matter, Blue Lives Matter, The 99%, BLM, and MAGA. The study also had a list of nonpolitical keywords, such as those related to arts, sports, and religion. For the nonpolitical keyword sections, the words for the arts were: Artist, Painter, Dancer, Sculptor, Designer, Filmmaker, Musician, Poet, Composer, Comedian/ Comedienne, Performer, Actor/Actress, and Playwright. In sports, the keywords

were: Sports, Athlete, Golf, Tennis, Basketball, Baseball, Football, Soccer, Boxing, MMA, Hockey, Softball, and Volleyball. In comparison, the keywords for religion were: Christian, Jewish, Muslim, Buddhist, Hindu, Baptist, Methodist, Catholic, Mormon, Episcopal/Episcopalian, Lutheran, Presbyterian, and Atheist. In their findings, Rogers and Jones (2021) reported that Twitter bios were 19.5% more likely to have an explicit political keyword in 2016 than in 2015; prevalence grew by 24.5% in 2017 and 26.2% in 2018. Implicit keywords became 30.3% more prevalent in 2016, 48.8% in 2017, and 34.4% in 2018 (p. 7). Although the raw number of Twitter users defining themselves by political affiliation is lower than the number defining themselves by their arts or sports participation, it is becoming increasingly common at a much higher rate than any of the categories that are measured.

Jones (2021) included in his study both a longitudinal and quantitative research paper. The longitudinal method for this research is called LOPS (Longitudinal Online Profile Sampling). For this research, the author used Jason J. Jones Identity Trends V1, a website that anyone can access to explore the dataset without programming or using any software beyond a web browser. It is available at <https://jasonjones.ninja/jason-j-jones-identity-trends-v1/>. The author described this tool as partially inspired by Google Trends, which has been mentioned by name in thousands of research articles indexed by Google Scholar. It was the primary source of data for hundreds of articles reviewed. The author used Twitter as the social media platform to collect data since it is public and available for collection. The data collected was from American Twitter users for the study included the time period between 2015 and 2020. The research focuses on finding the incidence and prevalence of a linguistic token present in the Twitter bios of the user. The primary objective of this study was to determine how prevalent linguistic tokens are; the linguistics tokens for the pronouns she,

her, he, and him held the top 1st to 4th slots of the most extensive prevalence and use throughout the Twitter bios of users between the years of 2015 to 2020.

A paper by Cisternino and Jones (2020), also used the LOPS (Longitudinal Online Profile Sampling) methodology to gather and analyze their data. This study used 3,051,877 American users Twitter profiles. The study focused on three types of offline events that could be related to the decision of Twitter users to disclose their identities online, namely Inclusion and visibility events, legal events, and Anti-LGBTQ violent events. The study found a daily rise in the prevalence of "user bios that contain at least one LGBTQ keyword. A consistent positive trend is clear from the beginning of available data in February 2015 until May 2018; the prevalence climbs from 34 to 50 - an increase of 47%" Cisternino and Jones (2020, p.9).

Arnold, Mayo and Dong (2021) utilized a quantitative methodology to gather their data. This research data sample was collected from surveys with Native English-speaking participants recruited through Amazon Mechanical Turk from the United States, Australia, and the United Kingdom. This study had the participants complete a Qualtrics questionnaire with three parts: (1) demographic questions, (2) instructions, and (3) main task. The study conducted three different experiments, which consisted of asking participants questions after being presented with stories with three different characters, Liz (she/her), Will (he/him), and Alex (they/them). In both experiments 1 and 2, participants were asked two questions regarding the characters, and in experiment 3, there were four questions to answer. The aim of these experiments was to determine whether or not people adopt a singular or plural interpretation of gender-neutral pronouns in ambiguous contexts. Experiment 1 showed that the singular interpretation of the pronouns they/them was more frequent when Alex was mentioned first in the two-person context. Experiments 2 and 3 further explored the two-person context by manipulating the order of mention for Alex and found a similar effect. The

singular interpretation of the pronoun they/them was more frequent for the Alex-first contexts than the Alex-second contexts in both experiments.

The methodology utilized by Tavits and Pérez (2019) to gather the data consisted of an online survey with more than 3,393 individuals from varied ideological leanings and educational backgrounds. This study consisted of three experiments with the approval of the Institutional Review Board of Washington University in St. Louis, Missouri. These three experiments were conducted with more than 3,000 Swedish adults to investigate the effects of gender-neutral pronouns on attitudes towards non-male and LGBTQ individuals. The first two experiments asked participants to identify an image by giving it a feminine pronoun (hon) and masculine pronoun (han) and a gender-neutral one (hen). Then, the participants were asked to write 2 to 3 very detailed sentences to state what the figure could be doing. The third experiment required participants to state the first name that came to mind when asked to assign one to the pronouns han, hon, and hen. Study 1 (n = 315) found that using gender-neutral pronouns increased the likelihood of completing an open-ended sentence with a nonmale name, which was associated with more positive feelings towards gay and transgender individuals and more favorable opinions about their inclusion. Study 2 (n = 1,840) replicated these findings with a larger sample and showed that the heightened salience of nonmales was associated with greater knowledge of female politicians and expressions of pro-female preferences. The third study explored the extent to which gender-neutral pronouns increased the prominence of nonbinary gender. The results revealed that the proportion of unisex names was the highest in the gender-neutral pronoun condition at 32%, significantly higher than the 1% in the masculine pronoun condition and 0.5% in the feminine pronoun condition. Additionally, the data indicated that in the gender-neutral condition, unisex names were the most frequently suggested category of names (32%), compared to male (24%) and

female (17%) names. These findings provide further evidence that using gender-neutral pronouns increases the prominence of nonbinary gender.

The methodology utilized by Li et al. (2020) was longitudinal and quantitative. It included the Twitter streaming API tool to gather the data collected between April and July 2020. The Twitter API tool is a program used by researchers to communicate with Twitter. An API (Application Programming Interface) is an interface that lets the program you write control or access a program somebody else wrote. In this case it allows an external program to take the place of a user account and instead communicate directly with whatever data is stored in the main Twitter servers. It collected its sample by collecting tweets and storing all user-level information available for each tweet, including the Twitter bio. Then, to filter fake and less established accounts, the accounts with fewer than 100 followers and celebrities were removed. The study had a non-emoji sample, collecting 200 tweets from 200 users as a control group. The study used the pre-trained fast Text language identification model as outlined in Joulin et al (2016) to detect the language in which each tweet or bio was written. Then later, they tokenized the language texts using the tools of NLTK (Loper & Bird, 2002), TweetTokenizer for English and the Polyglot multilingual tokenizer for other languages. The study aimed to investigate how emojis are used in Twitter bios and found that emojis are used in unique ways within bios compared to tweets. Emojis are positioned earlier in bios, and a higher percentage of bios start with an emoji than with text. In addition, facial expression emojis are dominant in tweets, while different variations of heart emojis are dominant in bios. The most popular emojis in bios are from the Smileys and Emotion group, and the least frequently used are from the Food and Drink group (Li et al. 2020). The study also found that people use emojis in their bios to show support for musical groups or sports teams and the countries they come from or are living in. Frequently used emojis in bios have high mutual information with similar or related emojis or those from the same category or concept.

These findings contribute to understanding how emojis are used in social media contexts, specifically in Twitter bios.

In another study by Jones and Tucker (2023), "Pronoun Lists in Profile Bios Display Increased Prevalence, Systematic Co-Presence with Other Keywords and Network," the LOPS methodology was used once again. This research included Twitter accounts in the United States. It used a cross-sectional dataset constructed at annual and daily temporal resolutions using a 1% sample of all public tweets obtained through the Twitter API version 1.1. The study focused on five pronoun lists: she/her, he/him, they/them, she/they, and he/they. The tokenization process treated each pronoun list as its own category, even if similar pronoun lists had different meanings for those who used them. The study covered the years between 2015 and 2022. It analyzed the prevalence and growth of pronoun lists in Twitter bios from 2017 to 2022. Results showed that pronoun lists appeared at low rates until 2018, when they began to grow in prevalence and plateaued in 2021. The study also examined the characteristics of Twitter users with pronoun lists in their bios and found that they are more likely to be verified and have higher activity and connectivity than users with blank bios. Furthermore, the study revealed clustering among Twitter users with pronoun lists in their bios, with a significantly higher percentage of their followers and friends also having pronoun lists in their bios.

The work by Smith and Smith (2016) presented a quantitative methodology with an online survey as a data collecting tool. The participants in this study were college students enrolled at a mid-sized university located on the west coast of the United States. The institutional research office gathered a sample consisting of members of the student population, whose total enrollment was approximately 8,500. The data collected was then coded and inputted into SPSS (Statistical Program & Service Solutions) for further statistical

analysis. The Statistical Program & Service Solutions (SPSS) is a software program used to analyze the data gathered in the study. In technical terms it is a software suite developed by IBM for data management, advanced analytics, multivariate analysis, business intelligence, and criminal investigation. The survey instrument focused on student perceptions of gender, gender nonconformity, and the current state of gender equity on campus. In the findings, the respondents reported slightly higher levels of femininity than masculinity. The study found that 80% of the students indicated some level of gender non-conformity as part of their gender identity. The results also indicate that one's level of comfort with gender displays is statistically related to perceptions of gender inclusiveness on campus, and comfort with doing gender differently was significantly related to both feelings of safety and inclusion on campus. This study suggests that asking about specific reactions to defined situations requires greater engagement with the underlying meanings of gender that individuals hold.

The researcher has found a few interesting aspects of this investigation that are relevant to this paper. Firstly, the methodology and data collection instrument or tool for this research are relatively new. The LOPS research tool previously mentioned is free of cost and much more accessible to researchers. Gathering data from publicly accessible information from users on social media requires the use of APIs and LOPS is an accessible and free to use tool. Longitudinal Online Profile Sampling (Jones, 2019; Rogers & Jones, 2019) is a useful tool to study self-presentation online. It allows precise measurement at high resolution, which is not true for most social science methods.

A study by Rogers and Jones (2021) focused on finding keywords in the Twitter bios of users in order to observe how political identity was related to the individual and how the Twitter bios presented themselves as a space for identity expression. In their paper Rogers and Jones (2021) state the following:

“Individuals seek to behave in ways that are consistent with their identity; behaviors (and feelings and values) that are perceived as inconsistent will be avoided or suppressed. A person’s identity is a constraint on what they are “allowed” to choose, in any given situation.” (p. 2)

This data is highly relevant to this research investigation because the researcher has proposed to explore how social media, specifically Twitter bios, are a space for individuals to express their identity. The study done by Jones (2021) has a very interesting detail pertaining to the presence of pronouns in Twitter bios. The data collected via the LOPS tool between 2015 and 2020 is used to observe which linguistic tokens held more prevalence and growth in usage by Twitter users in their bios and found an increase in the pronouns of she/her, he/him as the top four words with most usage between 2015 to 2020.

Tucker and Jones (2021) note that many more US Twitter users included preferred pronouns in 2022 than those in previous years. Far beyond this single manifestation of personal identity expression, Twitter bios provide an opportunity to study how individuals perceive and present themselves. Cisternino and Jones (2020) also state in their work that the ability for social media users to pick and choose which aspects of their identity they want to display online and which to leave out means that impression management and strategic decisions about what to disclose and when play a key role in digital identity construction.

In the following chapter, the researcher will present a final discussion and reflection on the elements of social media, specifically Twitter, along with their correlation to the concepts of identity and gender identity as well as to how pronouns have become synonymous with gender expression for users online.

Chapter 5: Conclusions

5.1 Overview

Up to this point, this paper has explored the themes of gender, gender expression along with gender identity, how pronouns relate to the previous three concepts and how all of them are presented in social media, Twitter to be specific. The sources to explore and answer the research questions as presented in the first chapter of this paper have been taken from articles and book chapters presented and discussed in chapter two as well as from previously published scholarly work, presented in the previous chapter. The methodology for this paper has been strictly archival, with all data collected from scholarly research articles.

This investigation has focused primarily on finding the relationship that the individual has with their identity and gender expression online, particularly the social media platform of Twitter. Social media platforms provide a space for gender expression by allowing individuals to share information about their gender identity and preferred pronouns. Individuals can use their profile bios, usernames, and even post content to express their gender identity. For example, individuals can choose to use gender-neutral language and specify their pronouns in their bios. Social media platforms such as Twitter provide users the bio space to specify their preferred pronouns on their profiles.

The use of pronouns is essential in signifying gender identity on social media. Their function is to make reference to an individual in the third person and can be gendered (e.g., she/her, he/him) or gender-neutral (e.g., they/them). Research has shown that the use of pronouns is crucial in acknowledging and respecting an individual's gender identity and can lead to positive outcomes such as increased gender inclusivity and reduced gender bias (Arnold, Mayo, & Dong, 2021). Many individuals on social media specify their preferred

pronouns in their profile bios, which can help others understand how to refer to them correctly.

Social media platforms clearly provide individuals with a space to express their gender identity and preferred pronouns. Using pronouns is essential in signifying gender identity on social media, and individuals can specify their preferred pronouns in their bios to promote gender inclusivity and reduce gender bias.

5.2 Research Questions

The research questions that have guided this study are presented here, followed by a response and analysis based on the data that has been gathered.

1. Does social media affect how individuals express their gender online?

The researcher has found that social media does affect how individuals express their gender online. According to a virtual ethnography study by Darwin (2017), social media has created a space for individuals to express their gender beyond traditional binary norms. The study found that individuals used social media to express their gender in various ways, including changing their profile pictures and usernames and using hashtags related to their gender identity. The anonymity that social media profiles bring provides individuals the flexibility to express their gender to the individual's preferences. Additionally, Miller et al. (2016) noted that social media has enabled people to experiment with different forms of gender expression and identities.

In the researcher's online usage experience, having access to a space for self-expression outside of the offline public spaces and the anonymity that social media and the internet provides are an essential tool for exploring identity. The online experience has

provided a space to perform gender in ways that would be considered taboo or looked down upon. Having the ability to pick and choose aspects that one would like to share with others in a space that is separate from offline lives allows displaying aspects of one's identity or gender identity that an individual would prefer not to share to avoid being stigmatized. In a certain manner, social media provides a "practice stage" for gender expression for individuals who wish to be more open about their gender identity. Cisternino and Jones (2020) present this principle in their study; the presentation of an ideal self-online can be beneficial in some contexts. In the researcher's own experience with the Twitter social media platform, the opportunity to have access to a space to present their nonbinary expression has helped in terms of the exploration of gender identity.

2. Do public profiles provide a space for gender expression?

Evidence suggests that public profiles on social media platforms provide a space for individuals to express their gender identity. For example, a study by Jones (2021) found that many Twitter users in the United States include gender-related terms or pronouns in their profile bios. Additionally, Li et al. (2020) found in their study of "Emojis within Twitter bios" that using particular emojis in the bios can be associated with specific identity traits with which individuals feel most identified. These findings suggest that public profiles can be an essential avenue for individuals to express their gender identity and be recognized by others. Miller et al. (2016) argue that Wellman and his colleagues' research demonstrated that social media is not a separate virtual world from offline relationships. Instead, their research showed that online connections did not come at the expense of offline connections; in fact, individuals with more online connections also had more offline connections. Therefore, reducing the complex theoretical approach to social media to a single trend of individual networking would be misleading.

A public online social media profile has become a way for individuals to present their preferred portrait of who they are or how they want to be perceived by others. However, at the same time, it lends itself as a place for individuals to carefully craft and choose the specific parts they want others to see, not necessarily showing the whole picture of who they are, which is very similar to offline interactions. Being provided a space apart from the offline social circle of a person's life can be beneficial. Cisternino and Jones's (2020) research has shown that concealing one's LGBTQ identity can lead to a range of adverse outcomes, including psychological distress; thus, the ability of LGBTQ individuals to safely disclose their queer identity online is an important one. An individual's identity is also subject to change over time; some aspects of their identity may be more sensitive to scrutiny and having a "safe place" to disclose a person's identity or gender identity is necessary.

3. Is there a relationship between subject and personal pronouns, such as she/her, he/him, they/them, and queer identity?

There is an evidently strong relationship between subject and personal pronouns and queer identity. The presentation of identity is essential for people and individuals that form part of the LGBTQ community and have adopted the use of pronouns online and offline as a form of gender expression. For example, a person who identifies as a woman but was assigned male at birth may prefer to use she/her pronouns, while a person who identifies as non-binary may prefer they/them pronouns. Hogan, Roberts and Gillaspie (2017) state that heterosexuality has dominated our language and culture. We must "become comfortable with ambiguity." Using nongender conforming pronouns such as they/them helps individuals express gender beyond the presented binary. The inclusion of the correct pronouns for an individual is essential to respect their gender identity and validate their existence. It is always best to ask someone what pronouns they prefer and use them consistently. While many

groups benefit from sharing preferred pronouns (for instance, people with gender-ambiguous names), there is a particular benefit for nonbinary and transgender individuals (Tucker & Jones 2023).

There is a growing awareness of gender identity, and through social media, has presented itself as a place for gender discourse in the growth of LGBTQ awareness over the past years. LGBTQ centers at various universities (The University of Maryland, n.d.; University of California, Davis, 2021), diversity centers ("Pronouns: a How-to," 2021), and companies encourage people to share their preferred pronouns. Tucker and Jones (2023) present evidence of a dramatic increase in web searches containing the terms "he/him," "she/her," or "they/ them" (Google Trends, 2022, p.2), including the phrases "why do people put she/her" and "what do they/them pronouns mean."

4. Are subject and personal pronouns used to signify gender identity in social media?

The relationship between subject and personal pronouns and queer identity has been presented in several of the provided references, such as Cisternino and Jones (2020), Darwin (2017), and Smith and Smith (2016). These studies suggest that the use of preferred pronouns can be an important aspect of queer identity and can help to challenge traditional gender norms. Arnold, Mayo, and Dong (2021) also found that talking about pronouns can change how they are understood, indicating that the relationship between pronouns and queer identity is complex and dynamic.

The use of subject and personal pronouns to signify gender identity in social media is presented in several of the provided references, including Cisternino and Jones (2021) and Li et al. (2020). These studies suggest that the use of pronouns in social media bios and profiles can serve as an important means for individuals to signal their gender identity and express themselves online. The prevalence of pronoun use in social media profiles has increased

significantly over time, with Jones (2021) reporting that the annual prevalence of American Twitter users with specified pronouns in their profile bio increased from 0.4% in 2015 to 2.2% in 2020.

Personal pronouns are used to signify gender identity in social media. A study of American Twitter users found that there was an increase in the number of users identifying with non-traditional gender pronouns in their profile bios Jones (2021). Additionally, emojis are sometimes used in social media bios to indicate gender identity Li et al (2020). The use of non-traditional gender pronouns and other language choices on social media can also impact how a person is perceived in terms of their gender identity.

5.3 Limitations of the Study and Recommendations for Further Research

This paper presents some limitations which the researcher would like to address. One of the aspects to which this research investigation could be susceptible is sample selection bias, because people with pronoun slash lists tend to be well-versed in the subject and usually allies or nonbinary themselves. Furthermore, the gender identity and performance of individuals are not static and are subject to change as Twitter bios can be altered or retailored by users over time. One more limitation of this investigation is the internal bias of the researcher, as a nonbinary person who identifies with the LGBTQ community. New research projects concerning this subject matter can be further enhanced by obtaining similar LOPS data from several more social media platforms taking into account profiles and bios with and without pronoun slash lists and gender inclusive language while also surveying a large sample of IRL populations from all types of socio-political and economic backgrounds. This will enable researchers to obtain a more considerable, less biased amount of data. Ideally, researchers from the LGBTQ community and outside of it should peer review the literature produced out of said future research to correct any unconscious bias by the researcher.

Finally, this sampling must be repeated periodically to account for the ever-changing social media landscape and the ever-evolving concepts of gender we experience as a society.

The researcher recommends the inclusion of other languages, such as Spanish, particularly that of Puerto Rico as well as other dialects from the hispanophone Caribbean because this study has focused on the gender expression of English-speaking users of pronouns on Twitter. In addition, future studies of this nature geared toward online users from anglophone speakers throughout the greater Caribbean would be of significant value to a fuller understanding of gender expression and identity in these communities. In terms of future research and data collection for studies, researchers within the Humanities, particularly from the field of Linguistics, should seek to expand their horizons toward social media. . Given that social media reflects the user's identity, both the culture and geographical location of the individuals must also be key aspects of future comparative studies.

References

- Arnold, J. J., Mayo, H. C., & Dong, L. (2021). My pronouns are they/them: Talking about pronouns changes how pronouns are understood. *Psychonomic Bulletin & Review*, 28(5), 1688–1697. <https://doi.org/10.3758/s13423-021-01905-0>
- Cisternino, I., & Jones, J. J. (2020). Societal Pressures, Safety, and Online Labeling- Investigating LGBTQ Self-identification in an Online Space.
- Darr, B. R., & Kibbey, T. (2016). Pronouns and Thoughts on Neutrality: Gender Concerns in Modern Grammar. *Pursuit: The Journal of Undergraduate Research at the University of Tennessee*, 7(1), 10.
<https://trace.tennessee.edu/cgi/viewcontent.cgi?article=1311&context=pursuit>
- Darwin, H. (2017). Doing Gender Beyond the Binary: A Virtual Ethnography. *Symbolic Interaction*, 40(3), 317–334. <https://www.jstor.org/stable/90011687>
- Hogan, P., Roberts, G., & Gillaspie, F. (2017). Why Does Language Matter? Counterpoints, 485, 8–17. <http://www.jstor.org/stable/45136184>
- Jones J.J. (2021) A dataset for the study of identity at scale: Annual Prevalence of American Twitter Users with specified Token in their Profile Bio 2015–2020. *PLoS ONE* 16(11): e0260185. <https://doi.org/10.1371/journal.pone.0260185>
- Jones, J. J., & Cisternino, I. (2023, March 13). Pronoun-slash-lists in the Bio: A descriptive, exploratory analysis. <https://doi.org/10.17605/OSF.IO/4H8JK>
- Joshua S. Smith, & Kristin E. Smith. (2016). What it Means to Do Gender Differently: Understanding Identity, Perceptions and Accomplishments in a Gendered World. *Humboldt Journal of Social Relations*, 38, 62–78.
<http://www.jstor.org/stable/humjsocrel.38.62>

- Li, J., Longinos, G., Wilson, S. E., & Magdy, W. (2020, November 1). Emoji and Self-Identity in Twitter Bios. *Computational Social Science*. <https://doi.org/10.18653/v1/2020.nlpccs-1.22>
- Marcoux, D. R. (1973). Deviation in English Gender. *American Speech*, 48(1/2), 98–107. <https://doi.org/10.2307/3087897>
- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2016). Does social media make people happier? In *How the World Changed Social Media* (1st ed., Vol. 1, pp. 193–204). UCL Press. <https://doi.org/10.2307/j.ctt1g69z35.20>
- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2016). Gender. In *How the World Changed Social Media* (1st ed., Vol. 1, pp. 114–127). UCL Press. <https://doi.org/10.2307/j.ctt1g69z35.15>
- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2016). Online and offline relationships. In *How the World Changed Social Media* (1st ed., Vol. 1, pp. 100–113). UCL Press. <https://doi.org/10.2307/j.ctt1g69z35.14>
- Miller, D., Costa, E., Haynes, N., McDonald, T., Nicolescu, R., Sinanan, J., Spyer, J., Venkatraman, S., & Wang, X. (2016). Academic studies of social media. In *How the World Changed Social Media* (1st ed., Vol. 1, pp. 9–24). UCL Press. <https://doi.org/10.2307/j.ctt1g69z35.9>
- Oliva, M. A. A., & Serrano, M. J. (2016). A matter of style: gender and subject variation in Spanish. *Gender and Language*, 10(2), 240–269. <https://doi.org/10.1558/genl.v10i2.18325>
- Radford, A. (2016). *Analysing English Sentences*. Cambridge University Press.

- RAJUNOV, M., & DUANE, S. (Eds.). (2019). *Nonbinary: Memoirs of Gender and Identity*. Columbia University Press. <https://doi.org/10.7312/raju18532>
- Roese, V. (2018). You won't believe how co-dependent they are: Or: Media hype and the interaction of news media, social media, and the user. In P. C (Ed.), *From Media Hype to Twitter Storm* (pp. 313–332). Amsterdam University Press. <https://doi.org/10.2307/j.ctt21215m0.19>
- Rogers, N., & Jones, J. D. (2021). Using Twitter Bios to Measure Changes in Self-Identity: Are Americans Defining Themselves More Politically Over Time? *Journal of Social Computing*, 2(1), 1–13. <https://doi.org/10.23919/jsc.2021.0002>
- Subrahmanyam, K., & Greenfield, P. (2008). Online Communication and Adolescent Relationships. *The Future of Children*, 18(1), 119–146. <http://www.jstor.org/stable/20053122>
- Tavits, M., & Pérez, E. O. (2019). Language influences mass opinion toward gender and LGBT equality. *Proceedings of the National Academy of Sciences of the United States of America*, 116(34), 16781–16786. <https://www.jstor.org/stable/26850543>
- Tucker, L., & Jones, J. (2023). Pronoun Lists in Profile Bios Display Increased Prevalence, Systematic Co-Presence with Other Keywords and Network Tie Clustering among US Twitter Users 2015-2022. *Journal of Quantitative Description: Digital Media*, 3. <https://doi.org/10.51685/jqd.2023.003>
- Wills, T. (2016). Social media as a research method. *Communication Research and Practice*. <https://doi.org/10.1080/22041451.2016.1155312>