

But First, Let Me Take a #selfie:

Analysis of Selfies and Sexual Self-Identification on Instagram

Abstract

Decades of research on face-ism in traditional media consistently report women are more likely to be pictured from a more distant perspective than men, showing more of their bodies. In a cultivation-like manner, women are socialized to believe that their most important characteristics are located in the body. In the online arena, however, individuals have much more control over their image and may self-present in any way they choose. Unfortunately, it appears that online users of social networks are mirroring the traditional, gendered manner of presenting the self. Within the framework of gender schema theory, a content analysis used the face-ism index and shot type to determine the facial prominence of 621 male and female Instagram users who both did and did not sexually self-identify. Using hashtags to sexually self-identify as #gay or #lesbian, the content analysis revealed that the face-ism effect prevails across both sexual self-identification and presentation. However, Instagram users who sexually self-identify do not follow the heteronormative patterns of presentation and self-impression patterns of non-identified Instagram users. In addition, Instagram users who sexually self-identify do not adhere to the gendered patterns used in traditional, mass media.

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In traditional mass media platforms, a team of writers, editors, reporters, photographers, and graphic artists controls the public image of both men and women. Unfortunately, this also means that traditional gender stereotypes are ubiquitous. Women are consistently underrepresented, and when they are present they are very often objectified (e.g., Collins, 2011). One way to capture this gender differential is to examine these presentations within the context of the growing body of literature about face-ism, which refers to the penchant to frame women from a more distant perspective than men (Archer, Iritani, Kimes, & Barrios, 1983).

In this era of digital media, individuals have much more control over their public image. In theory, men and women can self-present online in any way they choose. However, there is concern that, perhaps unwittingly, both men and women have adopted the gendered, stereotypical portrayals traditionally seen in mass media (Smith & Cooley, 2012; Cooley & Smith, 2013). In a previous study conducted by Erin & Nichols (2015), it was found that Instagram users follow traditional media portrayals of their gender. Female Instagram users post more body-centric selfies, and male Instagram users post more face-centric selfies.

It has been established that Instagram users self-present online in the gender, stereotypical portrayals in mass media. In the previous study conducted by Erin & Nichols (2015), the variable of sexual orientation was not included in the analysis. According to gender schema theory (Bem, 1982), individuals are gendered in society based on how sex-linked characteristics are maintained and transmitted in culture, including mass media.

Arguably, the “selfie” represents the ultimate self-selected online photo. The Oxford Dictionary (2015) defines a selfie as “a photograph that one has taken of oneself, typically taken with a smartphone or webcam and shared via social media” (n.p.). Posting a selfie is a self-motivated, and some would argue narcissistic (e.g., Panek, Nardis, & Konrath, 2013), behavior, given that narcissism is associated with both self-promotion and the use of interpersonal communication for self-enhancement (Wallave & Baumeister, 2002). As Panek et al., (2013) noted, social networking allows users to have near complete control over their self-presentation, making sites like Facebook and Instagram useful venues for deploying the kind of strategic interpersonal behaviors commonly used by narcissists to construct and maintain a carefully crafted self-image. Thus, this paper seeks to determine if men and women who sexually self-identify as gay or lesbian are self-presenting in the same gendered, stereotyped ways in their selfies that have been documented in traditional mass media

Review of the Literature

Gender Schema Theory

The process of self-identification and forming one’s sexual or gender identity is dependent on the society’s definition of this identity. Sex characteristics for personality, behaviors, and skills are developed by children depending on whether these characteristics are defined as masculine or feminine. Society defines what is masculine or feminine, and children and adults adopt the appropriate sex characteristics for their biological gender. This process of defining and assigning sex characteristic is known as sex typing.

Gender schema theory proposes that the process of sex typing is derived from the gender-based schematic process. Information in society is processed on the basis of sex-linked associations that constitute the gender schema. The theory proposes that the concept of self-identification becomes imbedded in the gender schema. As sex-linked characteristics are developed from sex typing, children accept these sex-linked characteristics for themselves, and they are adopted into the heteronormative, traditional definition of masculine or feminine. There is an innate link between a society's definition of gender and sex-linked characteristics and the development of sexual and gender identity (Bem, 1981).

Bem also proposed that within the gender schema exists several subschemas. One of these subschemas, the heterosexuality subschema, is another characteristic defined by society. In most societies, a heterosexual orientation is seen as the standard for both males and females. Individuals have developed a readiness to invoke this heterosexuality subschema in all social interactions, specifically those between opposite genders.

Face-ism

In the online arena, social media users have complete control of their image and presentation. Most of this control is done via the careful selection and uploading of photos of the self, often termed "selfies." Users innately select the most appealing or attractive image of themselves, which is therefore a reflection of how the user feels about himself or herself.

One reliable measurement of this type of visual online self-presentation is the face-ism index, which analyzes the differences in facial prominence in photos of men

versus women (Archer, Iritani, Kimes, & Barrios, 1983). This paper argues that when engaging in online impression management, men and women who sexually self-identify present themselves in a different manner than from the traditional, heteronormative presentation found both online and in traditional media. Thus, face-ism's focus on gender stereotyping is particularly appropriate.

Archer et al. (1983) created the face-ism index to analyze facial prominence in both mass media and fine art. This index is expressed as a ratio: the numerator measures the distance from the top of the head to the lowest point of the chin, and the denominator measures the distance from the top of the head to the lowest visible part of the body. Calculated in this way, the face-ism index can range from a score of zero (i.e., no face shown in the picture) to 1.00 (i.e., the picture shows only the face, with no other part of the body visible).

In Archer et al.'s (1983) original study, they used the index to analyze periodicals from the US, global artwork from different centuries, magazine photographs from 11 countries, and amateur drawings. Findings revealed that men were portrayed with more facial prominence (i.e., a greater focus on their faces than their bodies) than women in all media. Archer and his colleagues posited that "facial prominence may both reflect and contribute to thematic conceptions about the relative importance for women and men" (p. 733) because the same individual was rated as more intelligent and ambitious if depicted with a higher degree of facial prominence. They concluded that these results suggested that a "prototypically male" depiction includes a high degree of facial prominence, and that these depictions elicit "prototypically male" trait attributions.

Other face-ism researchers have supported these findings. Sparks and Fehlner (1986) found that women shown on-screen in occupations such as acting and entertainment had substantially less facial prominence than their male counterparts. Copeland (1989) found these same sex differences in facial prominence in prime time television. Szillis and Stahlberg (2007) found a face-ism effect for online photos of college professors and politicians, wherein males were shown with significantly more facial prominence than females. And Smith and Cooley (2012) examined 1400 online profile pictures from seven nations and found that men were significantly higher in facial prominence than women, regardless of culture.

And why is it important to determine facial prominence? As noted above, Archer et al.'s (1983) work found that gender differences affected interpersonal perceptions; higher facial prominence equated to a rating of higher intelligence, assertiveness, and ambitiousness than lower facial prominence. Schwarz and Kurz's (1989) work also determined that a high degree of facial prominence elicited more positive attributes in general; individuals depicted as such – mostly males – were perceived as more active, intelligent, assertive, and independent than those depicted with a low degree of facial prominence. Schwarz and Kurz (1983) and Zuckerman (1986; 1994) found a correlation between higher levels of facial prominence and attributes such as ambitiousness, intelligence, and dominance. And Levesque and Lowe (1999) linked higher facial prominence to a more positive general evaluation, especially on aspects such as warmth and sensitivity.

Research Questions and Hypotheses

Given the research on media effects, gender schema theory, and face-ism, this project aims to determine if – in a cultivation-like manner – users of the online social media site Instagram have adopted the traditional, gendered, stereotypical way of presenting the self while presenting their sexual self-identification on the social media site. Thus, the first question becomes:

RQ1: How does sexual self-identification influence the way that Instagram images are presented?

Based on the previous research, several patterns of male and female Instagram users emerged. Traditional media typically pictures women from a more distant perspective, showing more of their bodies. However, men are portrayed in the opposite manner. Men are pictured much closer with most of the focus directed on their faces, not bodies. This portrayal of men and women has cultivated the social pressure for women to place the emphasis on their bodies over their faces. In the online arena, despite the individuals having complete control of their portrayal, social media users still follow the traditional, gendered manner of presenting the self. Sexual orientation and sexual self-identification plays a major role in how individuals view themselves and how they consume media. This role will result in Instagram users who self-sexually identify to portray themselves differently in social media. We hypothesize that individuals who sexually self-identify will portray themselves in the opposite manner of their typical, gendered portrayal. For example, male users who sexually self-identify as #gay will display more body-centric images, which is atypical of sexually non-identified male users.

H1: Instagram users who present as male are more likely to display face-centric images than those who present as female.

Based on previous research on selfies on Instagram, several trends and patterns among male and female users of Instagram were discovered. Female Instagram users have a tendency to post a significant amount of more selfies than male Instagram users. Out of 382 qualified images, 278 of these images were posted by female Instagram users and only 104 of these images were posted by male Instagram users. Furthermore, female Instagram users showed a pattern of posting more body-centric images than face-centric images, meaning more of their body was showing in the photo. On the other hand, male Instagram users post more face-centric images than body-centric images. This portrayal follows the traditional, gendered portrayal in the media. Despite the independence for Instagram users to post however they desire, the social media users are still mirroring the typical portrayal of men and women they are used to experiencing in traditional media.

RQ2: How does sexual self-identification and presentation influence facial prominence in the face-ism ratio?

H2: Male Instagram users who self-identify as #gay will have a lower degree of facial prominence than selfies posted by male users of Instagram who do not sexually self-identify.

H3: Female Instagram users who self-identify as #lesbian will have a higher degree of facial prominence than selfies posted by female users of Instagram who do not sexually self-identify.

“Duckface,” as defined by the Oxford Dictionary (2015), is “an exaggerated pouting expression in which the lips are thrust outward, typically made by a person

posting for a photograph.” A growing trend in selfies, the duckface pose is typically used by women. The term is typically a pejorative term, referring to the contorting of the face into a caricature of femininity in which “one performs the Duckface by sucking in the cheeks and pushing out the lips. This makes the lips appear fuller, the cheekbones more prominent, and the eyes wider... [thus] the Duckfacing woman becomes a conspicuous symbol of how sexism, patriarchy, and misogyny work upon the body” (Davis, 2014, n.p.). Based on previous research, it was found that female Instagram users posted selfies in the duckface pose more often than male Instagram users. This trend suggests that the use of duckface is highly gendered.

RQ3: How does sexual self-identification and presentation interact with duckface to influence facial prominence in the face-ism ratio?

Methodology

Sample

This study examined selfie images uploaded to Instagram. According to Oxford Dictionary (2015), a selfie is a self-portrait taken with a smartphone or webcam and uploaded to a social site. Images were selected by using hashtagpirate, an Instagram web viewer website dedicated to collecting Instagram images from across the globe.

Typically, when the Instagram app is opened and a hashtag such as #selfie is used, images are pulled according the geosynchronous location of the users. However, the hashtagpirate website remedies this by collecting images the most recent images posted regardless of location.

In order to prevent the double coding of images, PDFs of the Instagram images were pulled. Overall, 956 #selfie images were collected in these PDFs, however, not all the images were coded for analysis. The photo selection criteria were based off face-ism index measures from previous face-ism studies (Archer et al, 1983; Peng et al., 2008, Smith & Cooley, 2012). In order to ensure only #selfies that qualified for the face-ism index would be coded, the following criteria were used:

1. Only images that had the #selfie hashtag were used.
2. The image had to be single subject of a solitary human.
3. Images that had the #selfie hashtag, but appeared to be taken by another person were excluded.
4. No videos, cartoons, or collages were used.

The final sample was comprised of 621 qualified images with the #selfie hashtag.

Sexual Self-Identification

After collecting the final sample of qualified images, we identified three primary groups of sexual self-identification: gay, lesbian, and no identification. To identify these sexual self-identifications, we used hashtags (#). While using the hashtagpirate website, we searched for #selfie #gay and #selfie #lesbian. Based on the individual's use of hashtags, we identified which users sexually self-identified as gay or lesbian. We also collected selfies with #selfie, and we used these images to indicate those as non-identified.

Data was broken into six categories to test these hypotheses, non-identified male (8.2%, $n=51$), #gay male (28.0%, $n=174$), #lesbian male (8.4%, $n=52$), non-identified female (18.8%, $n=117$), #gay female (5.6%, $n=35$), and #lesbian female (30.9%, $n=192$).

Face-ism

Images were measured using the criteria of the face-ism index, which calculates facial dominance in a photo. In order to determine this dominance, two measures were taken: “the distance in a depiction from the top of the head to the lowest point of the chin... [and] the distance from the top of the head to the lowest visible part of the subject’s body” (Archer et al., 1983, p. 726). The measurement of the head was then divided by the measurement of the body to create a ratio. As noted by Peng et al. (2008), the “ratio nature of the face-ism index warrants high inter-coder reliability and advantages in statistical analysis” (p. 12).

Selfie Type

Coders also categorized selfies by shot type. Criteria and operational definitions for shot type were based on the six categories established by Clark (1997):

1. Close up: when the frame includes only the face or certain details of the face
2. Portrait: when the shot includes the face or the face & shoulders
3. Half-bust: when the bottom border of the photo corresponds to the line just below the chest
4. Half-figure: when the person is cut off at the waist
5. American shot: when people are cut off at knee level
6. Whole figure: when the subject is fully pictured

An additional category was added to code for “body parts,” whereby a user would post a portion of their body with no head or just a body part. After the images were coded, the seven categories were used to classify the types of images that were being portrayed:

close-up (13.5%, $n=84$), portrait (44.1%, $n=274$), half-bust (22.9%, $n=142$), half-figure (6.8%, $n=42$), American (6.3%, $n=39$), whole figure (5.3%, $n=33$), and body part (1.1%, $n=7$). As Ryan & Nichols (2015) did, the selfie categories were broken into two groups: face-centric ($n=358$, 57.6%)—which included close up and portraits shots—and body-centric images ($n=263$, 42.4%)—which included half-bust, half-figure, American, whole figure, and body part shots.

Gender

Once cleaned, data indicated that of the total population ($N=621$), 44.6% ($n=227$, 278) of posts came from men and 55.4% ($n=344$) from women. In terms of sexual self-identification, 33.5% ($n=208$) identified through the hashtag “#gay,” 39.5% ($n=245$) identified through the hashtag “#lesbian”, and 27.1% ($n=168$) did not sexually self-identify.

Coders also examined images for the “duckface,” an exaggerated pouting of the lips (Oxford, 2015). Data indicated that Instagram users used a duckface 34.8% ($n=216$), of the time but most users do not pose in that manner ($n=404$, 65.1%).

Results

RQ1 asked if users who sexually self-identify present images on Instagram differently than those who do not. A Chi-square test of independence was calculated comparing the distributions of selfie types between gender presentations. No significant interaction ($\chi^2(1) = 10.22, p > .12$) was found between groups, indicating no significant differences in how selfie types were presented. Chi-square tests of independence were

also calculated comparing the distributions of face-centric and body-centric ($\chi^2 (1) = 3.05, p > .081$) images between gender presentation groups, indicating no significant difference between the groups. However, significance was approached, indicating with more data, a greater sensitivity may occur. Finally, duck face and gender presentation was analyzed through a Chi-square analysis ($\chi^2 (1) = 32.27, p < .001$), where 44.6% ($n=153$) of Instagram users who present as female posted duckface images as compared to only 22.7% of men.

See Table 1a for a more detailed breakdown of images that posted on Instagram by orientation and presentation.

Table 1a
Selfie posts by Presentation on Instagram

Selfie Type	Total	Male		Female		χ^2	<i>p</i>
	<i>N</i>	<i>n</i>	%	<i>n</i>	%		
Close Up	84	34	12.3%	50	14.5%	10.22	0.12
Portrait	274	115	41.5%	159	46.2%		
Half-bust	142	63	22.7%	79	23.0%		
Half-figure	42	24	8.7%	18	5.2%		
American	39	21	7.6%	18	5.2%		
Whole Figure	33	19	6.9%	14	4.1%		
Body Part	7	1	0.4%	6	1.7%		
Face Centric	358	149	53.8%	209	60.8%	3.05	0.081
Body Centric	263	128	46.2%	135	39.2%		
Duck Face	216	63	22.7%	153	44.6%	32.27	0.001

To further examine how self-identification of sexuality influence self-presentation, a Chi-square test of independence was calculated comparing the distributions of selfie types between sexual orientations—gay, lesbian, and non-identified. A significant interaction ($\chi^2 (12) = 19.31, p > .081$) was not found between

groups. Chi-square tests of independence were also calculated comparing the distributions of face and body-centric ($\chi^2 (2) = 1.75, p>.417$). Finally, duck face and self-identified sexual orientation were analyzed through a Chi-square analysis. A significant interaction was found ($\chi^2 (2) = 6.09, p<.048$), where 28.4% ($n=59$) of Instagram users who used the #gay posted duckface images as compared to only 39.2% ($n=96$) of users with #lesbian, and 36.5% ($n=61$) of users who did no sexually self-identify. See Table 1b for a more detailed breakdown of images that posted on Instagram by orientation and presentation. This indicates #gay had a significantly different proportion of individuals posting duckface selfies.

Table 1b
Selfie posts by Sexual Orientation on Instagram

Selfie Type	Total	Not Identified		Gay		Lesbian		χ^2	<i>p</i>
	<i>N</i>	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%		
Close Up	84	15	8.9%	30	14.4%	39	15.9%	19.31	0.081
Portrait	274	77	45.8%	87	41.8%	110	44.9%		
Half-bust	142	48	28.6%	44	21.2%	50	20.4%		
Half-figure	42	13	7.7%	18	8.7%	11	4.5%		
American	39	5	3.0%	17	8.2%	17	6.9%		
Whole Figure	33	8	4.8%	12	5.8%	13	5.3%		
Body Part	7	2	1.2%	0	0.0%	5	2.0%		
Face Centric	164	92	54.8%	117	56.2%	149	60.8%	1.75	.417
Body Centric	208	76	45.2%	91	43.8%	96	39.2%		
Duck Face	216	61	36.5%	59	28.4%	96	39.2%	6.087	.048

Since the variable of gender was collected by how an individual presents themselves on their post, RQ2 examines the tenets of face-ism in relation to sexual orientation and self-presentation. Additionally, H2 & H3 posits that how individuals present themselves to society will influence the type of images that will be posted on

Instagram. For example, an Instagram user that uses #gay and presents as a female will tend to post in the same heteronormative standards as a straight female and thus have more body-centric images. In order to explore these predictions, six categories of individuals and their face-ism ratio were analyzed through a one-way ANOVA.

Significant differences were found between the categories ($F(5) = 2.842, p < .015$), where #lesbian females ($\mu = 0.384, SD = 0.32$) posted images that significantly showed less facial prominence than males who do not sexually self-identify ($\mu = 0.565, SD = 0.24$), #gay males ($\mu = 0.481, SD = 0.21$), #lesbian males ($\mu = 0.491, SD = 0.23$), and females who do not sexually self-identify ($\mu = 0.525, SD = 0.57$). The only category in which #Lesbian Female did not significantly differ was #Gay Female ($\mu = 0.379, SD = 0.25$). See Table 2a for a complete breakdown of categories.

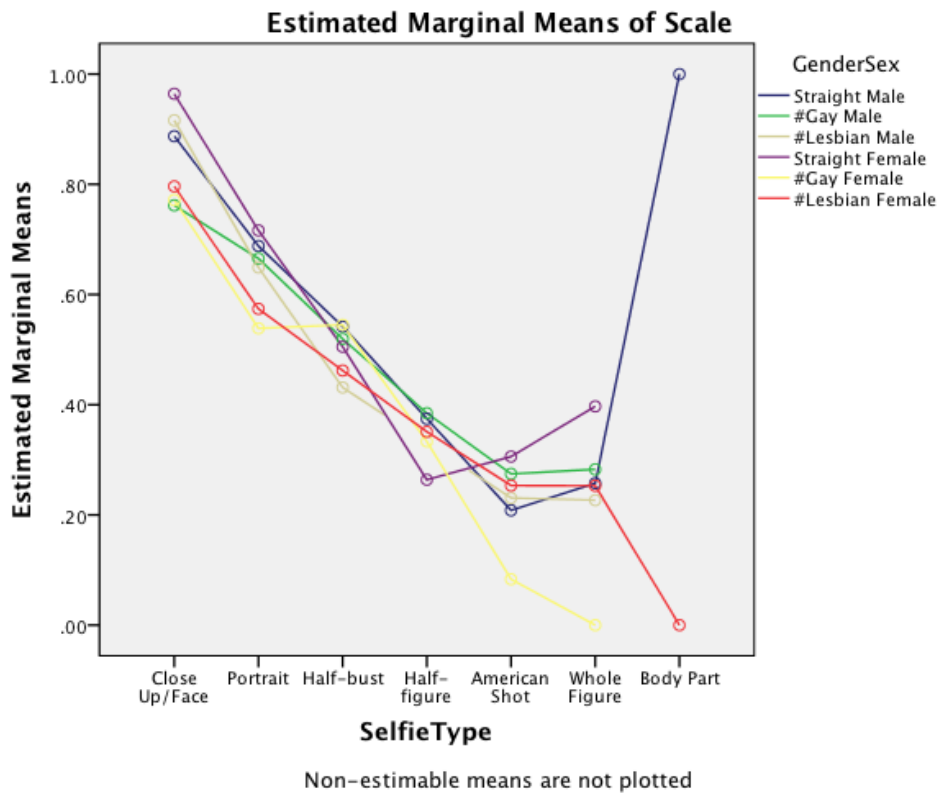
Table 2a
Face-ism Scale & Presentation type

Presentation Type	<i>n</i>	μ	<i>SD</i>
Straight Male	50	0.565	0.24
#Gay Male	174	0.481	0.21
#Lesbian Male	52	0.491	0.23
Straight Female	115	0.525	0.57
#Gay Female	35	0.379	0.25
#Lesbian Female*	192	0.384	0.32

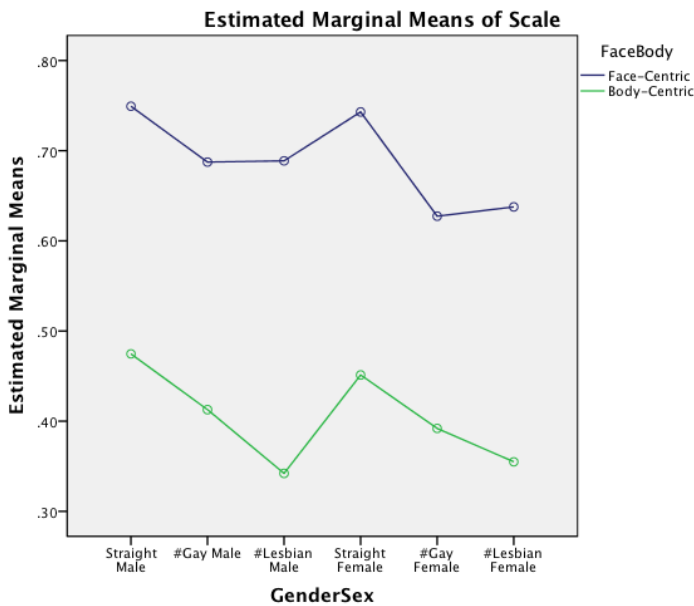
As Table 2a indicates, #gay male Instagram users ($\mu = 0.481, SD = 0.21$) have a lower degree of facial prominence than male users of Instagram who do not sexually self-identify ($\mu = 0.565, SD = 0.24$). However, this difference is not significant ($p > .230$) and only indicates a pattern, thus not supporting H2. #Lesbian Female Instagram users ($\mu = 0.384, SD = 0.32$) have a significantly ($p < .006$) lower degree of facial prominence than

female users of Instagram who do not sexually self-identify ($\mu = 0.525$, $SD = 0.57$), thus supporting H3.

To further explore how presentation influences facial prominence, the data was also analyzed by means of a two-way mixed design ANOVA with six levels of gender presentation and sexual orientation (i.e. gender/sex) (gay m/f, lesbian m/f, and not identified m/f) and seven levels of selfie type (close up, portrait, half-bust, half-figure, American, whole figure, and body part). First, main effects between gender/sex ($F(5) = 2.481$, $p > .031$), and selfie type ($F(6) = 23.947$, $p < .001$) were significant. However, the interaction effect between the variables was not significant ($F(25) = .868$, $p < .651$). Results did not indicate differences in facial prominence in the different selfie type categories between the gender/sex types. However, discernable patterns did emerge. See Table 2b-1, Table 2b-2, and Chart 1 for complete breakdown of categories.

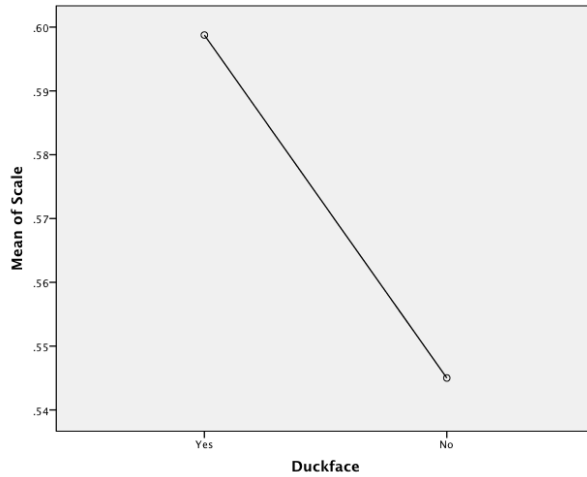


Additionally, a two-way mixed design ANOVAs with six levels of gender presentation and sexual orientation (i.e. gender/sex) (gay m/f, lesbian m/f, and not identified m/f) and two levels of image category (face-centric or body-centric) was run to explore their relationship with facial prominence. First, main effects between gender/sex ($F(5) = 2.613, p < .024$), and image category ($F(1) = 102.094, p < .001$) were significant. However, the interaction effect between the three variables was not significant ($F(5) = .194, p < .965$). Results did not indicate differences in facial prominence in the different selfie type categories between the face-centric or body-centric images. See Table 2b-1, Table 2b-2, and Chart 2 for complete breakdown of categories.



Finally, to explore how the variable of duckface interacted to influence facial prominence, an independent samples t -test indicated overall significant differences ($t(616) = 4.102, p < .043$) between groups. Those who post duckface ($\mu = .5988, SD =$

.423) had a higher degree of facial prominence than those who do not post duckface ($\mu = .5450$, $SD = .237$). See Table 2b-1, Table 2b-2, and Chart 4 for complete breakdown of categories.



Additionally, a two-way mixed design ANOVAs with six levels of gender presentation and sexual orientation (i.e. gender/sex) (gay m/f, lesbian m/f, and not identified m/f) and two levels of duckface (yes, no) was run to explore the variables relationships with facial prominence. However, the results were mixed. First, main effects between duckface ($F(1) = 1.764$, $p > .185$), and gender/sex ($F(5) = 1.226$, $p > .295$) were not significant. Additionally, the interaction effect between the variables was not significant ($F(5) = .702$, $p < .662$). Results did not indicate differences in facial prominence in the gender/sex categories between those who posted duckface. Analysis of the data indicate that female Instagram users who do not sexually self-identify ($\mu = .692$, $SD = .803$) have the greatest amount of facial prominence, followed by #Lesbian male ($\mu = .595$, $SD = .195$), males who do not sexually self-identify ($\mu = .586$, $SD = .227$), #gay males ($\mu = .5756$, $SD = 1.92$), #lesbian female ($\mu = .566$, $SD = .166$), and #gay female (μ

= .536, *SD* = .156). See Table 2b-1, Table 2b-2, and Chart 4 for complete breakdown of categories.

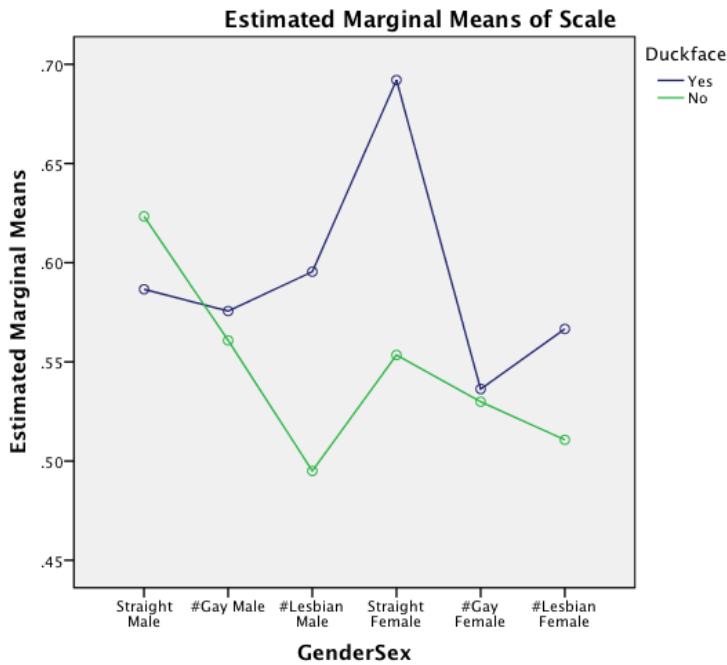


Table 2b-1

Selfie Type	Presenting Male								
	#Gay			#Lesbian			Not Identified		
	μ	<i>SD</i>	<i>n</i>	μ	<i>SD</i>	<i>n</i>	μ	<i>SD</i>	<i>n</i>
Close Up	0.76	0.18	22	0.92	0.10	4	0.89	0.18	8
Portrait	0.67	0.12	74	0.65	0.14	23	0.69	0.18	18
Half-bust	0.52	0.15	36	0.43	0.07	14	0.54	0.11	13
Half-figure	0.38	0.15	77	-	-	-	0.37	0.07	7
American	0.27	0.15	14	0.23	0.15	5	0.21	-	1
Whole	0.28	0.13	11	0.23	0.05	6	0.26	0.11	2
Body Part	-	-	-	-	-	-	1.00	-	1
Face Centric	0.69	0.16		0.69	0.13				
Body Centric	0.42	0.18		0.21	0.12				
Duckface	0.56	0.21	174	0.52	0.23	52	0.62	0.24	50

Table 2b-2

Selfie Type	Presenting Female								
	#Gay			#Lesbian			Not Identified		
	μ	<i>SD</i>	<i>n</i>	μ	<i>SD</i>	<i>n</i>	μ	<i>SD</i>	<i>n</i>
Close Up	0.77	0.12	8	0.80	0.14	35	0.96	0.09	7
Portrait	0.54	0.17	13	0.57	0.12	87	0.72	0.75	58
Half-bust	0.54	0.16	9	0.46	0.10	35	0.51	0.08	35
Half-figure	0.33	-	1	0.35	0.07	11	0.26	0.06	6
American	0.08	0.14	3	0.25	0.11	12	0.31	0.13	3
Whole	0.00	-	1	0.25	0.15	7	0.40	0.05	6
Body Part	-	-	-	0.00	0.00	5	-	-	-
Face Centric	0.69	0.16		0.69	0.13				
Body Centric	0.42	0.18		0.21	0.12				
Duckface	0.53	0.21	192	0.53	0.21	192	0.62	0.57	115

Discussion

Instagram users have complete freedom and control to present themselves online in the manner they desire. Previous research (Ryan & Nichols, 2015) found that male and female Instagram users post selfies online in the same hetero-normative patterns of traditional mass media. Using the variable of sexual self-identification and presentation, new patterns of self-presentation were found. Instagram users who sexually self-identify do not follow the hetero-normative patterns of traditional mass media.

When comparing the distribution of selfie types between gender presentations, the most noteworthy finding is regarding the analysis of face-centric and body-centric images with gender presentation. The data indicates that Instagram users who present as male

post more face-centric images than body-centric. Although this is not a significant finding, it approaches significance ($p>0.081$). In previous research (Ryan & Nichols, 2015), Instagram users posted selfies using the same hetero-normative patterns of traditional mass media. For female Instagram users, this meant their selfies were facial-centric with a high face-ism ratio. For male Instagram users, this meant their selfies were body-centric with a low face-ism ratio. However, when combining non-identified males, #gay males, and #lesbian males into a category of Instagram users who present male, it was found that 53.8% post face-centric selfies (close up or portrait). Previous research found a significantly lower percentage of male Instagram users who posted face-centric selfies. In same manner, sexual self-identification and presentation are influencing the way Instagram users present themselves online.

When comparing presentation type with the face-ism scale, minor patterns in the data were discovered. #Gay male Instagram users ($\mu= 0.481$, $SD=0.21$) have a lower degree of facial prominence than male users of Instagram who do not sexually self-identify ($\mu= 0.565$, $SD=0.24$). However, the difference is insignificant, suggesting only a pattern, and therefore, not supporting H2. Within the same category of data, it was found that #lesbian Female Instagram users ($\mu= 0.384$, $SD=0.32$) have a significantly ($p<.006$) lower degree of facial prominence than female users of Instagram who do not sexually self-identify ($\mu= 0.525$, $SD=0.57$), which supports H3.

In addition to the significance in Table 2a, some important patterns presented in the data. When comparing gender presentation and the face-ism scale, the category of unidentified males presented with the largest face-ism ratio, which means this category of Instagram users posted primarily facial-centric images. This finding is consistent with the

same finding in the previous study conducted by Ryan & Nichols (2015). However, the category of #gay males presented with a median number for the face-ism scale. Despite the trend that Instagram users who present male post predominantly face-centric selfies, males who sexually self-identify as #gay post selfies with a significantly lower face-ism ratio, which means the images are less facial-centric. In addition, the category of #lesbian males presented with an even lower face-ism scale like #gay males. This low face-ism scale means the selfies posted by Instagram users who present as male and sexually self-identify as #lesbian are body-centric as opposed to the male trend of facial-centric images.

All of the results revealed one important trend: Instagram users who sexually self-identify present themselves online differently and do not follow the hetero-normative trends in traditional, gendered mass media. Sexual self-identification plays a major role in how an individual views themselves, and this results in a different presentation online. Although gender schema theory proposes that individuals are sex-typed based on society's definition of male and female sex-characteristics, some patterns and trends in the data present an alternative to the gender schema theory. Despite there being clear gendered trends (i.e, body-centric vs. face-centric images), grouping Instagram users by gender presentation and sexual self-identification resulted in Instagram users not necessarily following these gendered trends.

Although major trends and patterns were identified in the data, the research contained some minor limitations. Within the six gendersex categories (non-identified m/f, gay m/f, and lesbian m/f), two groups in particular, #lesbian male and #gay female, had a much lower number of selfies than the four other gendersex categories. The uneven

distribution of data among these categories could have potentially skewed the data. In addition, when the data was combined with the data from a previous research (Ryan & Nichols, 2015) a higher amount of significance was found in several of the trends identified in this research. Simply increasing the sample size resulted in more clear patterns within the data. Another limitation in the research is the lack of intercoder reliability. When measuring the selfies for the face-ism ratio and coding the selfies to identify the shot type, only one coder performed these tasks. Because no other coder reviewed the results, it is possible some errors were made in calculating the face-ism ratio and identifying shot types.

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