Social Value, Content Value and Infinite Scroll's Roles Towards Instagram Capturing Millennial Users in a State of Flow.

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Abstract

The modern world consists of a 'tradigital' time, whereby a mix of 'traditional' and 'digital' is present. As time passes the Millennial generation's contemporary influence is becoming increasingly prominent as those born between 1981 and 1996 represent a sustainable audience for marketers. Millennials are native to digital, with social media a notorious element within their interconnected lives. Social platforms are purposely designed to capture users into consuming the platform for long periods of time, and to return regularly to do so – as stated by former Facebook President Sean Parker. Thus, understanding what appeals social platforms use to execute this tactic on Millennial users holds importance – as to provide greater insight into the social media marketing realm, relative to a prominent generation.

Past research surrounding this tends to incur a generalised approach, regarding either social media or social media users. This study differs in this regard – focusing solely on the platform of Instagram, detailing the relationship between digital experience, which has been underlined as the elements of '*Social Value*', '*Content Value*' and '*Infinite Scroll*', in conjunction with how Instagram capture the Millennial generation unconsciously for long periods of time – otherwise known as a '*Flow*' state.

The study is based upon current literature which has suggested capturing users in a Flow state as a tactic utilized by social media platforms, and further indicated Social Value, Content Value and Infinite Scroll as drivers of this. The study has adopted a quantitative lens, undertaking Binomial Logistic Regression and One-Sample Sign Tests.

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Chapter 1: Introduction

1.1 Topic Introduction

Social media is an almost universal aspect of the contemporary world – with over 50% of the global population (4.2 billion) active users as of January 2021 (Johnson, 2021), and the Instagram platform encompassing 1 billion active users (Tankovska, 2021b). This corresponds with the rising increase toward technology/digital led by digitally native generations such as Millennials – who live and breathe the language and culture of computers, mobile devices, and the internet having grown up alongside the emergence of these technologies (Zur and Zur, 2012) (cited in Lie (2013). The Millennial generation encompasses those born between 1981-1996 (Dimmock, 2019), meaning they are at a relatively early stage of the human lifecycle – with the oldest Millennial 37.48 years younger than the 2020's figure of average life expectancy within the US (Andrasfay and Goldman, 2021). Additionally, Millennials have recently become the largest generation within the US and are projected to inherit $68 trillion by 2030 (Fry, 2020; Kelly, 2019) – positing them as a relevant and sustainable generation for marketers.

As mentioned, Millennials are technologically/digitally-savvy – with these aspects appealing to the generation, urging engagement (Serazio, 2015). Lantos (2014) notes should marketers wish to engage with Millennials, they must adapt from traditional marketing methods, particularly due to the digital/technological influx which Millennials have grown up alongside, that are considered a pivotal aspect of their interconnected lives. Marketers appear to have adopted this approach – now utilizing social media to allow consumers such as Millennials to co-create and collaborate with brands surrounding their offerings – voicing opinions and declaring what they do and do not want (Naletelich and Spears, 2020; Wiegand, Lee and Xu, 2020; Lantos, 2014; Suntikul and Jachna, 2014).

The business model of social media platforms such as Instagram surrounds the sale of advertising, with most platforms conducting a '*free-of-charge*' service. For example, 98% of Facebook's 2019 revenue stemmed from advertising (Simon, 2021). Thus, the goal of social media platforms surrounds immersing/capturing their users into consumption for long periods of time, and on a regular occurrence – as a longer consumption time provides greater scope for social media platforms to distribute more adverts and thus generate more revenue (Appel *et al.*, 2020). This is apparent by former Facebook president Sean Parker who states Facebook's objective surrounded: *"How do we consume as much of your time and conscious*

attention as possible?" (Solon, 2017). Therefore, social media platforms strive for capturing users, by almost infecting a trance-like state where suddenly time has escaped (Appel *et al.*, 2020).

This notion represents a concept known as Flow – which refers to when one enters a state of hyper-focus, becoming immersed within an activity/operation (Csikszentmihalyi, 1975). According to Nakamura and Csikszentmihalyi (2014; 2009), Flow encompasses intense and focused concentration, whereby action and awareness merge, a loss of reflective self-consciousness occurs, and time distortion transpires (i.e. time is lost track of). In relation to social media, the studies of Kaur, Dhir and Rajala (2016) and Kaur *et al* (2016) have linked Flow to the digital world.

With previous research suggesting positive digital experience as *"the next competitive battleground"* for marketers (Klaus, 2014, p. 306) – social media platforms must consider the customer's journey to aid distribution of a positive experience. There are two routes known to underline said digital experience – acquiring greater customer insight and the construction of a requisite platform (Nuseir, McKenna and Harrington, 2020; Price, Wrigley and Straker, 2015). From this, the author has drawn comparison between the concept of Customer Value with acquiring greater insight, while noted the use of Infinite Scroll as the platform construction utilized by Instagram (see *Chapter 2*).

Within social media, Customer Value has previously been suggested as a driver toward consumers entering the Flow state on social media through the elements of Social Value and Content Value (see Jiao, Jo and Sarigöllü, (2017) and Jiao, Gao and Yang (2015)). Social Value refers to the '*social*' aspect which social media offers users, through providing relevant content from likeminded users such as friends, family, and influencers, while Content Value refers to the contributing, creating, consuming, and exchanging self-generated content aspect of social media which users receive from consumption (Jiao *et al.*, 2018; Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015).

Additionally, the Infinite Scroll construction refers to a concept whereby content is presented to the user never-endingly, with a lack of interferences to pose halting of consumption (i.e. stopping cues) (Noë *et al.,* 2019; Springer, 2015). In relation to Flow, Infinite Scroll has been indicated as a driver toward entering this state – as consumers of an Infinite Scroll algorithm are considered vulnerable to consuming more content than intended, while aids toward immersing users within the platform (Montag *et al.*, 2019; Neyman, 2015).

1.2 Study Introduction

This study analyses the elements of Social Value, Content Value, and Infinite Scroll in relation to the Millennial generation and the Instagram platform – focusing on their capacity to capture Millennials in the Flow state while they consume Instagram. A quantitative approach has been undertaken – utilizing an online questionnaire to gather data and the software of Excel and SPSS to respectively manipulate data and conduct analysis (Binomial Logistic Regression and One-Sample Sign Test). The study has been conducted following the Research Question of:

"Does digital experience as delivered by Instagram capture Millennial users in a state of Flow?"

The elements of Social Value, Content Value, and Infinite Scroll have been used to define '*digital experience*', with the Research Objectives (see *Chapter 3*) compiled to relate to these elements regarding their role toward Millennials entering the Flow state while consuming Instagram.

1.3 Gaps Of Current Literature

The current/relevant literature surrounding the elements of Customer Value (Social Value, Content Value), Infinite Scroll and Flow within social media is little in quantity – initially positing this topic as viable and intriguing. However, through examination of the available literature, the author has identified two gaps present – with both referring to the generalizability of a study component.

Gap 1: Firstly, within previous studies where the authors have implemented a platform-specific element – they seem to counteract this specification by failing to focus their study on a sub-section of users, simply generalizing their platform's users as one entity. The author argues this fails to acknowledge any generational/age-related characteristics which may be present within their findings – such as capacity toward digital/technology for example. The author notes this as a gap as should a study not specify by implementing an age-related/generational characteristic, the results found cannot be specifically considered toward every user of a social media platform – they can only be considered only from a general perspective. See the study of Shahpasandi, Zarei and Nikabadi (2020) as an example of this.

Gap 2: Secondly, past studies have tended to classify social media as one entity – failing to acknowledge the platform related differences held. For example, although Instagram,

Facebook, TikTok, and Snapchat all fall under the '*social media*' title, each platform has its own distinct characteristics, while some are designed toward different users. The author notes this as a gap as should a study not specify upon a relevant component, the results found cannot be specifically considered to individual platforms. Similar to Gap 1 – they can only be considered from a general perspective. See the studies of Pelet, Ettis and Coward (2017) and Kaur *et al* (2016) as an example of this.

For further context, the studies of Lin *et al* (2020) and Jiao, Gao, and Yang (2015) represent studies which failed to implement specification upon both the social media platform, and upon social media users – both studies focused on anyone who utilized social media. Thus, the author has opted to examine this through a specified lens – ensuring specification upon a social media platform and implementing a generational component within study. The Millennial cohort has been chosen for analysis due to their digitally inclined nature, strong influence on the world, and projected increasing influence (see *Section 2.3*), while the social media platform of Instagram has been selected due to the value which Millennials hold for said platform (see *Section 2.3*).

1.4 Study: Overall Aims

In highlighting these literature gaps, this study hopes to attain an improved understanding of Flow in relation to the elements of Social Value, Content Value, and Infinite Scroll. Through implementing the platform and generational specification mentioned, the author aims to acquire findings specific to Instagram's Millennial users.

There is also a lack of studies surrounding these topics available, with the study of Jiao, Gao and Yang (2015) the best-placed study in relation to author's topic – despite its lack of specification, and lack of the Infinite Scroll element. To highlight – no study mentioned within *Section 1.3* included all the elements which this study discusses. Thus, the author aims to shed more insight into the elements of Social Value, Content Value, and Infinite Scroll toward becoming captured into the Flow state while consuming Instagram – specifically targeting the Millennial generation, while adopting a marketing perspective.

1.5 Study: Research Rationale

The rationale of this research stems from a marketing perspective. For context, former Facebook Executive, Pinterest President, and current Moment CEO, Tim Kendall states social media's aim surrounds: *"how much of your life can we get you to give to us"* (Exposure Labs Productions, 2020), while (as mentioned) former Facebook President, Sean Parker is quoted stating that during Facebook's development the objective surrounded: *"How do we consume as much of your time and conscious attention as possible?"* (Solon, 2017). Social media platforms such as Instagram have now almost become a universal aspect of a Millennial's life, with 78.8% of Instagram's 1 billion active user base wholly incorporating the Millennial generation (Statista Research Department, 2021b; Tankovska, 2021b) and the average Millennial spending 145 minutes per day upon social networks in 2020 (Tankovska, 2021a).

From a marketing perspective, the author aims to achieve greater insight into Social Value, Content Value and Infinite Scroll's relationship regarding entering the Flow state while consuming Instagram. Contemporary social media platforms such as Instagram consist of brands/marketers distributing marketing messages, ranging from large corporations to start-ups aiming to capitalize on the large and global user bases (Appel *et al.*, 2020; Wang *et al.*, 2019; Alalwan *et al.*, 2017). Thus, the author believes through acquiring the specified findings regarding Social Value, Content Value and Infinite Scroll toward Instagram's Millennial users entering the Flow state, additional insight will be available toward the social media marketing realm.

1.6 Dissertation Layout

CHAPTER 1: This chapter has shown an introduction to the literature and study conducted, while also noted the gaps in current literature, overall research aims, and research rationale.

CHAPTER 2: This chapter delves further into the current/relevant literature surrounding the topic of study – expanding upon topic introduction proposed in *Section 1.1*.

CHAPTER 3: This chapter further explores the research question proposed in *Section 1.2*, while also details the Research Objectives compiled regarding the elements of Social Value, Content Value and Infinite Scroll – with each element receiving an individual objective

CHAPTER 4: This chapter extensively discusses the methodological choices which surrounded this study – inclusive of the Research Design which aided toward the study's

Quantitative nature, the data collection/analysis methods (e.g. Online Questionnaire and Binomial Logistic Regression/One-Sample Sign Test), and the considerations which were encountered such as ethics.

CHAPTER 5: This chapter provides an overview of the data analysis conducted, while also proposing the subsequent findings in the forms of tables and bar charts. For example, the Cronbach's Alpha (reliability testing) results are proposed, along with the findings of each element – Social Value, Content Value and Infinite Scroll in relation to the Binomial Logistic Regression and One-Sample Sign Test analysis conducted.

CHAPTER 6: This chapter encompasses a discussion regarding the findings detailed in *Chapter 5* – commencing with exploration whether each Research Objective was achieved and followed by an investigation as to the findings' relevance for contemporary marketers. This chapter concludes with a reflective piece whereby the author considers whether the Research Question has been answered, and whether the overall Research Aim has been achieved.

CHAPTER 7: This chapter proposes a summary of the dissertation – reiterating the study's findings. The post-study limitations are also included, along with the author's recommendations for future research.

2.1 Introduction

This chapter provides an insight into the current and relevant literature surrounding the topic of study. In commencement, the current state of social media is proposed – narrowing toward the Instagram platform. This follows by a discussion regarding the Millennial generation and the current tradigital/engagement era in which the world resides. Next, the state of Flow is explored – noting it's relevance to social media. Discussion regarding what underlines the digital experience of Instagram is also proposed – ultimately noting Customer Value (Social Value and Content Value) and the Infinite Scroll platform construction as said underpinning, while also linking these elements to a Flow state.

2.2 Social Media

Social media is an integral part of the contemporary world, with Johnson (2021) reporting 4.2 billion active worldwide users of January 2021 – representing over 50% of the global population. Since formulation, social media has evolved from its initial form. First unveiled in the early 1990s through the evolution of blogs, followed by site '*Sixdegrees*' in 1997, social media has become a place where users can create and build relationships through peering, communicating, and sharing content with/of other users (Fuchs, 2011; Kietzmann *et al.,* 2011; Tapscott, Williams and Herman, 2008). Fuchs *et al* (2013, p. 3) note an explanation of contemporary social media, describing it as an offering of *"online social networking, online community building and maintenance, collaborative information production and sharing, and user-generated content production, diffusion and consumption"*.

Their explanation caters to the '*social*' aspect which accompanies social media, while also including the marketing and information-sharing/receiving elements which have entered within recent years. For example, Shearer and Mitchell (2021) detail the contemporary consumer's shift in '*News*' consumption – highlighting the information-sharing/receiving element within social media. Their study found 53% of the 9,220 participants stated they receive news updates via social media either *"often"* or *"sometimes"*, while only 28% declared they do not retrieve their news on social media, or digitally.

From a critical perspective, the emergence of Covid-19 has empowered social media further, as lockdowns/restrictions hit the world, forcing '*stay at home*' initiatives. This left the modern consumer craving easy entertainment to pass the time – with social media fitting the

description, as evident by a Statista Research Department (2021a) study showcasing 27% of partakers increased their social network consumption in 2020. For further perspective, Casey (2017) notes in 2016 the average Millennial spent six hours per week on social media, whereas Tankovska (2021a) details the average time spent upon social networking sites as 145 minutes per day within 2020 – translating to almost 17hrs per week, equivalent to an increase of 154% over a 4-year period.

2.2.1 Instagram

The study of Tankovska (2021c) also showcased that 43.1% of participants would use the social platform '*Instagram*' more if confined to their homes. Instagram is a mobile picture and video capturing and sharing service (Hu, Manikonda and Kambhampati, 2014), and one of the leading contemporary social media platforms, with over 1 billion active worldwide users (Tankovska, 2021b). The platform encompasses a visual nature, arguably differentiating it from social platforms like Facebook or Twitter which are more text-heavy (Shane-Simpson *et al*., 2018; Pitman and Reich 2016).

Instagram offers private messaging, the option to tag content through searchable hashtags, the capability to include numerous images and/or videos within a single post, and a '*stories*' feature that allows users to post content which is accessible for 24 hours (Carpenter *et al*., 2020). In line with contemporary social media, brands have begun to utilize the service of Instagram to distribute their marketing messages, ranging from large corporations to start-ups aiming to capitalize on the platform's large user base (Appel *et al.*, 2020; Wang *et al.*, 2019; Alalwan *et al.*, 2017). Instagram's main users are young to middle-aged adults, with 78.8% of their user demographics falling between 18-44 years old (Statista Research Department, 2021b) – wholly incorporating the Millennial generation.

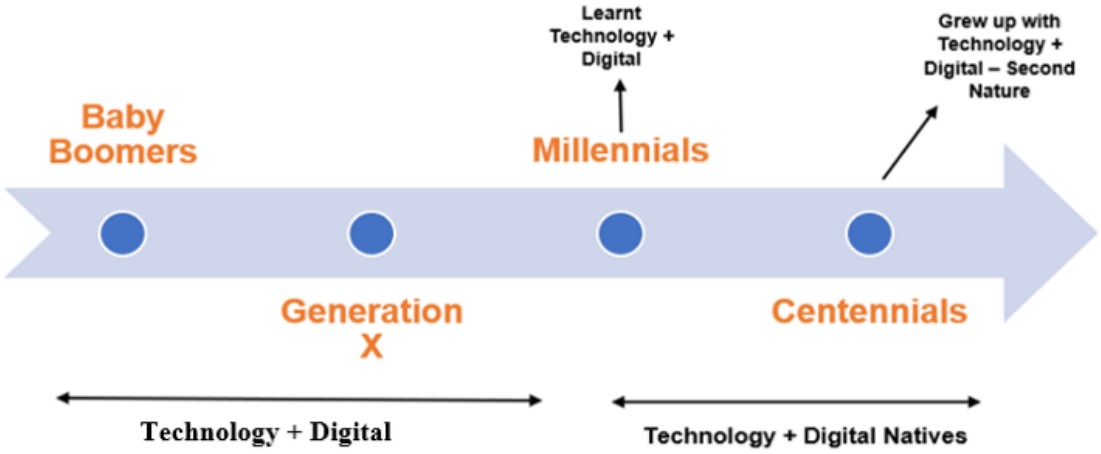
2.3 The Millennial Cohort

Millennials, also known as '*Generation Y*', represent those born between 1981-1996 (Dimock, 2019). They hold distinct characteristics as compared to the generations beforehand ('*Baby Boomers*' and '*Generation X*'), such as being native to the digital/technological influx which the world seen (Celi, 2019; Smith, 2019; Serazio, 2015; Zimerman, 2012). Their early exposure to technology/digital has shaped their behaviour and had significant social, psychological, social, and cognitive outcomes (Bolton *et al.*, 2013). Millennials were the first

generation to come to grips digital/technology, as it was introduced during their youth, allowing them to learn/grow around digital (Zur and Zur, 2012) (cited in Lie (2013)), while generations beforehand were forced to adapt their '*traditional*' mindsets and enter a learning stage once again – hindering their capability toward understanding (Kesharwani, 2020; Wang, Myers and Sundaram, 2013; Autry and Berge, 2011).

Figure 1 depicts this, noting how the older generations of Baby Boomers and Generation X are immigrants to technology/digital, whereas the younger demographics of Millennials and '*Centennials*' are technology/digital natives.

Figure 1. Technology And Digital Via Generations.



*Compiled by the author (2021)

Zur and Zur (2012) (cited in Lie (2013)) state digital natives live and breathe the language and culture of computers, mobile devices, and the internet, while digital immigrants will never have the same natural capacity level with technology/digital as those who grew up alongside it. To clarify, the author is not simply labelling Baby Boomer and Generation X members '*challenged*' in relation to technology/digital – acknowledging these generations have adapted toward technology/digital, with individuals of an older demographic becoming more digitally literate through practices such as having easy access to the internet, and owning mobile devices (Klimova *et al.*, 2016; Wu *et al.*, 2015; Heart and Kalderon, 2013).

However, the author suggests as these generations have not grown up alongside the technological/digital influx, they are positioned with a disadvantage in comparison to the Millennial and Centennial generations who live and breathe the technological/digital language of today (Zur and Zur, 2012) (cited in Lie, 2013). Critically speaking, the younger demographics are characteristically technologically/digitally-savvy, while the older

demographics are assumed some difficulty with technology (Kesharwani, 2020; Wang, Myers and Sundaram, 2013; Autry and Berge, 2011).

In line with their age, being at a relatively early stage of the human lifecycle, Millennials represent sustainability from a marketing perspective as they will be purchase-able for a long period of time. For context, Andrasfay and Goldman (2021) found the average life expectancy in the US within 2020 to be 77.48. The author argues that this positions the oldest Millennial – aged 40 (Dimock, 2019), to represent a minimum of 37.48 additional purchasing years the generation holds based upon life expectancy. From a critical viewpoint, although Centennials are indeed purchase-able for a longer period, they do not hold the current impact which Millennials possess. For example, within 2020 Millennials overtook Baby Boomers to become the largest generation in the US (Fry, 2020), while they are also projected to globally inherit $68 trillion by 2030 (Kelly, 2019) – highlighting their current influence, and their projected long-term future importance to marketers.

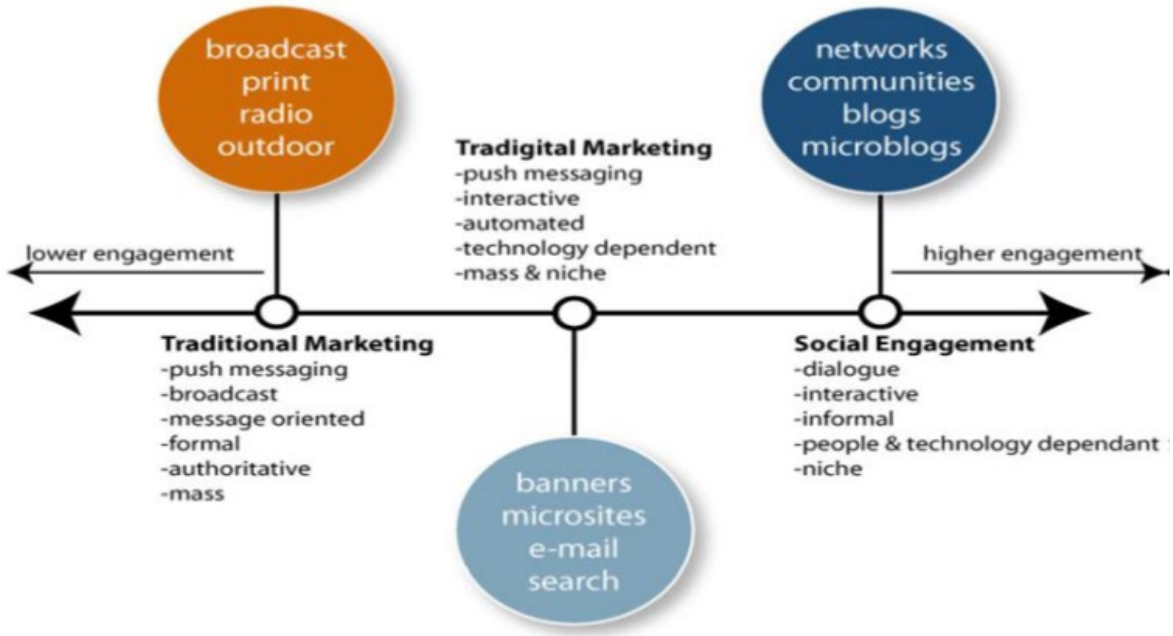
Millennials are not an easy generation to market to, as they are marketing-savvy and do not want to be simply told of an offering – they want to co-create and collaborate with brands surrounding said offering, voice their opinions, and declare what they do and do not want (Naletelich and Spears, 2020; Wiegand, Lee and Xu, 2020; Lantos, 2014; Suntikul and Jachna, 2014). Due to their usage of mobile devices and internet, Millennials live in a hyper-interactive, highly communicative world, and thus to truly resonate with the generation marketers must adapt, appealing to the values they hold such as '*connectedness*' – as Millennials seek participation, information sharing and relationship building (Chaney, Touzani and Slimane, 2017; Serazio, 2015; McMahon and Pospisil, 2005). Critically, should marketers wish to engage with Millennials, they must adapt to their appeals. As stated by Lantos (2014) – *"marketers must take a quantum leap from traditional marketing modes, especially in light of the digital technologies millennials grew up with, and that are an integral part of their interconnected lives"*.

2.4 Tradigital And Engagement Era

Corresponding with Millennials' digital nature, marketing strategies and tactics have taken a digital form, with social media becoming a platform heavily utilized. Despite this, traditional tools such as print and signage are still used, placing the marketing world within a *'Tradigital'* era – as shown by Armano (2009). Armano (2009) presents marketing

communications' evolution from the '*push*' nature of traditional times, where brand-consumer engagement was low, toward a highly engaged landscape whereby brand-consumer dialogue and interaction is key – highlighting the influence digital has had on the realm of marketing. This evolution is further supported by Paul and Mas (2020) and Gilal *et al.* (2019), while Florenthal (2019) declares marketers must adjust their advertising methods to truly resonate with the tech-savvy, hyper-connected and cynical consumer of today. However, while the older generations of Baby Boomers and Generation X are still marketing relevant, communications will continue to incorporate traditional tools (Williams and Page, 2011).

Figure 2. Evolution Of Marketing Communications.



Vargo and Lusch (2008; 2004) are advocates of this, detailing a shift in marketing communications. They state traditional times incorporated a '*value-in-exchange*' perspective as value was embedded into tangible products and pushed upon the consumer. This olden-day, traditional outlook incorporated push-like marketing, whereby communication was forced and presented to consumers, value lied within products and consumers were told about said value (Paul and Mas, 2020; Gilal *et al.*, 2019; Vargo and Lusch, 2008; 2004). In continuance, these academics stated traditional times entailed an outlook that the consumer was solely a target for marketers, noting this as a far cry from a consumer's role in the modern era – a claim supported by Prahalad and Ramaswamy (2004).

In comparison, Paul and Mas (2020), Gilal *et al.* (2019), and Vargo and Lusch (2008; 2004) detail how the marketing realm has adapted, shifting toward a '*value-in-use*' model – as value is now held within the intangible service which an offering can provide to the consumer. For context, the author critically proposes an iPhone or a car – neither product provides value to the consumer until said consumer enables/uses said product. Critically speaking, a phone/car which is not used is of no value to the consumer. Thus, a shift from traditional marketing practices has occurred, as consumers truly purchase products for the service said product provides, not for the product itself (Paul and Mas, 2020; Gilal *et al.*, 2019; Vargo and Lusch, 2008; 2004). In abundance, tangible goods are purchased for the intangible service they can provide, highlighting contemporary consumers ultimately purchase *'offerings'* as opposed to goods (Paul and Mas, 2020; Gilal *et al.*, 2019; Vargo and Lusch, 2008; 2004).

From this, Vargo and Lusch (2008; 2004) suggest consumers have become a co-producer of value – as the consumer is required to enable said value by using the offering in question. Prahalad and Ramaswamy (2004, p. 11) complimented Vargo and Lusch's work, stating consumers/markets are no longer simply *"a target for the firm's offerings"*, noting consumers as an equal participant who should be consulted in the value creation process to ensure a brand's offerings are relevant and desired. Similarly, Labrecque *et al.* (2013) detail the existence of a quickening change in control from the marketer to the consumer. Payne, Storbacka and Frow (2008) extended upon this, stating marketers need to co-create value with the consumer to ensure their offerings are relevant, reiterating that there is no value created until the offering is used – placing experience and perception as vital aspects in value determination.

Thus, author observes the marketing realm is in an '*engagement*' era, noting how co-creation and brand-consumer engagement are becoming increasingly valuable marketing tools – as Armano's (2009) publication also depicts. Harmeling *et al.* (2017) and Hollebeek *et al.* (2016) also support this claim. However, from a critical perspective, the author argues engagement marketing is not a simple process – as it is not guaranteed consumers will want to engage, with the average engagement rate of Instagram brand posts representing only 1.22% in 2019 (Tankovska, 2021d). Despite this, contemporary consumers such as Millennials have become known for their general willingness to engage and voice opinions, becoming dubbed as '*prosumers*' (proactive consumers) in the process (Lantos, 2014; Ritzer, Dean and Jurgenson, 2012).

This is where social media interjects, with platforms such as Instagram allowing brands to communicate, interact, and engage with consumers in a cost-effective and quick manner, while within an environment accepted and enjoyed by consumers such as Millennials (Smith, 2011). For example, 2020 consisted of 6.12 million sponsored/branded posts within Instagram (Guttman, 2020), while a Facebook (2019) study highlighted 63% of Instagram users enjoyed content from influencers. The digital influx has allowed contemporary consumers to voice opinions, while also integrated an ability for consumers to become hyper-connected with one another, allowing word of mouth to take an online form via blogs and social media (Bauer *et al.*, 2015; Kimmel and Kitchen, 2014). The author suggests this has thus positioned consumers such as Millennials within an environment where they are likely to remain for long periods of time as they are receiving intrinsic (rewarding) outcomes from the relevant and engaging content received from likeminded friends/family/brands.

2.5 The State Of Flow

Conducting engagement initiatives within social media provides many advantages to marketers/brands. For example, within Instagram there is an immense interconnected nature, as users receive personalised content, and content of their friends, family, and personal influencers, while also create/distribute content themselves (Carpenter *et al.*, 2020; Li and Kim, 2019; Lee *et al.*, 2015). From a critical viewpoint, this allows brands to enter an environment where users are present to engage with other likeminded users.

The author argues social media platforms such as Instagram are also designed to capture users and encourage retention as to ensure high margins through the advertising model of social media. For context – as Instagram is a '*free-of-charge*' service, their revenue is generated through advertising, with 98% of parent company Facebook's revenue for 2019 stemming from this (Simon, 2021). Critically speaking, through capturing users into long/consistent platform consumption, Instagram can place larger quantities of advertisements upon their users' timelines – thus providing greater scope to distribute more adverts and thus generate more revenue (Appel *et al.*, 2020).

The author critically proposes this as a tactic utilized by social media platforms, aiming to achieve the conscious and unconscious attention of consumers – as evident by former Facebook Executive, Pinterest President, and current Moment CEO, Tim Kendall's comments within '*The Social Dilemma*' documentary. Kendall states social media's aim

surrounds: *"how much of your life can we get you to give to us"* (Exposure Labs Productions, 2020) – catering for conscious and unconscious time. Similarly, former Facebook President, Sean Parker is quoted stating that during Facebook's development the objective surrounded: *"How do we consume as much of your time and conscious attention as possible?"* (Solon, 2017). Thus, social media's goal is to immerse users within the platform, to encourage regular usage and usage for long periods of time – striving for capturing users, by almost infecting a trance-like state where suddenly time has escaped (Appel *et al.*, 2020).

The author critically suggests that this represents a concept formulated by Csikszentmihalyi (1975) known as the state of '*Flow*', which refers to when humans enter a state of hyper-focus, becoming immersed within an activity/operation – as it is more universally known, becoming '*in-the-zone*'. According to Nakamura and Csikszentmihalyi (2014; 2009), the state of Flow encompasses intense and focused concentration, whereby action and awareness merge, a loss of reflective self-consciousness occurs, and time distortion transpires (one loses track of time). Snyder and Lopez (2007) note the Flow state can be entered at any time, but it is most likely to arise when the individual is wholeheartedly undertaking an activity/operation for intrinsic purposes (rewarding purposes) – which is supported by the studies of Engeser and Rheinberg (2008), Schüler (2007), and Eisenberger *et al.* (2005).

Previous literature has proven the state of Flow robust – with the study of Csikszentmihalyi (1996) indicating Flow's presence within art and science, while the studies of Csikszentmihalyi and Robinson (1990), Jackson (1996; 1995), and Perry (1999) indicated Flow's presence within aesthetic appearance, sport, and literature writing, respectively. The author critically notes that although these areas deviate from the digital nature of social media/Instagram, they cater for the intrinsic requirement to enter a Flow state (Engeser and Rheinberg 2008; Schüler, 2007; Snyder and Lopez, 2007; Eisenberger *et al.*, 2005), as each activity provides a rewarding output – which represents a goal of social media platforms as previously suggested. This is supported by Sean Parker (Former Facebook President) who states Facebook utilize '*Likes*' to provide users with *"a little dopamine hit"* as to urge further usage and keep users within the platform for as long as possible (Solon, 2017).

Similarly, Instagram utilize the '*Likes*' feature while also incorporate features such as '*Comments*' and '*Tags*' which further provide '*rewarding hits*' to Instagram users (Aramendia-Muneta, Olarte-Pascual and Ollo-López, 2021; Carpenter *et al.*, 2020). From a critically perspective it should also be noted that Instagram's parent company is Facebook – a

brand Former President Sean Parker implicated for utilizing dopamine hits to consciously manipulate users into prolonged usage (Solon, 2017). Thus, one can assume Instagram hold a similar stance to Facebook regarding projecting '*rewarding hits*' upon their users to capture said users. Also, in relation to social media, previous research has linked Flow to the digital world, with the elements of social interaction, enjoyment, and concentration being suggested as drivers of entering Flow (Kaur, Dhir and Rajala, 2016; Kaur *et al*, 2016).

2.6 The Consumer Experience

As discussed, experience plays a pivotal role in value determination (Payne, Storbacka and Frow, 2008). Pine and Gilmore (1998, p. 97) refer to a consumer's experience as *"a distinct economic offering"*, detailing how consumers desire positive experiences within a transaction. A collaborative study conducted by Customer Bliss and Oracle showed over 33% of the 1,100 participants would not return to a brand following a single negative experience, while over 41% were willing to pay a premium of 20% for better-quality service (Warren, 2019). Also, global organisation Amazon recorded they lost 1% in sales for every 100 milliseconds of page load (Phillips, 2016) – critically highlighting the importance and correlation of experience towards generating revenue.

In correspondence with the '*prosumer*' rise, the experience which the consumer receives has become vital for brands. Lemon and Verhoef (2016) refer to it as a current leading management strategy, referencing a 2015 collaborative Accenture/Forrester report which found improving the customer's experience to be the main short-term objective among executives at large corporations. From a critical viewpoint, the hyper-connected nature of social media platforms such as Instagram has created opportunities and challenges for brands (Leeflang *et al*., 2013; Libai *et al*., 2010). For example, the additional touchpoints and customer-to-customer communication have provided brands with less control regarding the customer experience (Rapp *et al*., 2015) – as every service exchange corresponds with an experience, inclusive of digital touchpoints (Schmitt, Brakus and Zarantonello, 2015).

2.6.1 Digital Experience On Social Media

Previous research has suggested positive digital experience as a driver of sales. Klaus (2014, p. 306) refers to digital experience as *"the next competitive battleground"* for organisations, as his study of 80 carefully selected managers showcased significant higher average

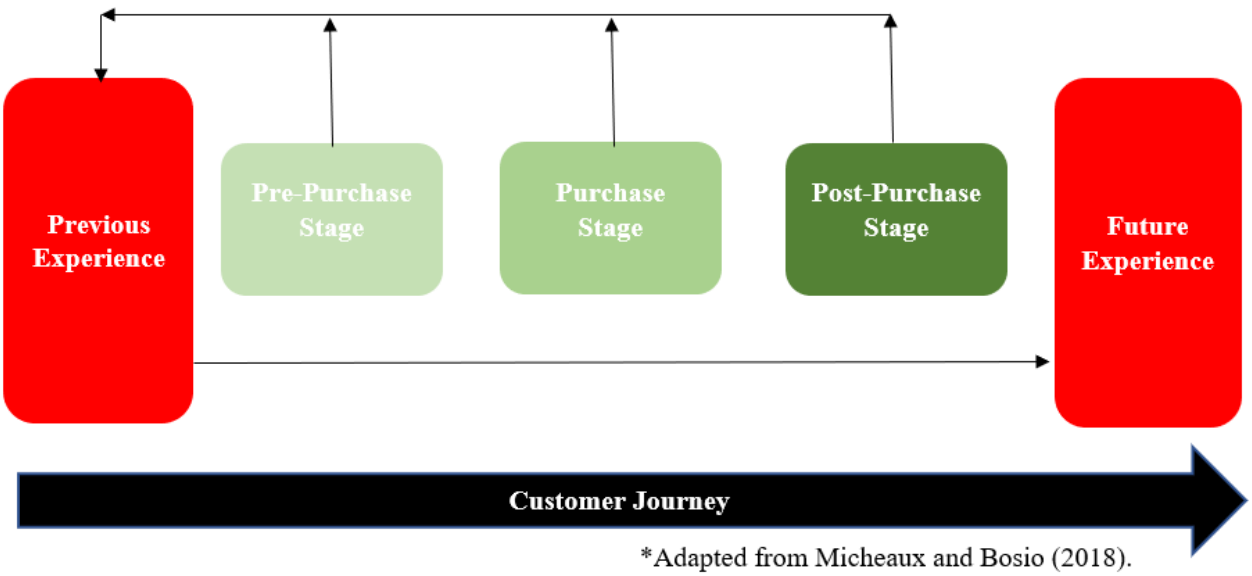
profitability for customer centric organisations, which ensured positive experience at every aspect – while emphatically at digital touchpoints. Klaus (2020, p. 7) later argues brands are nothing more than a compilation of direct and indirect interactions that is manifested in the brain as an overall perception – suggesting that we evaluate brands on *"our (and others') experiences with the brand."*

Thus, social media firms such as Instagram must consider what underlines a positive digital experience. The author proposes two routes known to underline said digital experience – acquiring greater customer insight and the construction of a requisite platform (Nuseir, McKenna and Harrington, 2020; Price, Wrigley and Straker, 2015). Acquiring greater insight allows social media firms to retrieve information which can be utilized to improve one's service to deliver a superior experience and thus provide greater value (Einhorn and Löffler, 2021; Price and Wrigley, 2016; Said *et al.*, 2015). In comparison, the platform's construction refers to the outlook and usage design of the platform to the user (Malik and Pfeffer, 2016). Critically speaking, regarding acquiring greater customer insight and information regarding the construction of a requisite platform – one must consider the customer journey as this concept provides scope to achieve feedback/information regarding the desires and opinions of consumers (Micheaux and Bosio, 2018; Rosenbaum, Otalara and Ramírez, 2017; Lemon and Verhoef, 2016).

2.6.2 Customer Journey Mapping

Customer journey mapping refers to depicting the chain of events that consumers undertake/meet during their interaction with an organisation (Rosenbaum, Otalara and Ramírez, 2017; Richardson, 2010). The concept surrounds visually illustrating the three stages of purchasing – the pre-purchase, the purchase, and the post-purchase (Micheaux and Bosio, 2018; Rosenbaum, Otalara and Ramírez, 2017; Lemon and Verhoef, 2016).

Figure 3. The Customer Journey.



*Adapted from Micheaux and Bosio (2018).

concept states that individuals draw upon past experiences to determine their willingness to undertake future experiences, while the three stages within represent distinct activities (Micheaux and Bosio, 2018; Rosenbaum, Otalara and Ramírez, 2017; Lemon and Verhoef, 2016). In relation to social media platforms such as Instagram – the pre-purchase stage refers to the desire to use the platform, while the purchase stage refers to the physical decision to utilize the platform, inclusive of the opening of said platform, and the post-purchase stage represents the physical consumption and usage of the platform (Micheaux and Bosio, 2018; Rosenbaum, Otalara and Ramírez, 2017; Lemon and Verhoef, 2016).

Studies have shown social interaction, opinion/content sharing, and entertainment/passing time to be leading reasons as to why individuals use social media (Whiting and Williams, 2013; Hoffman and Novak, 2012) – and thus elements which aid firms such as Instagram to manoeuvre their consumers to the post-purchase stage and encourage long usage and regular return. The author critically notes social interaction and opinion/content sharing holds similarities to '*Customer Value*', while entertainment/passing times relates to a social media platform's construction requisite – with Instagram utilizing Aza Raskin's concept of '*Infinite Scroll*'.

2.7 Customer Value

Vantrappen (1992) states Customer Value is created through meeting the customers' expectations in relation to quality, delivery, and cost, while Christopher (1996) provides a simpler explanation – declaring it is created when the perceived benefits to the consumer

exceed the costs of ownership. The study of Jiao, Gao and Yang (2015) tested the relationship between Customer Value within social media toward the Flow state. They note how strong competitive advantage stems from the consistent delivery of superior Customer Value, while Roig *et al.* (2006) state the primary source of competitive advantage for brands is to provide offerings of stronger value to the consumer – claims supported by Zeithaml *et al.* (2020), Payne, Frow and Eggert (2017), and Kumar and Reinartz (2016).

Jiao, Gao and Yang (2015) defined the Customer Value within social media as the '*Social Value*' and '*Content Value*' which the consumer receives – compiling these elements in line with social media's characteristics of information, openness, interaction, sharing, connectedness, autonomy, collaboration, participation, creativity and reciprocity (retrieved from Kaplan and Haenlein (2010), Constantinides and Fountains (2008), Straus and Frost (2008), and O'Reilly (2007)). They refer to Social Value as the '*social*' aspect which social media offers users, through providing relevant content from likeminded users such as friends, family, and influencers, while Content Value refers to the contributing, creating, consuming, and exchanging self-generated content aspect of social media. Similar definitions were also utilized in the studies of Jiao *et al.* (2018) and Jiao, Jo and Sarigöllü (2017).

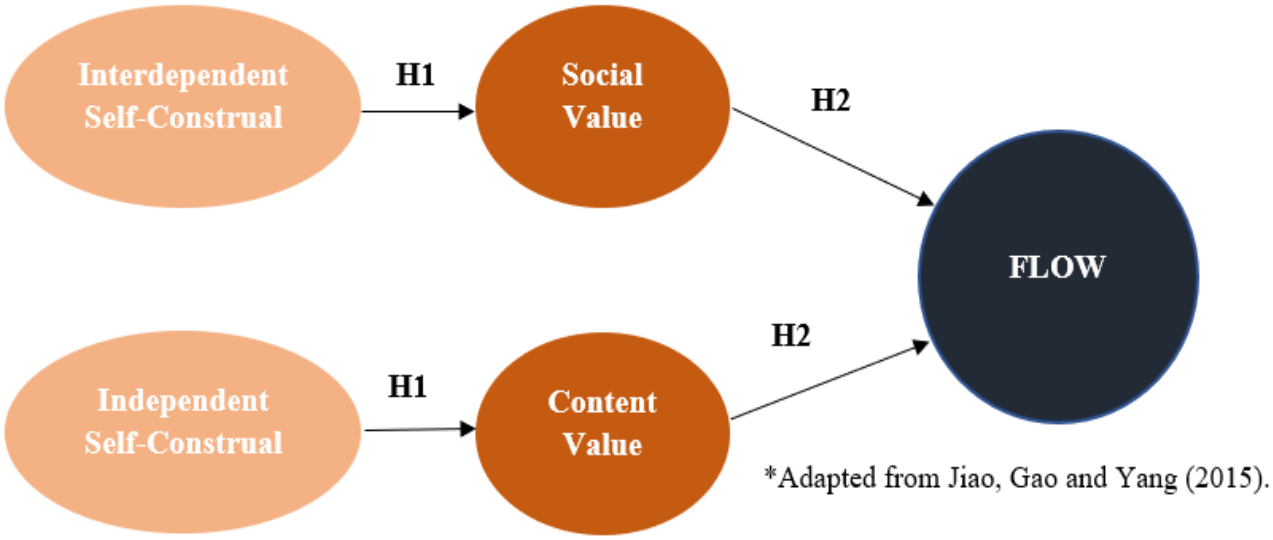
Jiao, Gao and Yang (2015) opted to split Customer Value into the elements of Social Value and Content Value due to the differences held between social media users and individuals in general. They mentioned how individuals hold different beliefs and opinions and therefore value is not guaranteed in a singular form, noting how this depends on an individual's self-construal. In other words, it depends on an individual's cognitive belief of oneself in relation to others (i.e. self-perception) (Markus and Kitayama, 1991). Jiao, Gao and Yang (2015) state how certain individuals find value in remaining '*private*' and thus may not find value within creating and distributing content, while others may find value in creating and distributing content as they enjoy expressing opinions and beliefs – a claim supported by Hoffman and Novak, 2012).

Thus, Jiao, Gao and Yang (2015) opted to test these elements separately, adopting an '*Independent*' and '*Interdependent*' self-construal model. The Interdependent self-construal referred to the Social Value element as it solely incorporated the '*social*' aspect of social media – disregarding the content creation/distribution aspect. This was referred to as the interdependent component as it is assumed all users enjoy this aspect as it is the primary part of social media which lacks consumer choice (as a '*feed*' is consistently present). Oppositely,

the independent component referred to the Content Value element as it solely incorporated the content creation/distribution aspect whereby consumer choice is present based upon on individual's self-perception in relation to others (i.e. self-construal). For example, certain individuals may value holding internal attributes and '*individualism*' (i.e. keeping to oneself), while others may value '*collectivism*' and holding social roles (Giacoman and Jordan, 2017).

Thus, Jiao, Gao and Yang (2015) adopted the research model showcased within *Figure 4*. As shown, they firstly determined whether Social Value and Content Value were appropriate for analysis toward the state of Flow (H1). Following positive findings of this, they then analysed said elements toward entering the state of Flow within social media (H2).

Figure 4. Jiao, Gao And Yang's Research Model.



Jiao, Gao and Yang (2015) received positive results regarding both the Social Value and Content Value elements and the state of Flow. Similarly, the study of Jiao, Jo and Sarigöllü (2017) found Social Value and Content Value held a positive impact on social media users entering a Flow state. In addition, the study of Hu, Kettinger and Poston (2014) found online Social Value positively impacted consumer satisfaction rates and continued use of social media – elements required to enter the Flow state.

From an alternate perspective, the author argues the findings of Kaur, Dhir and Rajala (2016) and Kaur *et al.* (2016), whereby social interaction and enjoyment were suggested as drivers of entering Flow within social media, relate to the Customer Value received by a social media user. Social Value incorporates interaction among likeminded users, such as friends, family, and influencers, while is also assumed to be enjoyed by the user – as if it were not enjoyed,

the individual would simply not use the platform. Regarding Content Value, this element represents social interaction through its sharing and distribution aspects, while can be assumed to be enjoyed by the user – as if it were not enjoyed, the individual would simply not engage with this aspect of social media (Jiao, Gao and Yang, 2015).

2.8 Infinite Scroll

Along with Social Value and Content Value, the author notes Aza Raskin's concept of Infinite Scroll plays a pivotal role within the concentration element which Kaur, Dhir and Rajala (2016) and Kaur *et al.* (2016) linked to entering Flow within social media. This is due to social media's construction, requiring users to scroll to receive content, while social media platforms such as Instagram utilize Raskin's creation ensuring content is never-endingly distributed to the user (Neyman, 2017) – with a Lupinacci (2020) report detailing how social media is consumed within continuous flows as opposed to in singular doses.

According to Springer (2015), Infinite Scroll refers to the procedure of automatically loading content once a user comes close to the end of the currently loaded content – thus proving the content to be infinite in quantity. Noë *et al.* (2019) note Infinite Scroll is utilized on social media as it is designed to prolong usage and it lacks stopping cues. In comparison, platforms with a scroll bar provides consumers with an estimate of the content quantity on a page – allowing users to plan '*stopping*' of consumption, while Infinite Scroll simply automatically loads content for continuous consumption providing less incentive to stop consumption (Springer, 2015).

Neyman (2015) states consumers of an Infinite Scroll algorithm are vulnerable to consuming more content than intended – positing social media platforms such as Instagram in a positive position to enter the state of Flow. Also, social media algorithms are designed to provide relevant content with reason to keep you on the platform and eliminate/lessen reasons to leave or pause consumption (Harris, 2016). According to Montag *et al.* (2019), continued endless scroll ensures the consumer is becoming more and more immersed, while the continued finding of relevant content further conditions/influences the consumer to remain on the platform – providing further scope for entering the Flow state.

2.9 Conclusion

In conclusion, this chapter has detailed the current state of social media, specifying toward the Instagram platform. The Millennial generation were also discussed, inclusive of their relation to the social media and tradigital era of today, followed by an outlay of the Flow concept – noting how this tactic is utilized by platforms such as Instagram. Digital experience's importance was then presented, encompassing the customer's journey and its ability to provide greater customer insight and feedback regarding factors such as the platform's construction – while the concepts of Customer Value (Social Value and Content Value) and Infinite Scroll where then explored in relation to the Flow state. For purpose, the relevance and advantage of this study in comparison to the previous literature (i.e. the '*gaps*' catered for) has been discussed within *Chapter 3*.

Chapter 3: Research Question And Objectives

3.1 Introduction

This chapter details the compiled Research Question of this study, the study's uniqueness in comparison to past literature, and the study's objectives.

3.2 Research Question

This study will examine the relationship among the digital experience which Millennials receive when on Instagram, toward their entering into the state of Flow – defining digital experience as the Social Value, Content Value, and Infinite Scroll elements which *Chapter 2* discussed. For purpose, the author has compiled the following Research Question:

"Does digital experience as delivered by Instagram capture Millennial users in a state of Flow?"

As discussed within *Chapter 2*, the state of Flow has been linked to the digital world (Kaur, Dhir and Rajala, 2016; Kaur *et al*, 2016), while is also most likely to arise when an individual is wholeheartedly undertaking an activity/operation for intrinsic/rewarding purposes (Engeser and Rheinberg, 2008; Schüler, (2007); Snyder and Lopez, 2007; and Eisenberger *et al.*, 2005). Also examined within *Chapter 2* was the importance of digital experience to contemporary consumers such as Millennials, with Klaus (2014, p. 306) quoting digital experience as *"the next competitive battleground"* for brands. The nature of social media – to provide positive experiences through '*dopamine hits*' to encourage retention and usage for long periods of time (Exposure Labs Productions, 2020; Solon, 2017) was also explored.

From the literature presented, the author has gained interest regarding whether the positive digital experience received while consuming social media – underlined as Customer Value (Social Value and Content Value) and the Infinite Scroll construction, plays a role within social media's attempts to capture said users unconsciously for long periods of time. The author's interest has arisen from a marketer's perspective – with his marketing background providing curiosity as to whether gaining insight in relation to Social Value, Content Value and Infinite Scroll toward Flow can provide further insight within the realm of social media marketing.

3.3 Past Research

Although previous research surrounding Social Value, Content Value, Infinite Scroll and Flow exists (see *Chapter 2*), it is minimal in quantity – while following extensive investigation, no studies are available which incorporate every element. Although this itself provides this study with a '*new*' and intriguing look, the author has also identified two gaps in present in this available past literature. Prior studies have tended to incur a generalized approach, either classifying social media as '*one*' by generalizing all platforms irrespective of the individual characteristics, or focusing on the '*users*' of a platform, as opposed to a specific sub-section of users.

In addition, the Millennial cohort has been chosen for analysis due to their digitally inclined nature, strong influence on the world, and projected increasing influence (see *Section 2.3*), while the social media platform of Instagram has been selected due to the value which Millennials hold for said platform. From focusing upon these specific elements, the author suggests additional insight will be acquired in relation to the social media marketing realm which is tailed to a marketing-relevant generation, and a platform which largely reside within.

3.3.1 Gap 1: Lack Of Specification Upon Age-Related/Generational Characteristics

This gap refers to the instances whereby a platform-specific element had been implemented by the authors. Prior studies which did this tended to lack specification regarding the users' of said platform – failing to focus their study on a sub-section of users, simply generalizing their platform's users as one entity. The author notes by generalizing a platform's social media users as one entity, any generational/age-related characteristics are disregarded. The author argues this as a gap as should a study not specify by implementing an age-related/generational characteristic, the results found cannot be specifically considered toward every user of a social media platform – they can only be considered from a general perspective.

The study of Shahpasandi, Zarei and Nikabadi (2020) represents an example of this. Their study analysed Flow in relation to the social media platform of Instagram, however failed to acknowledge the different age-related/generational characteristics within users. Thus, the author argues that although their results are specific to the Instagram platform – they cannot be considered for every Instagram user as Instagram is consumed by those of all ages/generations. As this study specifies upon the Millennial generation, the author suggests

the findings of this study can bridge this gap, presenting results specifically tailored to Millennials and their subsequent characteristics/preferences.

3.3.2 Gap 2: Lack Of Specification Upon Social Media Platforms

Previous studies have tended to classify social media as one entity – disregarding the platform related differences held. For example, although each social media platform holds their own distinct characteristics – such as Instagram's visual nature in comparison to Facebook and Twitter's text-heavy nature (Shane-Simpson *et al*., 2018; Pitman and Reich 2016), past studies have tended to blend all platforms under a '*social media*' heading. The author notes this as a gap as should a study not specify upon a relevant component, the results found cannot be specifically considered to individual platforms. Similar to Gap 1 – they can only be considered only from a general perspective.

The studies of Pelet, Ettis and Coward (2017) and Kaur *et al* (2016) are examples of this. Both studies analysed Flow in relation to social media, however failed to acknowledge the different characteristics between social media platforms. Thus, the author argues that this ensues their results cannot be specific to a social media platform – as they cannot be considered directly related to the characteristics of one specific platform. As this study specifies upon the Instagram platform, the author suggests the findings of this study can bridge this gap, presenting results specifically tailored to Instagram and its subsequent characteristics.

For further context, the studies of Lin *et al* (2020) and Jiao, Gao, and Yang (2015) refers to studies which failed to implement specification upon both the social media platform, and upon social media users – both studies focused on anyone who utilized social media. Due to these gaps, the author has opted to conduct this study through a specified lens – ensuring specification upon a social media platform and employing a generational component within study.

3.4 Research Objectives

The research objectives have been assembled in line with the literature discussed throughout *Chapter 2*. The compiled research objectives can be seen below – with Objective 1 catering

for the element of Social Value, Objective 2 catering for the element of Content Value, and Objective 3 catering for the element of Infinite Scroll.

3.4.1 Objective 1

"Determine whether the Social Value received on Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

As *Chapter 2* discussed, social media platforms such as Instagram have thrived within the engagement era of today with young demographics such as Millennials. The importance of acquiring greater customer insight was also explored, with Customer Value noted as a primary aspect of a positive social media experience. Representing one aspect of Customer Value is Social Value. In reiteration of *Section 2.7*, Social Value has been indicated as a driver toward entering Flow within environments such as social media (Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015), while has additionally been correlated with positive customer satisfaction and continued social media use – elements suggested to positively impact an individual toward entering the state of Flow within a social media (Hu, Kettinger and Poston, 2014).

As stated, previous studies surrounding this topic have tended to incur a generalized approach, thus the author has opted to undertake a specified approach – specifying by generation and social media platform. In reiteration, Millennials and Instagram were selected for the reasons outlined in *Section 3.3*. Thus, the author compiled this objective – ensuring specification to both the Millennial cohort, and the Instagram platform.

3.4.2 Objective 2

"Determine whether the Content Value received on Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

This objective has been compiled in a similar manner to Objective 1, as Content Value represents the other aspect of Customer Value within social media. Identical to Social Value – Content Value has been previously indicated as a driver toward entering Flow within social media (Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015). However, previous research surrounding Content Value has also undertook a generalized approach, and thus the author

has compiled this objective – ensuring specification to both the Millennial cohort, and the Instagram platform.

3.4.3 Objective 3

"Determine whether the Infinite Scroll platform construction utilized by Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

As *Section 2.8* discussed, social media is consumed through continuous flows as opposed to singular doses (Lupinacci, 2020), while Aza Raskin's concept of Infinite Scroll is designed to consistently deliver additional content, prolong usage, and lack stopping cues (Noë *et al.*, 2019; Neyman, 2017; Springer, 2015). As mentioned, consumers of an Infinite Scroll algorithm are vulnerable to consuming further content than intended (Neyman, 2015) – placing social media platforms such as Instagram in a positive position to enter the state of Flow. In addition, Montag *et al.* (2019) states continued endless scroll ensures the consumer is becoming increasingly immersed, while the continued finding of relevant content further conditions/influences the consumer to remain on the platform – providing further scope for entering the Flow state.

Although the literature indicates Infinite Scroll as a driver of entering the state of Flow within social media platforms such as Instagram, there are no definitive studies which incorporate the two elements. Thus, the author acquired interest regarding the correlation between the state of Flow and Infinite Scroll – compiling this objective in line with the specified approach of Objective 1 and Objective 2.

As will be discussed in greater detail within *Chapter 3*, a quantitative approach has been selected. Through undertaking this approach the author has been able to quantify his findings (Bryman, 2012) – providing the opportunity to determine the degree to which each element (if at all) affects Instagram's Millennial users regarding entering the state of Flow. This will allow the author to establish whether any of three elements dominate in this regard, or whether they hold an equal capacity.

3.5 Conclusion

In conclusion, this chapter has explored the study's research question – delving into the reasoning behind the compiled question, along with where the author's interest arose, while the gaps of previous studies were also discussed. In addition, the research objectives were outlined, accompanied by the reasoning behind their creation and selection.

Chapter 4: Research Methodology

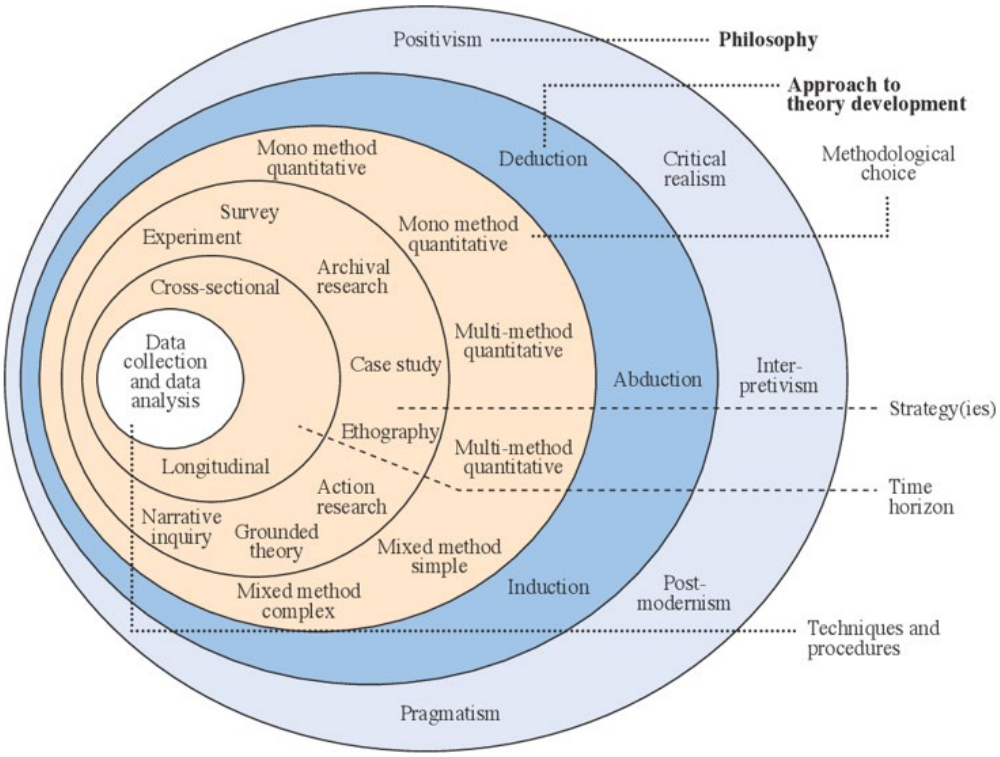
4.1 Introduction

This chapter details an extensive insight into the methodological considerations behind the study conducted – commencing with a discussion of the research design through Saunders, Lewis and Thornhill's (2016) '*Research Onion*'. Next, an exploration of the implemented methodology has been presented, inclusive of the sampling undertaken, hypotheses compiled, and data collection/analysis methods conducted. The study considerations have then been discussed, inclusive of the pilot study conducted, the ethical conundrums throughout, and the limitations identified prior to study commencement.

4.2 The Research Onion Toward This Study

Saunders, Lewis and Thornhill (2016) propose the '*Research Onion*' as a technique for determining one's research design. The concept represents a real-life onion, whereby the author commences at the outermost layer, pealing back layers following decision of design – with each new layer referring to a more detailed stage of the research process, until a full design is in place and thus data collection and subsequent analysis can begin (Saunders, Lewis and Thornhill, 2016). The concept's value stems from its adaptability regarding topic methodology and contexts (Bryman, 2012) – and thus was consulted by the author for this study. The layers respectively refer to the research philosophy, approach, strategies, choice, and time horizon.

Figure 5. The Research Onion.



(Saunders, Lewis and Thornhill, 2016, p. 124)

4.2.1 Research Philosophy

A research philosophy represents a set of principles/assumptions regarding the nature of what is being examined (Bryman, 2012). The author intends to undertake a Positivist outlook regarding his study. Positivism refers to the scientific study of the social world, where scientific laws are to be tested against through data systematically (Park, Konge and Artino, 2020; Turner, 2001). This philosophy was selected as it aligns with the research aims outlined, while social media/Instagram has become engrained into the social world of today. Also, throughout the full research design process the study of Jiao, Gao and Yang (2015) was consulted as their research holds distinct similarities to this study. Jiao, Gao and Yang (2015) opted for a Positivist philosophy and thus this has impacted the author's philosophy selection.

4.2.2 Research Approach

This selection was impacted by the philosophy of the current study, as the '*Deductive*' approach is considered suited to the Positivist philosophy due to its nature – developing a hypothesis or hypotheses from pre-existing theory (see *Chapter 2* for pre-exiting theory) and testing against data acquired (Snieder and Larner, 2009). This approach generally utilizes

questionnaires to create insight for comparison via data which aids in accepting/rejecting the hypothesis or hypotheses (Saunders, Lewis and Thornhill, 2016). Similarly to the philosophy selection, the study of Jiao, Gao and Yang (2015) urged the author toward a deductive approach.

4.2.3 Research Strategy

This layer refers to the first methodological choice of design (Saunders, Lewis and Thornhill, 2016). The author opted to undertake a '*Quantitative*' strategy, due to the ambiguity surrounding '*Mixed Methods*' (Bergman, 2011), and difficulty to acquire a large sample through a '*Qualitative*' strategy (Vasileiou *et al.*, 2018).

Qualitative Research is defined as any form of research which provides findings through a non-statistical approach, whereby there is no means of quantification in findings accumulation (Rahman, 2017). In comparison, Quantitative Research refers to any form of research which provides findings from statistical procedures, whereby quantification is emphasized throughout data collection and analysis (Bryman, 2012). Mixed Methods Research represents a research strategy whereby a combination of Qualitative and Quantitative Research is undertaken (Johnson, Onwuegbuzie and Turner, 2007).

Mixed Methods Research has become widely accepted within the research realm (Armano-Immonen, 2013) – recognized as the third main approach on the research paradigm (Bazeley, 2006), while provides advantages such as broadness of insight (Johnson, Onwuegbuzie and Turner, 2007). However, the author opted to eliminate this research strategy from contention due to the ambiguity and lack of specification which surrounds it in practice (Bergman, 2011).

Quantitative Research tends to cater for large samples – thus aiding validity and generalizability of findings (Rahman, 2017), while samples within Qualitative Research are generally small in nature and thus threaten the validity and generalizability of findings (Vasileiou *et al.*, 2018). Therefore, the author selected a Quantitative strategy as the research population is of a large embodiment – '*Millennials who use Instagram*'. As mentioned within *Chapter 2*, 78.8% of Instagram's total users wholly incorporate the Millennial generation (Statista Research Department, 2021b) – thus, a large sample size was required to ensure findings remained valid and representative – positing Quantitative Research as the most relevant research strategy.

4.2.4 Research Choice

This layer refers to determining the research instrument (i.e. how the data will be acquired). In line with the Positivist philosophy, deductive approach, and quantitative strategy, the author opted to undertake a questionnaire. Also, the study of Jiao, Gao and Yang (2015) utilized a questionnaire – further influencing the author's selection choice. While considering the need to acquire a large sample size, and the Covid-19 restrictions, the author opted to implement a digital form upon the questionnaire. *Section 4.6.1* discusses the questionnaire conducted in greater detail.

4.2.5 Research Time Horizon

The final layer refers to the length of study – referring to either a study from a single point in time ('*Cross-Sectional*'), or a study which considers multiple points in time ('*Longitudinal*') (Kruase, 2007; Levin, 2006). As the author is a college student, his resources (such as time) are limited and therefore a '*Cross-Sectional*' study was chosen.

4.3 Methodology Overview

Table 1 details a summary of methodology conducted. The author also notes the data collection and analysis methods from the study of Jiao, Gao and Yang (2015) has been consulted when determining and implementing the methodology presented.

Table 1. Methodology Undertaken: Summary.

Population (**μ**)	Millennials who hold an Instagram account.
Sample (**n**)	The initial aim was to acquire 170 participants. By completion, 207 eligible participants were acquired.
Sampling Method	Non-Probability Sampling – '*Volunteer Sampling*' approach through a combination of '*Snowball Sampling*' and '*Self-Selection Sampling*'.
Data Collection Methods	An online questionnaire was compiled by the researcher through online survey development company '*Survey Monkey*'. The questionnaire was then distributed via a web link and QR codes.
Piloting?	Yes – A pilot study was conducted at 10% of the minimum intended sample size (i.e. 170 participants). Participants were chosen based upon convenience to the researcher.
Was the data checked for reliability/validity?	Yes – the '*Cronbach Alpha*' test was undertaken to ensure reliability, while questionnaire compilation guidelines were consulted to aid validity. A pilot study was also undertaken to further aid validity
Data Analysis Methods	The collected data has been analysed via two analysis methods – '*Binomial Logistic Regression*' and '*One-Sample Sign Test*'. Both analysis methods incorporated '*Null Hypothesis Significance Testing*' – ensuring findings were of an acceptable confidence interval, requiring an alpha level of $\mathbf{p < .05}$.
How/Where has the data been stored?	Throughout the dissertation all data was stored within 3 secure (i.e. password protected) places – The researcher's laptop, a USB stick, and within Survey Monkey. During times of leisure, the laptop and USB stick were stored within the researcher's personal safe.

4.4 Sample Of Population

As outlined, the study's target population refers to '*Millennials who use Instagram*' – narrowing the research from simply social media users and implementing a generational characteristic to the study. As it is impractical to survey this entire target population (Saunders, Lewis and Thornhill, 2016), the author chose to undertake the sampling practice.

As the author is a student, a non-probability sampling approach was selected – due to the lack of time and resources available to conduct probability sampling. Probability sampling refers to having the *"distinguishing characteristic that each unit in the population has a known, nonzero chance of being included in the sample"* (Henry, 1990), whereas non-probability sampling is the opposite as randomization is not implemented (Etikan, Musa and Elkassim, 2016). As the author is a student, the resources available are limited, meaning the ability to randomly select participants and ensure a large sample size is unfeasible – hence the non-probability approach selection. According to Saunders, Lewis and Thornhill (2016) there are four categories of non-probability sampling – '*Quota*', '*Purposive*', '*Volunteer*', and '*Haphazard*'. For purpose, the author will only discuss his chosen category.

4.4.1 Non-Probability Sampling Choice

For purpose, the author has selected to undertake a '*Volunteer Sampling*' approach – which refers to sampling procedure that relies on publicising one's study, allowing all criteria-meeting individuals to voluntarily participate and become part of the final sample should they desire (Murairwu, 2015). Saunders, Lewis and Thornhill (2016) note there are two techniques within this approach – '*Snowball Sampling*' and '*Self-Selection Sampling*'.

Volunteer Sampling was chosen as it caters for the required large sample through the publication element, while the '*Snowball Sampling*' and '*Self-Selection Sampling*' techniques also appeared relevant/viable. *Table 2* depicts a description of the two techniques, along with the reasoning for selection. The steps of implementation are outlined within *Section 4.6.2*.

Table 2. Snowball And Self-Selection Sampling: Description And Reasoning.

Snowball Sampling	Self-Selection Sampling
Where participants volunteer to be part of the study and are also utilized by the researcher to act as a tool for acquiring additional criteria-meeting participants (Saunders, Lewis and Thornhill, 2016). This technique was selected due to the researcher's access to the Millennial generation, via trusted connections who (prior to questionnaire release) volunteered to distribute the questionnaire to their criteria-meeting friends/family.	Where study details are published with criteria required for participation, and all relevant individuals can partake should they desire (Saunders, Lewis and Thornhill, 2016). This technique was selected due to the simplistic ability to distribute the questionnaire within digitized Millennial hotspots, inclusive of the Instagram platform itself. This allowed the researcher to access his own Instagram followers who, in correspondence with age, vastly incorporated the Millennial generation.

4.5 Hypotheses Compiled

As discussed, a deductive approach was undertaken through a Quantitative strategy. Thus, the author has compiled the hypotheses below – with each hypothesis relating to a separate element of study (see *Chapter 3*). Through the hypotheses displayed in *Table 3*, '*Null-Hypothesis Significance Testing*' has been conducted – requiring an alpha level of $\mathbf{p < .05}$.

Table 3. Hypotheses Compiled.

Alternate Hypotheses (**H1**)	Null Hypotheses (**H0**)
H1a: Social Value does impact Instagram's capturing of Millennial users in a state of Flow.	**H0a:** Social Value does not impact Instagram's capturing of Millennial users in a state of Flow.
H1b: Content Value does impact Instagram's capturing of Millennial users in a state of Flow.	**H0b:** Content Value does not impact Instagram's capturing of Millennial users in a state of Flow.
H1c: Infinite Scroll does impact Instagram's capturing of Millennial users in a state of Flow.	**H0c:** Infinite Scroll does not impact Instagram's capturing of Millennial users in a state of Flow.

4.6 Data Collection

The author undertook an online questionnaire due to its accessibility in relation to acquiring the necessary large sample, and Covid-19 distribution related restrictions. In addition to *Section 4.2.4*, this has been chosen due to the convenience it offered the author and partakers. Regarding partakers, the questionnaire's '*online*' nature appeals to the digital characteristics of Millennials, which allowed willing participants to participate from mobile devices – potentially enhancing attractiveness. A large array of tools was also available to create online questionnaires, and export the data acquired – aiding convenience for the author. The author identified '*Survey Monkey*' as the intended tool due to familiarity of the tool's capabilities.

4.6.1 Questionnaire Design

The utilized questionnaire can be seen within Appendix A*, while the frequencies of each indicator responses can be seen within Appendix B*. Although recommended to gather and utilize previously validated questions, the author was forced to mostly compile his own indicators as there was little availability of previously validated questions relevant to the topic of this study. For example, the author consulted academic databases such as NCI's '*Trap*' and '*Research Gate*', while also contacted academics of similar and/or relevant

studies attempting to acquire their questionnaires. These academics either failed to respond or were unwilling to share the questionnaire they utilized. Thus, the author compiled his indicators in consultation with the Hubspot Guide for Writing Survey Questions, Survey Monkey's Guide for Writing Survey Questions, and the study of Dolnicar (2013) which surrounded compiling strong survey questions.

For example, the compiled indicators consisted of simple language and remained specified, while avoided double-barrel and double-negative queries. The author also implemented a '*test, re-test*' initiative through his academic advisors and the pilot study which *Section 4.8* details. The questionnaire was split into four segments, with Segment 1 asking 9 generalized questions (including questions regarding Flow while consuming Instagram), while Segments 2, 3, and 4 respectively tailored toward Social Value, Content Value and Infinite Scroll and their relationship with Flow. Segments 2, 3, and 4 each consisted of 7 questions ensuring consistency – proposing 30 questions in total which proved a low completion time ranging between 5-6 minutes.

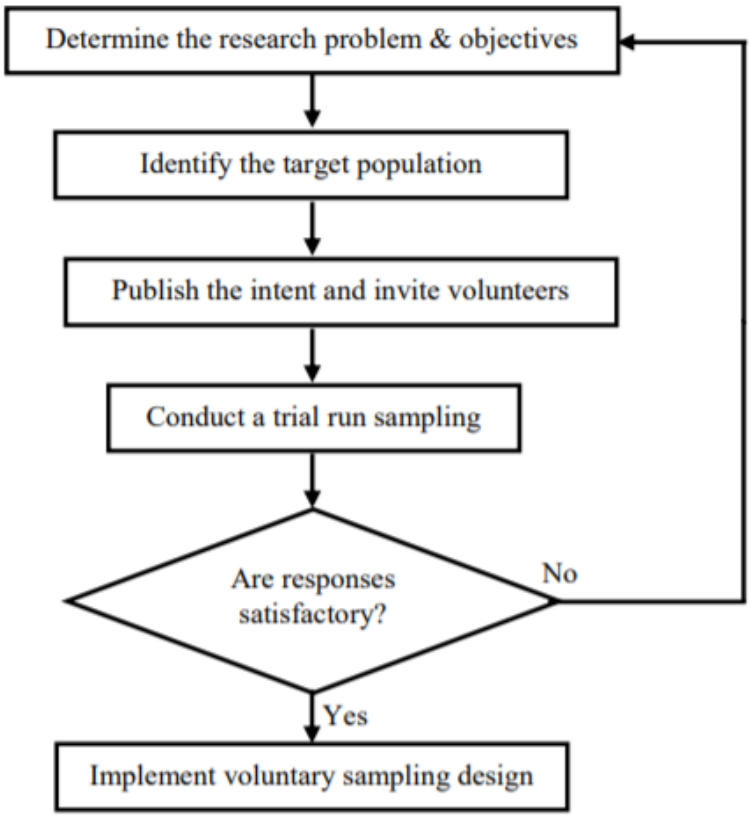
The element names of Social Value, Content Value, and Infinite Scroll were not mentioned, nor was the state of Flow – the indicators described scenarios relative to each element in relation to the state of Flow as to ensure participant understanding of what is being asked. Within each Segment, certain indicators focused solely on the element in relation to the state of Flow (used as Independent Variable for Logistic Regression), while others represented more direct indicators suggesting the element toward the state of Flow (used as Dependent Variable for Sign Test). For purpose, Appendix C* presents these.

A '*Likert Scale*' (Strongly Disagree → Disagree → Neither Agree nor Disagree → Agree → Strongly Agree) accompanied each indicator within Segment 2, 3, and 4 for participants to provide their responses upon as this approach aided the author within data analysis, while was also a simplistic response tool.

4.6.2 Online Questionnaire Distribution

An online questionnaire was also selected to complement the sampling methods as it is easily distributable (i.e. convenience). As *Section 4.4* discussed, the author chose to undertake a '*Volunteer Sampling*' approach, utilizing both the '*Snowball*' and '*Self-Selection*' techniques. Regarding data collection, the author followed the '*Voluntary Sampling Design Stages*' proposed by Murairwu (2015).

Figure 6. Murairwu's Voluntary Sampling Design Stages.



Stage 1: The author determined the research problem and objectives (see *Chapter 3*)

Stage 2: The author identified the targeted population – '*Millennials who use Instagram*'.

Stage 3: Survey Monkey offer distribution tools such as web links and QR codes – which therefore allowed the author to easily publicise the questionnaire.

The web link allowed the author to distribute the questionnaire within digital environments popular to Millennials – such as the Instagram platform itself, other social media platforms where the targeted audience may have resided (e.g. Facebook, LinkedIn), and direct messaging. The web link was utilized for simplistic distribution, posting upon digital touchpoints such as social media platforms seeking for individuals to volunteer their participation ('*Self-Selection Sampling*'), while also undertook direct messaging to distribute the questionnaire to the individuals who (prior to study commencement) volunteered their distribution assistance ('*Snowball Sampling*'). These individuals then forwarded the web link to criteria-meeting friends/family, while some also posted the link upon their personal social media platforms.

The QR code allowed the author to acquire participants within physical environments following the easing of Covid-19 restrictions. For example, the author works within a leisure centre whereby numerous relationships have been built with customers. Thus, following the easing of Covid-19 restrictions whereby the leisure centre reopened, the author positioned a printed version of the QR code within the view of said customers – allowing volunteered participation ('*Self-Selection Sampling*'). From this, certain individuals volunteered to distribute the questionnaire to their criteria-meeting friends/family ('*Snowball Sampling*'). In this instance, the web link was forwarded by the author via direct messaging.

Stage 4: The author conducted a pilot study (see *Section 4.8*).

Stage 5: As the pilot study responses were satisfactory, the author implemented the full design.

4.6.3 Data Collection Results

The author received a total of 231 questionnaire responses – however 11 were removed as they either failed to complete, or abandoned the questionnaire, while another 13 had to be removed as they did not meet the criterion of either holding an Instagram account or residing within the Millennial generation. This left 207 viable responses ready for data analysis.

4.7 Data Analysis

Following data collection, the author exported the acquired data from Survey Monkey to an excel file.

4.7.1 Data Sorting And Manipulation

Firstly, the ineligible participants were removed. Following this, excel was utilized to manipulate the data within Segments 2, 3, and 4 from categorical data into numeric data, while splitting each element into different data sets and adding the data acquired from Q9 of Segment 1 to each set – with the data from Q1-Q8 of Segment 1 deemed irrelevant/unneeded. Excel was selected and utilized due to the author's familiarity and experience with said software. Afterward, a copy of the data was created to ensure initial files were available should they be required. Data was then transferred to SPSS as this software allowed the author to conduct the relevant analysis, while is also academically recognised.

Within analysis, the author intended to undertake a form of regression analysis, along with a median response comparison – as the questionnaire was compiled to provide scenarios relevant to each element. The data acquired was intended to allow the author to attribute an average score for each element in relation to Flow (used in the Logistic Regression analysis as Dependent Variable), while also to allow the author to acquire a separate average score which would act as the Dependent Variable within the Sign Test analysis. See Appendix C* for clarification regarding which indicators were used toward which test. However, prior to this the data collected had to be tested for its reliability levels (Elsayed, 2012).

4.7.2 Cronbach's Alpha

To test the collected data's reliability the author utilized the Cronbach Alpha test– which analyses the internal consistency of data, requiring a score of '***>.7***' to indicate reliability (Taber, 2018; Tavakol and Dennick, 2011; Santos, 1999; Bland and Altman, 1997). As each element is independent from each other – three Cronbach Alpha tests were conducted (one test per element – e.g. one for Social Value, etc).

In conducting the Cronbach's Alpha test the author followed the steps detailed by Laerd Statistics (2021b), while ensured the indicators acting as Dependent Variables were excluded. Namely – Q9 of Segment 1, Q4 + Q5 of Segment 2 (**Social Value Cronbach Alpha Test**), Q3 + Q4 of Segment 3 (**Content Value Cronbach Alpha Test**), and Q2 + Q3 + Q7 of Segment 4 (**Infinite Scroll Cronbach Alpha Test**). To clarify, only the indicators utilized as Independent Variables were included – Q1, Q2, Q3, Q6, + Q7 of Segment 2 (**Social Value Cronbach Alpha Test**), Q1, Q2, Q5, Q6, + Q7 of Segment 3 (**Content Value Cronbach Alpha Test**), and Q1, Q4, Q5, + Q6 of Segment 4 (**Infinite Scroll Cronbach Alpha Test**).

The elements of Content Value and Infinite Scroll met the required score (**>.7**) to represent internal consistency and thus reliability, respectively achieving scores of **.914** and **.754**. In comparison, the element of Social Value did not meet the required score (**>.7**), achieving a score of **.686** – with the removal of Q3 of Segment 2 conducted to raise the reliability score to **.693**. Although this indicates a lack of internal consistency and thus reliability within the Social Value element, the author has opted to continue with said element following discussion with his academic advisor, where it was concluded that continuation may aid future research. This was noted as a limitation to the study (see *Section 7.2.1*)

Table 4. Cronbach's Alpha Scores.

	Social Value	Content Value	Infinite Scroll
Cronbach Alpha	.693	.914	.754

4.7.3 SPSS Analysis

To analyse the collected data, the author opted to utilize two analysis techniques – '*Binomial Logistic Regression*' and '*One-Samples Sign Test*'. Two analysis techniques were chosen due to the capabilities from the data acquired.

Binomial Logistic Regression: Regression Analysis models the relationship between a dependent variable and one or more independent variables – describing how the typical value of the dependent variable fluctuates in relation to the independent variable, while holding the other independent variables constant (Laerd Statistics, 2021a; Soto, 2013). This analysis technique was chosen as it corresponds with the author's initial intention in relation to the questionnaire – utilizing an average score of each element as the Independent Variable and Q9 of Segment 1 as the Dependent Variable).

Although many Regression models are available, the author opted to undertake Binomial Logistic Regression (commonly known as '*Logistic Regression*') as the data collected and study conducted follows its necessary assumptions – as shown in *Table 5*. The assumptions listed have been acquired from Laerd Statistics (2021a) and Mendes and Ganga (2013).

Table 5. Binomial Logistic Regression: Assumptions.

Your dependent variable should be measured on a dichotomous scale	The dependent variable used refers to the data collected from Q9 of the Introductory Questions (i.e. Yes/No) responses – thus a dichotomous scale.
You have one or more independent variables, which can be either continuous (i.e. an interval or ratio variable) or categorical (i.e. an ordinal or nominal variable).	One independent variable (average of Question Type 1) has been used which is '*continuous*' – an average score of each element.
You should have independence of observations and the dependent variable should have mutually exclusive and exhaustive categories.	Each element (Social Value, Content Value, Infinite Scroll) has been kept independent from each other – with three separate Logistic Regression tests conducted.
There needs to be a linear relationship between any continuous independent variables and the logit transformation of the dependent variable.	The linear relationship was present.

Within SPSS, the author followed the steps outlined by Laerd Statistics (2021a) in conducting this analysis – utilizing the data acquired from Q9 as the Dependent Variable, and an average score for each element as the Independent Variable. The average score was compiled for each participant. In keeping the three elements (Social Value, Content Value, Infinite Scroll)

separate from each other – three individual Logistic Regression tests were conducted. Following the steps of Laerd Statistics (2021a), the author then considered the variance level, category prediction, and significance level to determine the relationship between entering the Flow state in relation to each element in question.

One-Sample Sign Test: A '*Paired-Samples Sign Test*' is an analysis technique used to establish whether there is a median difference between one set of observations (Laerd Statistics, 2021c). However, to conduct a One-Sample Sign Test it is recommended to follow the steps of a Paired-Samples Sign Test while utilizing a '*Dummy Variable*' (IBM, 2021). Similar to the previous analysis technique, this technique was chosen as it corresponds with the initial intention in relation to the questionnaire (i.e. comparing an average of each element in relation to Flow against the median answer), while three separate tests (one per element) were also conducted. This technique was also selected as the data/study aligns with the necessary assumptions – as depicted within *Table 6*. The assumptions listed have been acquired from Laerd Statistics (2021c).

Table 6. Paired Samples Sign Test: Assumptions.

Your dependent variable should be measured on a continuous (i.e. interval or ratio) or ordinal level.	The dependent variable (average from Question Type 2) is measured on an ordinal scale.
Your independent variable should consist of two categorical, 'related groups' or 'matched pairs'.	As dummy variable was created, where all responses equalled the median answer (2.5). This follows this assumption.
The paired observations for each participant need to be independent.	No participant response has affected another.
The difference scores (i.e. differences between the paired observations) are from a continuous distribution.	The difference scores are from a continuous distribution.

In conducting analysis, a dummy variable was first created representing the median value of the possible responses (**3**) – with intention to show that should over **50%** of occasions score above the median value regarding their average score the element in question (e.g. Social Value), said element can be considered to affect Millennials toward the Flow state while consuming Instagram. The author followed the steps outlined by Laerd Statistics (2021c), providing scope to view the positive/negative differences between the average score of each element and the Dummy Variable, the quantity of tied scores, and the test's significance level.

4.7.4 Graph/Table Compilation

Following the SPSS analysis conducted, the researcher utilized the data acquired to compile relevant Bar/Pie Charts within Excel to highlight the study findings. Excel was selected for this purpose due to the researcher's familiarity with said software. Additionally, certain tables were also utilized directly from the SPSS analysis as they effectively highlighted the study findings.

4.7.5 Data Storage

In line with GDPR regulations, data was stored within three secure places to combat potential loss/leakage, namely the author's password protected laptop, Survey Monkey account, and a USB stick. To further adhere to GDPR regulations and combat loss/leakage of data, the author stored the laptop and USB stick within a personal safe during leisure times. Post-study, data has been erased and stored solely on the USB stick – which will remain within the personal safe until NCI's mandatory review period has passed.

4.8 Piloting

Piloting refers to a test study prior to official study, utilized to improve quality and efficiency (Johanson and Brooks, 2010). A pilot study tests the feasibility of the protocols, allowing the author to locate problematic/inefficient areas which must be amended (In, 2017) – hence the author's choice to undertake. Self-compiling the questionnaire indicators represents another reasoning for choice. For example, Jiao, Gao and Yang (2015) undertook a pilot study, receiving feedback that their original survey incorporated overly academic phrasing which hindered their participants' capability to provide relevant data.

Quantity of participants required for piloting does not have a universal answer, with Isaac and Michael (1995) and Hill (1998) calling for between 10-30 participants, while Van Belle (2002) and Julious (2005) called for a minimum of 12. However, these calls fail to directly cater for the total sample size intended for the official study, whereas Treece and Treece (1982) indicated that 10% of the total sample size should be considered. Thus, the author has opted to follow their guidelines. Initially, the author aimed for a minimum of 170 eligible questionnaire respondents – therefore placing 17 participants required for the pilot study (**170 X 10% = 17**). Coincidentally, this also catered for the callings of Isaac and Michael (1995), Hill (1998), Van Belle (2002) and Julious (2005).

The author utilized the web link publication tool to acquire participants, distributing the link via direct messaging to 17 trusted connections. From this, the author received feedback regarding his phrasing on 3 indicators. According to the pilot study partakers, the three indicators consisted of either poor phrasing or phrasing which was overly academic. From this, the author amended the relevant indicators prior to official release – providing optimal scope for the retrieval of accurate data.

4.9 Study Considerations

When conducting a study, certain considerations must be addressed – such as ethics and limitations.

4.9.1 Ethical Considerations

Merriam-Webster (2021) define ethics as *"the discipline dealing with what is good and bad with moral duty and obligation"*, while Wellington (2015) concurs, noting ethics refers to the moral principle and guiding conduct which one holds/should be held. Within research, ethics refers to the incorporation of *"ethical principles into research practice in all stages of investigation, from planning and inception through to completion and dissemination of results"* (Cubelli, 2020). As there are no universal set of ethical guidelines, the author has consulted the American Marketing Association's ethical guidelines, along with NCI's ethical guidelines to ensure his intended practices were conducted in an ethical manner.

In relation to the ethical considerations of this study, the author proposes Smith and Quelch's (1992, p. 62) *"Potential Ethical Considerations for Researching Consumers"*. They suggest eight areas which authors of consumers should consider within study. These are showcased within *Table 7*, along with notes as to how the author combatted these considerations.

Table 7. Potential Ethical Considerations For Researching Consumers.

Smith and Quelch's (1992) Ethical Issues	Participants' Rights according to Smith and Quelch (1992)	How has this ethical consideration been combatted within this study?
Preserving participants' anonymity.	Right to privacy.	The researcher ensured anonymity within study – asking only for an email address for reference should an individual opt to want their data removed.
Exposing participants to mental stress.	Right to safety.	Indicators were kept clear and concise to ensure understanding and did not ask for any mentally straining information.
Use of special equipment and techniques.	Right to privacy and right to choose.	At the beginning of the questionnaire the data analysis techniques were outlined, while an accompanied indicator asked the respond to provide consent.
Involving participants in research without their knowledge.	Right to be informed and right to privacy.	At the beginning of the questionnaire an outline of the research, along with the data intentions was proposed. This was followed by accompanied indicator asking the participant for his/her consent.
Use of deception	Right to be informed.	To reiterate, all research and data intentions were outlined at the beginning of the questionnaire.
Use of coercion.	Right to choose.	As *Section 4.2.1* discussed, the researcher undertook a Volunteer Sampling approach – providing choice of participation. Also, the researcher provided an email address to allow participants to withdraw their data at any time.
Selling under the guise of research.	Right to be informed.	To reiterate, all research and data intentions were outlined at the beginning of the questionnaire. The researcher's stance (Level 9 NCI Student) was also mentioned.
Causing embarrassment, hindrance, or offense.	Right to respect.	The researcher ensured all indicators remained professional and followed the guidelines mentioned within *Section 4.2.3*.

To further detail the ethical considerations undertaken within this study, the author has opted to briefly outline a consideration noted prior to questionnaire distribution – '*Participant Knowledge*'. The author acknowledged that a reliance on indirect contact and distribution of the questionnaire existed due to the sampling methods intended – and therefore the indirect

participants acquired may have lacked sufficient knowledge of what the study was, what their data may have been used for, and how it may have been used/manipulated/stored. To combat this, an executive summary/statement was placed at the beginning of the questionnaire detailing this information and was accompanied by consent seeking indicators.

4.9.2 Study Limitations

Within research, a limitation refers to a systematic bias that was not or could not be controlled which may have impacted the study's findings (Price and Murnan, 2004). There are two primary forms of limitations – internal validity threats, and external validity threats, and according to Fink (2013) it is essential a study be internally valid to be externally valid and thus generate true findings.

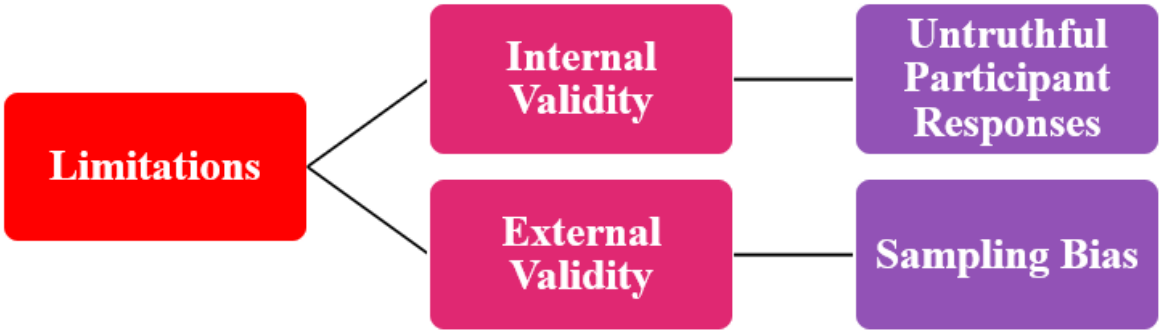
Table 8. Internal And External Validity: Definitions.

Internal Validity	External Validity
Where results are free from systematic bias – i.e. the results measure what they are supposed to (Price and Murnan, 2004).	When the results indicate the sample's findings can be accurately said to represent the population (Price and Murnan, 2004).

Prior to study commencement, the author acknowledged his intended study would not be free of limitations and therefore opted to implement '*delimitation*' (lessening bias affects) where possible (Price and Murnan, 2004). Publishing said information has also been selected as publicising limitations is the ethically correct thing to, while shows study transparency, and can aid future research (Greener, 2018; Bunniss and Kelly, 2010; Drotar, 2008).

The author has incorporated a limitations section within *Chapter 7*, whereby post-study limitations have been presented. Thus, this section solely details potential limitations identified prior to study commencement, along with the delimitation action implemented. *Figure 7* depicts an overview of an identified internal and external validity limitation.

Figure 7. Limitations Identified Prior To Study Commencement.



Internal Validity: Prior to study commencement, the author noted that a reliance surrounded the self-proclaimed responses of partakers. Thus, potential of receiving untruthful participant responses existed (Price and Murnan, 2004). In relation to this study, this could occur in the form of participants responding in a manner they deem more '*socially acceptable*' (such as responding as if they were a stereotypical Millennial) and when this occurs the participants responses reflect neither their perceptions, nor the perceptions of the population (Price and Murnan, 2004). To combat this and lessen the potential biased findings, the author implemented validity testing throughout the study, while also avoided utilizing key words within the questionnaire's indicators (e.g. '*Millennial*').

External Validity: In line with Fink's (2006) statement that a study cannot be externally valid unless internal validity is ensured, the author identified sampling bias, whereby the sample is not representative of the population as a potential limitation. To combat this, the author acquired a large sample, allowing scope for data from irrelevant and unrepresentative participants to be removed, while also implemented the validity testing mentioned.

4.10 Conclusion

In conclusion, this chapter discussed the research design through Saunders, Lewis and Thornhill's (2016) '*Research Onion*' and was followed by an exploration into the implemented methodology – encompassing the sampling undertaken, hypotheses compiled, and data collection/analysis methods conducted. Study considerations were also discussed – such as the pilot study undertaken, the ethical conundrums throughout, and the identified limitations prior to study commencement.

Chapter 5: Research Analysis And Findings

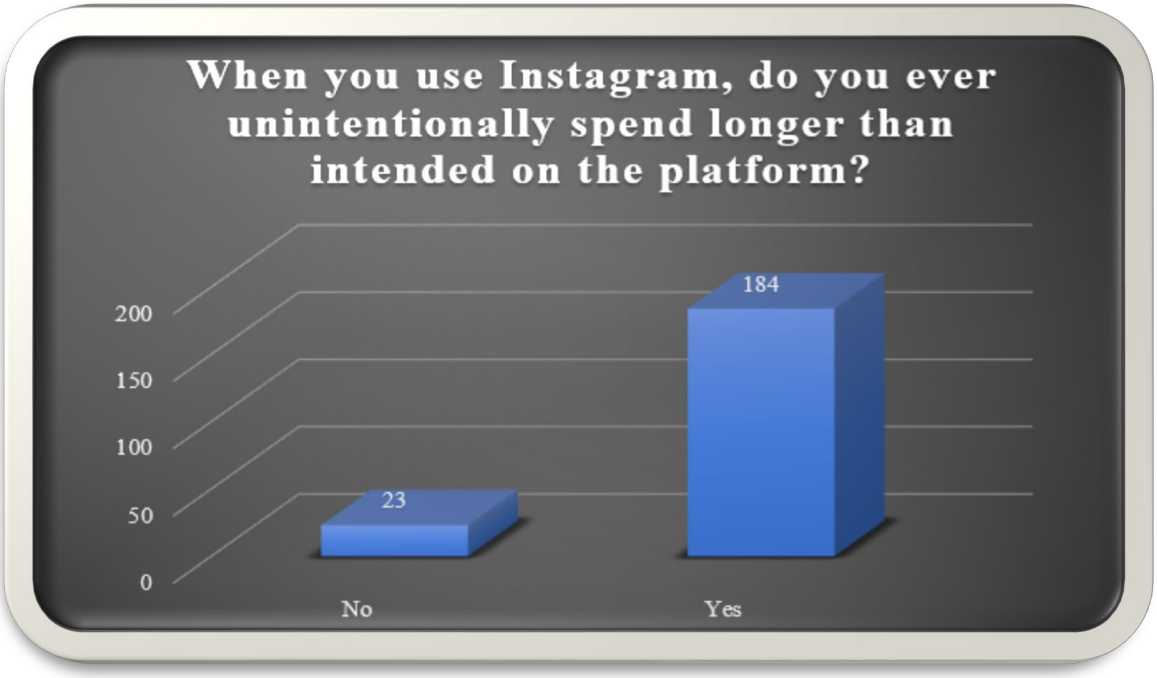
5.1 Introduction

This chapter displays an exploration of the author's analysis and findings toward answering the study's Research Question – ***"Does digital experience as delivered by Instagram capture Millennial users in a state of Flow?"***. It commences by discussing the dominating view of Millennials regarding entering the state of Flow on Instagram, then delving into findings of each element (Social Value, Content Value, Infinite Scroll) toward Millennials entering the state of Flow while consuming Instagram – utilizing relevant graphs and tables where appropriate.

5.2 Dominating View Regarding Entering The State Of Flow On Instagram

As mentioned in *Section 4.7.3*, the responses from Q9 of Segment 1 were separately analysed against an overall average score of Social Value, Content Value and Infinite Scroll – with the first acting as the Dependent Variable, and the latter as the Independent Variable within their respective test. However, it should be noted that prior to conducting the Logistic Regression, the data from Q9 indicated a dominant belief among participants (i.e. Millennials) that they tended to unconsciously spend longer than intended on Instagram. As shown in *Figure 8*, **184** participants responded '*Yes*' (i.e. **88.9%**), while only **23** participants responded '*No*' (i.e. **11.1%**) – proposing the dominant belief that Millennials do unintentionally spend long than intended consuming Instagram.

Figure 8. Dominating Belief Regarding Entering Flow On Instagram: Bar Chart.



However, in relation to the Logistic Regression, the author notes this dominating belief as a concern as it is best to conduct Logistic Regression whereby the Dependent Variable's data is balanced – representing a more even split as Logistic Regression has greater statistical power when consisting of balanced data (Connelly, 2020; Wright, 1995).

5.3 Social Value Generates Contrasting Results

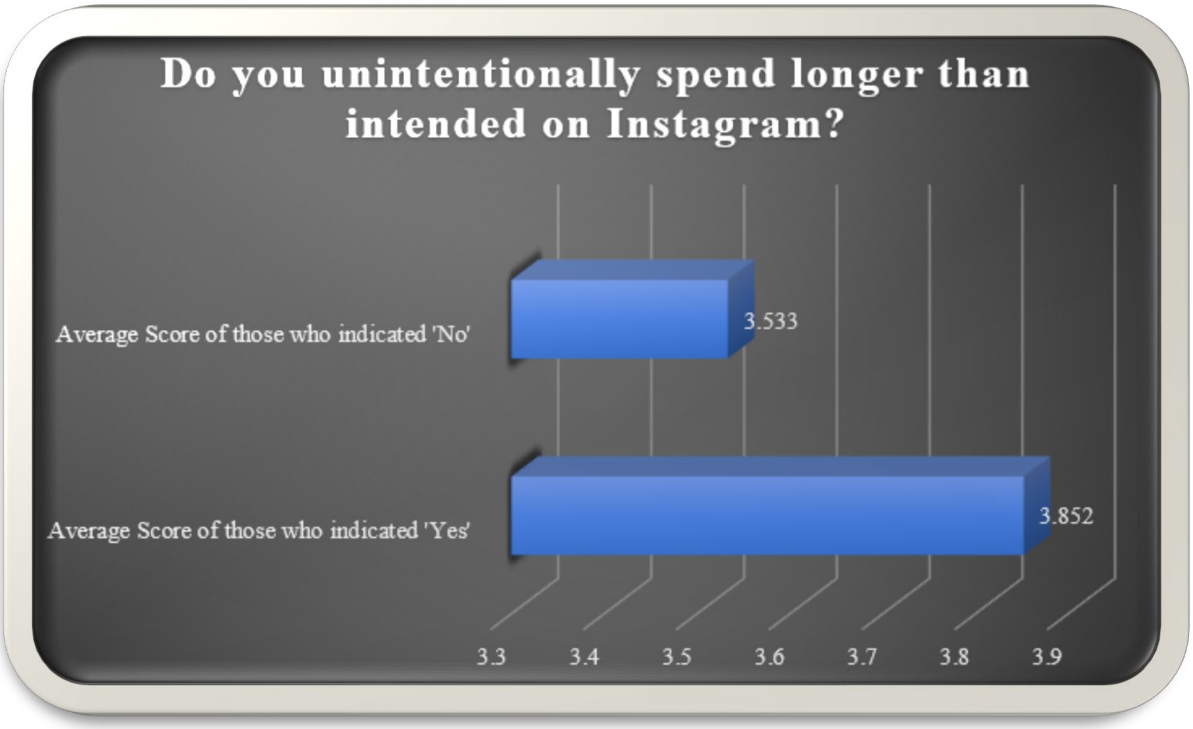
As *Section 4.7.3* discussed, two types of analysis were conducted toward achieving this study's Research Objectives and answering the Research Question by which this study is based upon – Logistic Regression and One-Sample Sign Test. From these tests Social Value has found contrasting results, with Logistic Regression failing to indicate Social Value to have an effect upon Millennials entering the Flow state while consuming Instagram, but the Sign Test finding a positive indication within a statistically significant manner.

5.3.1 Logistic Regression Fails To Meet Significance Level

*"Logistic Regression was performed to ascertain the effects of **Social Value** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

Interestingly, irrespective of whether participants stated that they do/do not unconsciously spend longer than intended on Instagram, the average score exceeded the median value of **3**. As expected, the average Social Value score of the **184** participants who sated they do unintentionally spend longer than intended on Instagram (**3.852**) exceeded the average score of those who stated they do not (**3.533**) – as *Figure 9* presents.

Figure 9. Differences regarding Dependent Variable.



Logistic Regression compiles two measures of explained variance – '*Cox & Snell* R^2' and '*Nagelkerke* R^2' values. However, as the Cox & Snell R^2 is unable to achieve a value of 1, the Nagelkerke R^2 method has been preferred (Laerd Statistics, 2021a). Thus, the explained variance of Social Value is equal to **3.4%**.

Table 9. Social Value: Explained Variance, Degrees of Freedom, Beta Level, Alpha Level.

	Nagelkerke R^2	**df**	**B**	**Sig.**
Social Value	3.4%	1	-.541	.055

In addition, the Logistic Regression achieved **B = -.541** – although the required degree of statistical significance was not acquired, finding **p = .055**. Thus indicating a non-significant impact as the alpha level exceeded **.05** (**p > .05**). However, as the alpha level only minimally exceeds the acceptable **< .05** level, the author carefully deems this as a trending element – noting additional research surrounding this element should be conducted (see *Section 7.3.5*).

5.3.2 Sign Test Indicates Social Value Toward Entering Flow

*"Sign Test was performed to ascertain the effects of **Social Value** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

The conducted Sign Test found **148** occasions where the score of Social Value exceeded the median value (**3**), as opposed to **59** occasions whereby it was equal to/below the median value.

Table 10. Frequencies.

		N
Dummy Variable - Social Value	Negative Differences[a]	148
	Positive Differences[b]	34
	Ties[c]	25
	Total	207

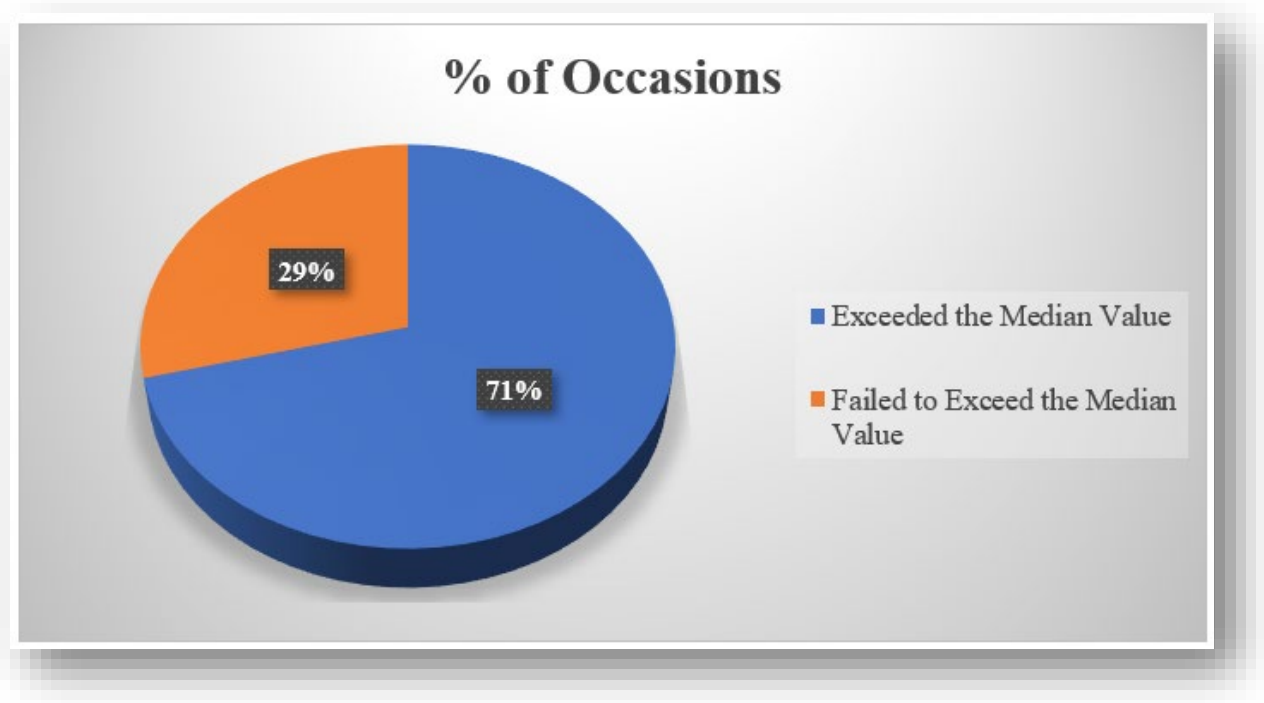
a. Dummy Variable < Social Value

b. Dummy Variable > Social Value

c. Dummy Variable = Social Value

This indicates Social Value to positively impact Millennials toward entering the Flow state while consuming Instagram as the average Social Value score exceeded the median value (**3**) on over **50%** of occasions – as shown within *Figure 10* (rounded to nearest percentage).

Figure 10. Pie Chart Presenting The % Differences Between Response Frequencies.



As exhibited within *Table 11*, the data is statistically significant – acquiring an alpha level of **< .001**. Also noted was **Z = -8.376**.

Table 12. Test Statistics.

	Dummy Variable - Social Value
Z	-8.376
Asymp. Sig. (2-tailed)	.000

As shown, the data is statistically significant – acquiring an alpha level of **< .001**. Also noted was **Z = -8.376**.

5.3.3 H0a Rejected As Evidence Shown For H1a

In reiteration of *Section 4.5*, the alternate and null hypothesis surrounding Social Value were:

H1a: Social Value does impact Instagram's capturing of Millennial users in a state of Flow.

H0a: Social Value does not impact Instagram's capturing of Millennial users in a state of Flow.

As only one test has indicated Social Value toward Millennials entering the Flow state while consuming Instagram in a statistically significant manner, the author has opted to consider this element as a '*weak*' indicator. Despite its '*weak*' classification, Social Value has still been indicated as a driver – thus, the author rejects **H0a**, showing evidence for **H1a**. Therefore, positing Research Objective 1 as achieved (see *Section 6.2*).

5.4 Content Value Also Generates Contrasting Results

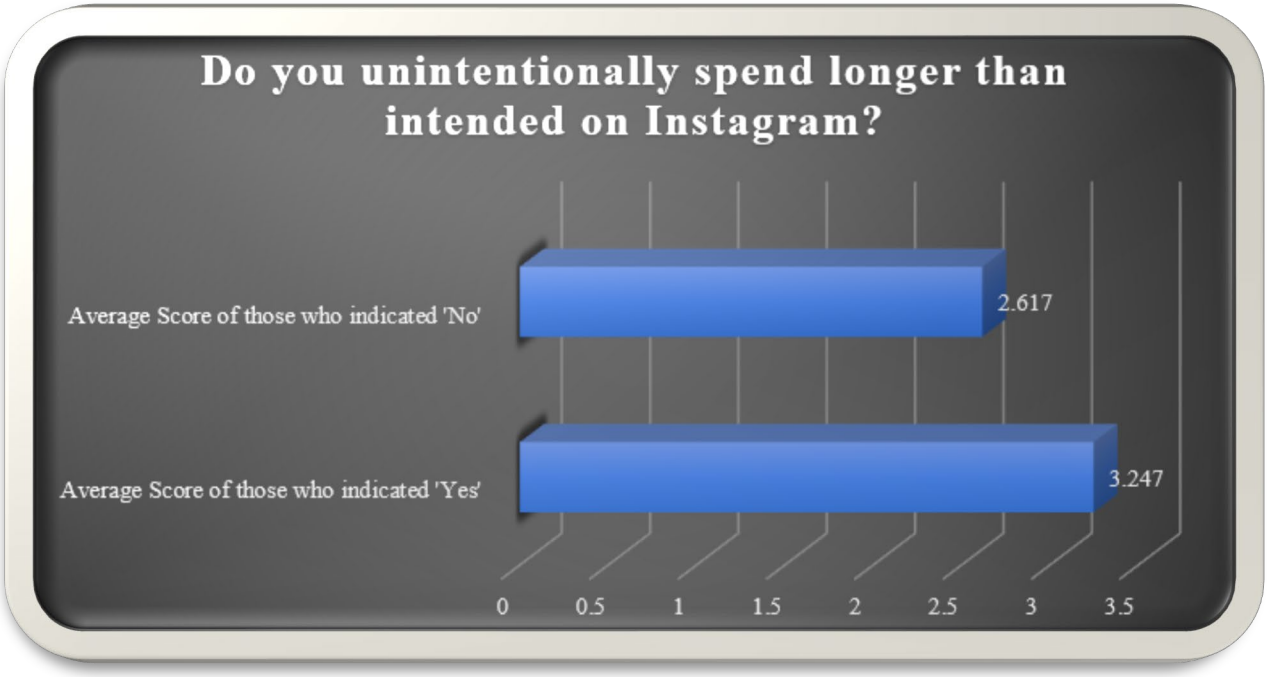
Similar to Social Value, Content Value has also generated contrasting results – failing to indicate the element to hold an affect toward Millennial users entering the Flow state while consuming Instagram within both conducted tests.

5.4.1 Logistic Regression Is Impacted By Dependent Variable

*"Logistic Regression was performed to ascertain the effects of **Content Value** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

Unlike Social Value, Content Value appears to be affected based upon participants' belief regarding whether they do/do not unconsciously spend longer than intended on Instagram – with the average Social Value score exceeding **3** for those who believe they do, however falling below **3** for those who do not. As *Figure 11* presents, the average score of those who stated they do unintentionally spend longer than intended on Instagram was **3.247**, while those who stated the opposite received an average score of **2.617**.

Figure 11. Differences regarding Dependent Variable.



As displayed within *Table 12,* the level of explained variance was equal to **6.6%**, while **B = -.541**. The data was also considered statistically significant, acquiring an alpha level of **.01**.

Table 12. Content Value: Explained Variance, Degrees of Freedom, Beta Level, Alpha Level.

	Nagelkerke R^2	**df**	**B**	**Sig.**
Social Value	6.6%	1	-.541	.01

5.4.2 Sign Test Shows No Affect

*"Logistic Regression was performed to ascertain the effects of **Content Value** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

The conducted Sign Test found **96** occasions where the average score of Content Value exceeded the median value (**3**), as opposed to **111** occasions whereby it was equal to/below the median value.

Table 13. Frequencies.

		N
Dummy Variable – Content Value	Negative Differences[a]	96
	Positive Differences[b]	87
	Ties[c]	24
	Total	207

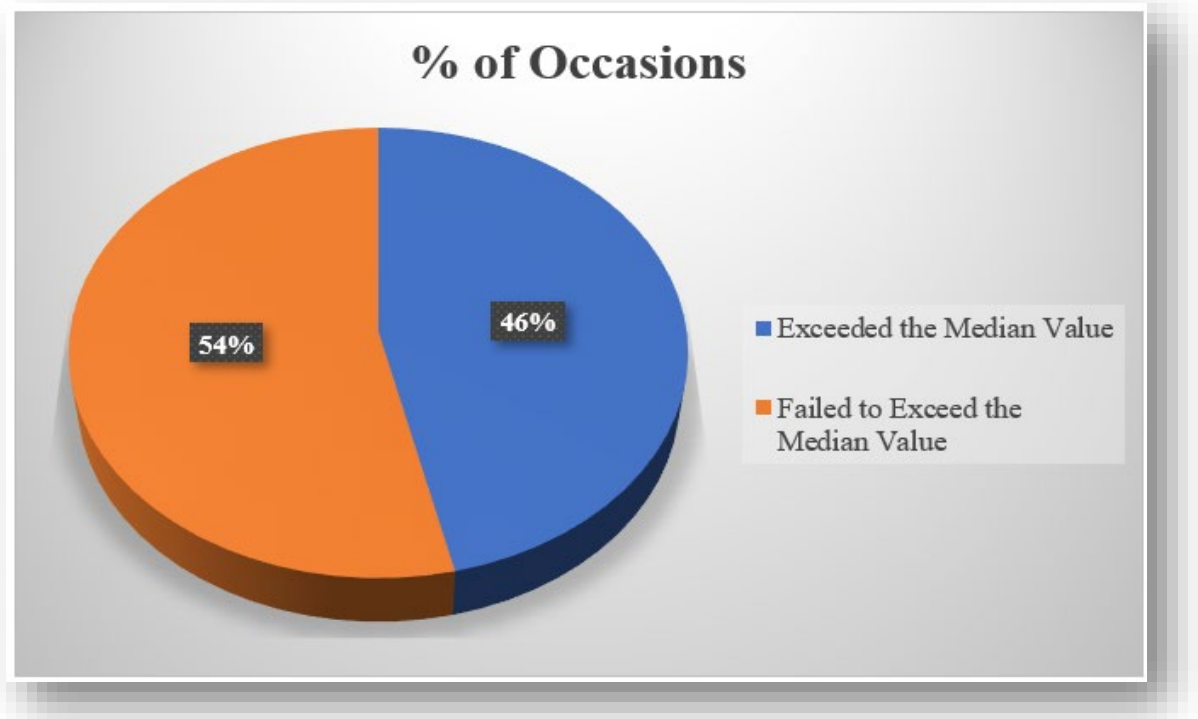
a. Dummy Variable < Content Value

b. Dummy Variable > Content Value

c. Dummy Variable = Content Value

This indicates Content Value to hold no affect toward Millennials entering the Flow state while consuming Instagram as the average Content Value score failed to exceed the median value (**3**) on over **50%** of occasions. This is displayed in *Figure 12*, rounded to the nearest percentage.

Figure 12. Pie Chart Presenting the % Differences Between Response Frequencies.



Despite this, the data acquired is not statistically significant – acquiring an alpha score exceeding **.05** (**p > .05**), finding **p = .554**, as displayed in *Table 14*. Also noted was **Z = -.591**. Due to the failure to achieve statistical significance – the author proposes additional research surrounding element should be conducted.

Table 14. Test Statistics.

	Dummy Variable – Content Value
Z	-.591
Asymp. Sig. (2-tailed)	.554

5.4.3 H0b Rejected As Evidence Shown For H1b

In reiteration of *Section 4.5*, the alternate and null hypothesis surrounding Content Value is:

H1a: Content Value does impact Instagram's capturing of Millennial users in a state of Flow.

H0a: Content Value does not impact Instagram's capturing of Millennial users in a state of Flow.

The Logistic Regression indicated Content Value to affect Millennials toward entering the Flow state while consuming Instagram in a statistically significant manner, however the Sign Test indicated Content Value to hold little affect in this regard – while also failed to achieve the required alpha level. Thus, in a similar manner to the Social Value element – the author has opted to consider this element as a '*weak*' indicator. Therefore, despite its '*weak*' classification, Content Value has still been indicated to hold an affect – thus, the author cautiously rejects **H0b**, showing evidence for **H1b**. Therefore, positing Research Objective 2 as achieved (see *Section 6.3*).

5.5 Infinite Scroll Indicated To Hold Affect By Both Tests

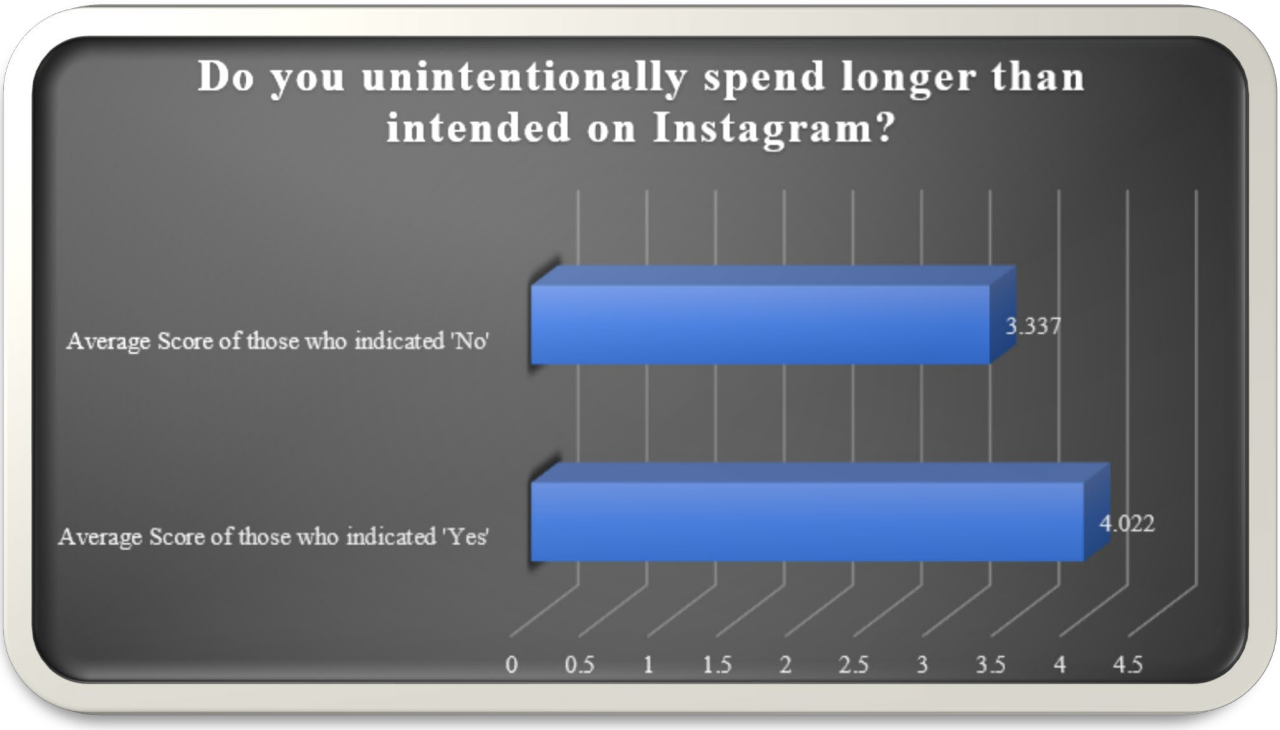
Unlike Social Value and Content Value, Infinite Scroll has been indicated as a driver toward Millennials entering the state of Flow while consuming Instagram in a statistically significant manner within both tests

5.5.1 Logistic Regression Posits Dependent Variable Irrelevant

*"Logistic Regression was performed to ascertain the effects of **Infinite Scroll** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

Infinite Scroll shows interesting results, indicating that irrespective of whether participants (Millennials) stated that they do/do not unconsciously spend longer than intended on Instagram, the average score exceeded the median value of 3 – with those who stated they do achieving a higher score (**4.022**) than those who indicated they do not (**3.337**).

Figure 13. Differences Regarding Dependent Variable.



As *Table 15* presents, the level of explained variance was equal to **16.7%**, with **B = -.541** and the alpha level representing **< .001** – thus positing the data as statistically significant.

Table 15. Content Value: Explained Variance, Degrees of Freedom, Beta Level, Alpha Level.

	Nagelkerke R^2	df	B	Sig.
Social Value	16.7%	1	-1.319	< .001

5.5.2 Sign Test Shows Dominating Results

*"Logistic Regression was performed to ascertain the effects of **Content Value** on the likelihood that participants (Millennial Instagram-consumers) enter the Flow state while consuming the Instagram platform."*

The conducted Sign Test found **165** occasions where the average score of Infinite Scroll exceeded the median value (**3**), as opposed to **42** occasions whereby it was equal to/below the median value.

Table 16. Frequencies.

		N
Dummy Variable – Infinite Scroll	Negative Differences[a]	165
	Positive Differences[b]	32
	Ties[c]	10
	Total	207

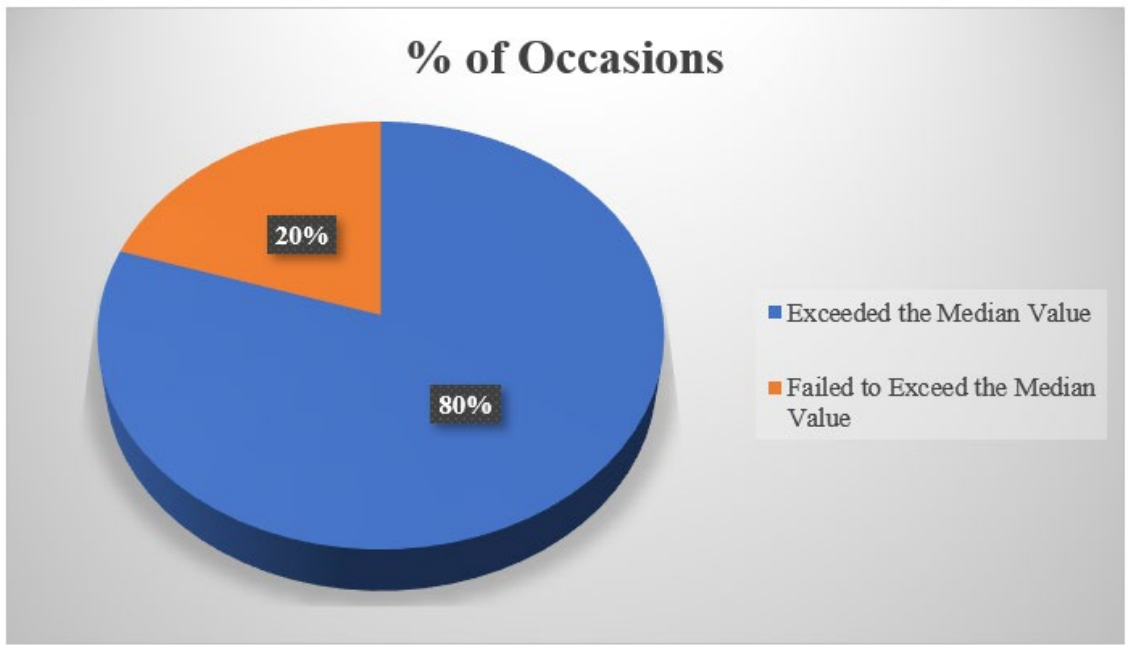
a. Dummy Variable < Infinite Scroll

b. Dummy Variable > Infinite Scroll

c. Dummy Variable = Infinite Scroll

This indicates Infinite Scroll to hold affect toward Millennials entering the Flow state while consuming Instagram as the average Infinite Scroll score exceeded the median value (**3**) on over **50%** of occasions. This is exhibited in *Figure 14*, rounded to the nearest percentage.

Figure 14. Pie Chart Presenting the % Differences Between Response Frequencies.



As shown in *Table 17*, the data is statistically significant – acquiring an alpha score of **< .001**. As noted was **Z = -.591**.

Table 17. Test Statistics.

	Dummy Variable – Infinite Scroll
Z	-9.405
Asymp. Sig. (2-tailed)	.000

5.5.3 H0c Rejected As Evidence Shown For H1b

In reiteration of *Section 4.5*, the alternate and null hypothesis surrounding Content Value is:

H1c: Infinite Scroll does impact Instagram's capturing of Millennial users in a state of Flow.

H0c: Infinite Scroll does not impact Instagram's capturing of Millennial users in a state of Flow.

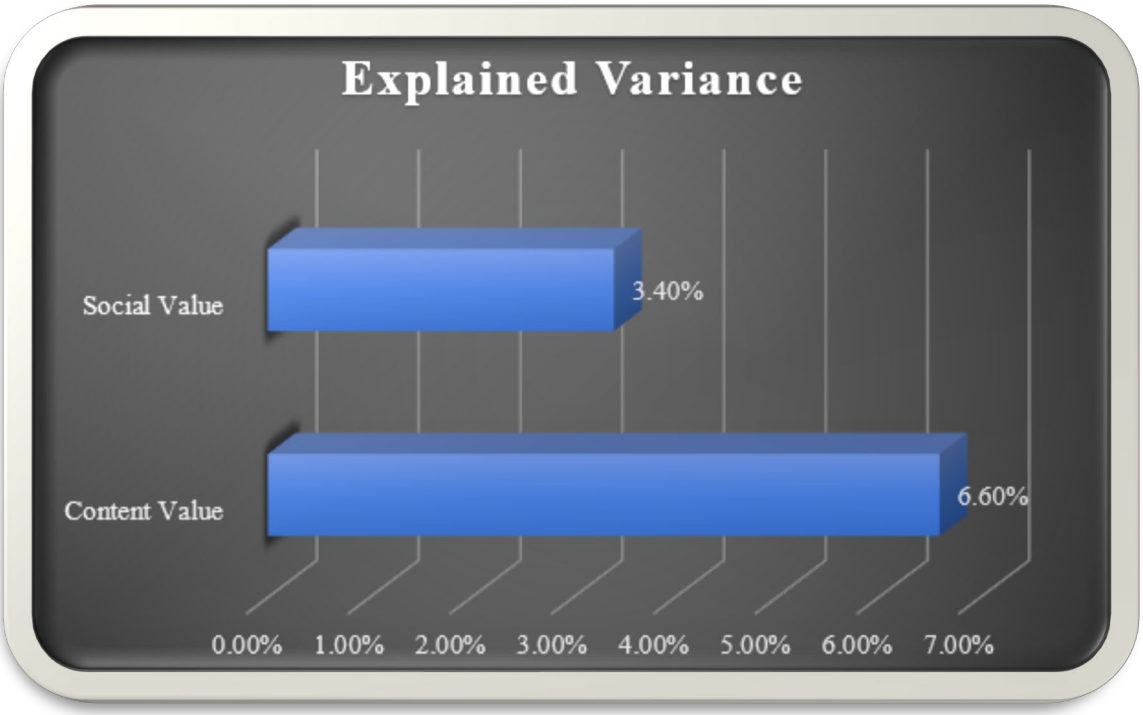
As presented within *Section 5.5*, Infinite Scroll has been indicated toward Millennials entering the Flow state while consuming Instagram in a statistically significant manner within both conducted tests. Thus, the author rejects **H0c**, showing evidence toward **H1c**. Therefore, positing Research Objective 3 as achieved (see *Section 6.4*).

5.6 Content Value Holds The Weakest Affect

As discussed, both Social Value and Content Value have been deemed to hold a '*weak*' affect toward Millennials entering the state of Flow while consuming Instagram as both elements failed to achieve statistically significant results on both tests.

Considering the Logistic Regression findings, Content Value generated a greater explained variance – as depicted in *Figure 15*. Thus, as explained variance is utilized to determine the discrepancy between a model and data (LaHuis *et al.*, 2014; O'Grady, 1982) – a higher score is considered to represent a stronger affect, positing Content Value to hold a stronger affect.

Figure 15. Content Value vs Social Value: Explained Variance.



However, regarding the tests which failed to indicate both elements to hold an effect on Millennials entering the state of Flow while consuming Instagram in a statistically significant manner – Social Value's findings trump the findings of Content Value. Firstly, Social Value's Logistic Regression findings the element to hold an affect – however failed to

achieve the required statistical significance by a minimal amount (**.005**). Thus, the author considered the Social Value as a trending element (see *Section 5.3.1*).

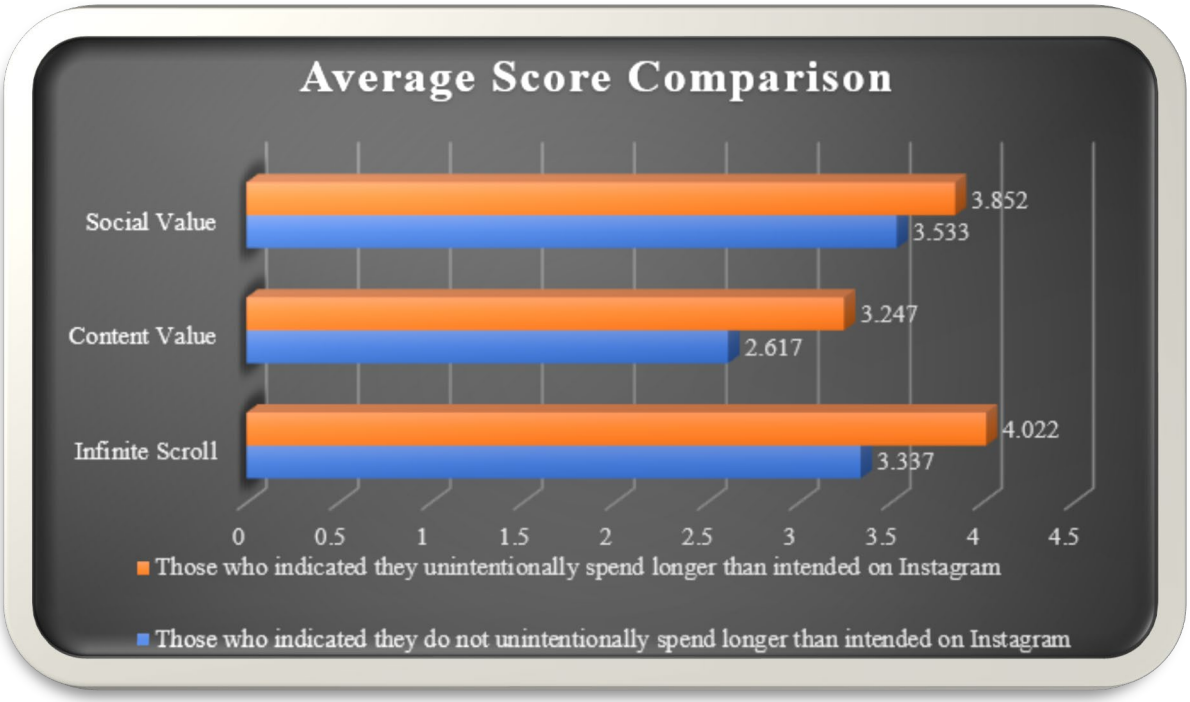
In comparison, Content Value's Sign Test findings failed to indicate the element to hold an affect – as over **50%** of recorded occasions resided below the median value (**3**) (see *Section 5.3.2*). Although this data was deemed statistically insignificant – no findings have arose to indicate an affect for Content Value in relation to the Sign Test, while the Logistic Regression positions a trending affect for Social Value. Thus, the author has deemed Content Value to hold the lowest affect toward Millennials entering the state of Flow while consuming Instagram.

5.7 Infinite Scroll Holds The Strongest Degree Of Affect

In correspondence with *Section 5.6*, Infinite Scroll has been deemed to hold the strongest affect toward Millennials entering the state of Flow while consuming Instagram. Initial reasoning proposed this result as Infinite Scroll was the sole element which indicated an affect within both the Logistic Regression and Sign Test. However, a deeper consideration supports this claim.

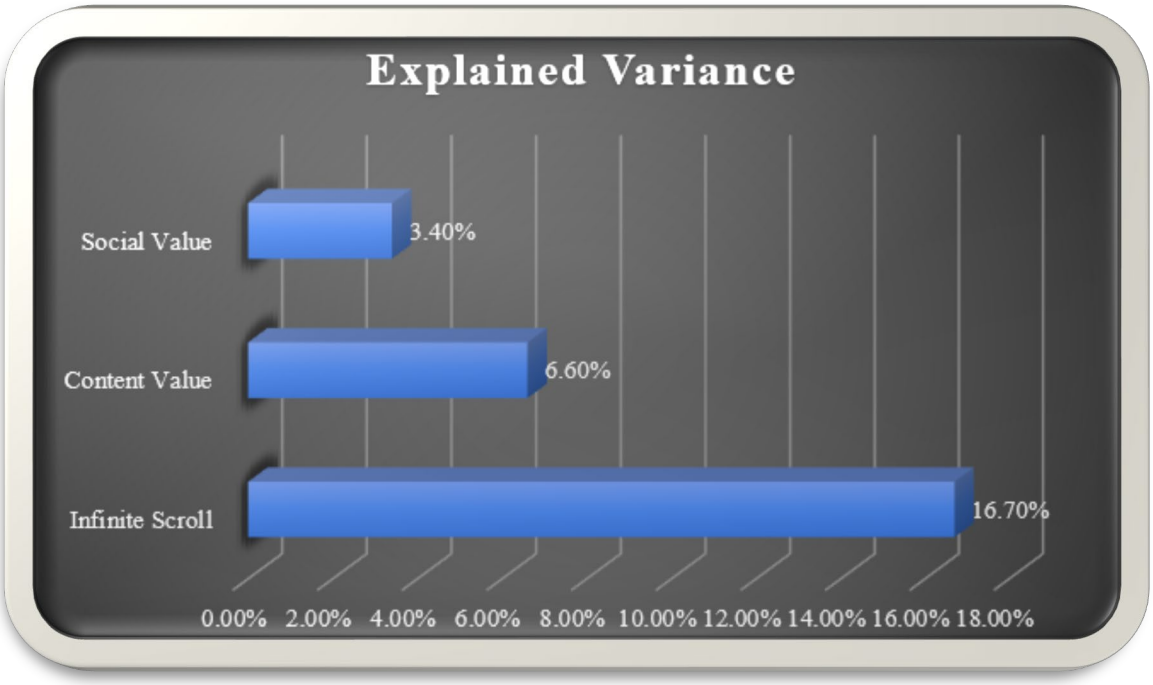
Regarding the Logistic Regression findings, Infinite Scroll placed second among the highest average scores for both those who stated they did unintentionally spend longer than intended on Instagram, and those who stated they did not.

Figure 16. Average Score Comparison: Logistic Regression.



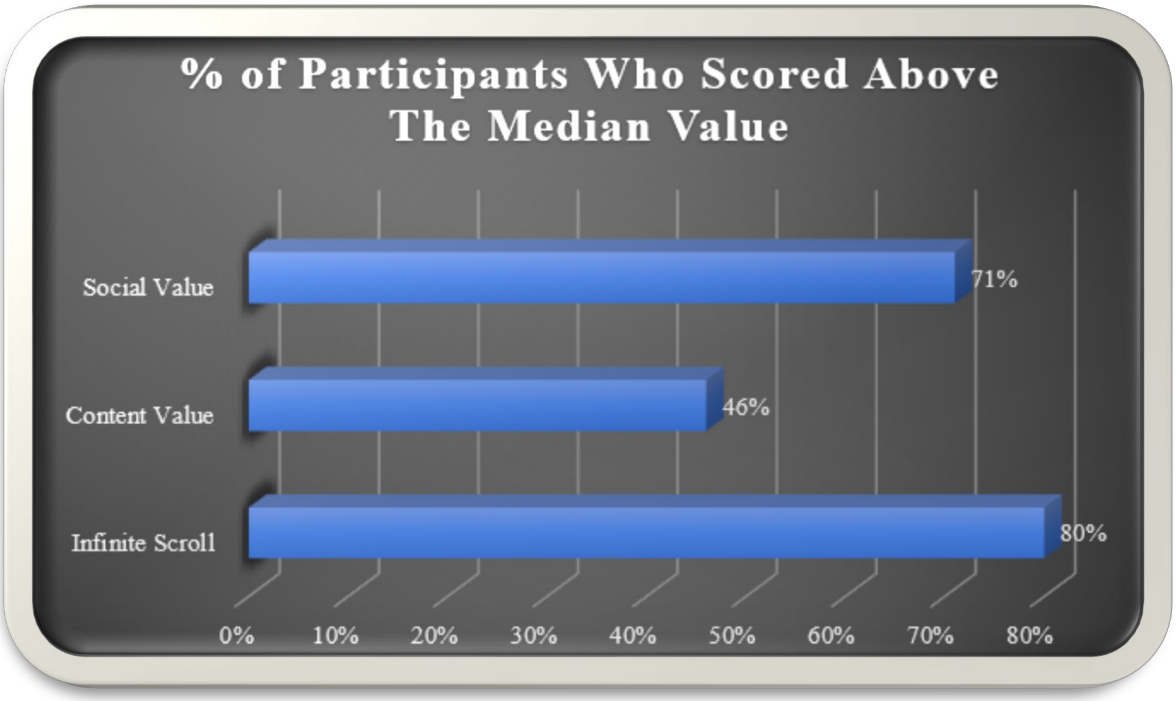
However, Infinite Scroll provided the largest percentage of explained variance, almost tripling the next best score – thus proposing Content Value as the strongest affect.

Figure 17. Explained Variance Comparison: Logistic Regression.



In addition, the Sign Test also positioned Infinite Scroll to hold the strongest affect – with the element recording the largest number of occasions whereby the average score exceeded the median value.

Figure 18. Frequency Comparison: Sign Test.



Thus, Infinite Scroll has been deemed to hold the strongest affect toward Millennials entering the Flow state while consuming Instagram, with Social Value considered to hold the next-most affect – therefore positioning Content Value to hold the weakest affect.

Table 18. Degree Of Affect: Ranking

Strongest Affect	Infinite Scroll
Second-Most Affect	Social Value
Weakest Affect	Content Value

5.8 Conclusion

In conclusion, this chapter has proposed an outline of the author's analysis and findings regarding each element (Social Value, Content Value, Infinite Scroll) toward Millennials entering the Flow state while consuming Instagram. Infinite Scroll and Social Value were both indicated to hold affect toward the Flow state under both analysis methods – however Social Value's Logistic Regression failed to achieve statistical significance, leading to the element being considered trending. Content Value was also indicated to hold affect, however only within one of the analysis methods. Social Value has been deemed to hold the weakest affect, while Infinite Scroll has been deemed to hold a strongest affect.

6.1 Introduction

This chapter represents a discussion regarding the findings from Chapter 5. The discussion has been compiled in correspondence to each Research Objective (noting an interpretation from a marketing perspective), the Research Question, and the overall Research Aims.

6.2 Research Objective 1

"Determine whether the Social Value received on Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

Based upon the study's findings, the author has concluded that the Social Value affects Millennial users regarding entering the state of Flow while consuming Instagram – to a weak degree (see *Section 5.3.3*). However, acknowledges these findings must be taken lightly due to the reliability issue which surrounds this element (see *Section 4.7.2*). In reiteration of *Chapter 5*, the Logistic Regression test failed to find Social Value to affect Millennials toward entering the Flow state while consuming Instagram in a statistically significant manner, while the Sign Test found Social Value to hold an affect in a statistically significant manner. However, the Logistic Regression only minimally exceeded the required alpha level and therefore Social Value was considered as a trending element. Thus, as both tests found positive findings, but only one met the required alpha level, the author has deemed Social Value to hold a weak affect – acknowledging the positive indication, while considering the significance level.

In reiteration of *Chapter 2*, Social Value was crafted in line with social media's characteristics of information, openness, interaction, sharing, connectedness, autonomy, collaboration, participation, creativity and reciprocity (retrieved from Kaplan and Haenlein (2010), Constantinides and Fountains (2008), Straus and Frost (2008), and O'Reilly (2007)). It became known as one branch under the '*Customer Value*' heading – referring to the '*social*' aspect which social media offers users, through providing relevant content from likeminded users such as friends, family, and influencers (Jiao *et al.*, 2018; Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015).

This result has provided an interesting conclusion, while also indicated the author's call for implementing age-related/generational and platform specification as viable. As *Chapter 2*

discussed, the study of Jiao, Gao and Yang (2015) tested the relationship between Customer Value within social media toward the Flow state – splitting Customer Value into the segments of Social Value and Content Value. Their study found both elements to be drivers of entering the Flow state while consuming social media. In addition, the study of Jiao, Jo and Sarigöllü (2017) adopted a similar Customer Value definition – noting Social Value and Content Value's ability to positively impact on social media users entering a Flow state, while the study of Hu, Kettinger and Poston (2014) found Social Value to aid online consumer satisfaction rates and continued social media use.

In relation to Social Value, these studies all adopted a generalized approach – classifying social media as one entity (by disregarding platform characteristics) and focusing on users of any age demographic/generation. Through this approach Social Value was consistently indicated as driver toward Flow. In comparison, this study – which focused solely on Millennials and the Instagram platform, could not conclusively indicate Social Value toward the Flow state within both conducted tests.

Although both tests found positive findings, the Sign Test minimally failed to meet the required alpha level. This weakly supports the findings of Jiao, Gao and Yang (2015) and Hu, Kettinger and Poston (2014) – who conclusively notes Social Value as a strong driver toward Flow and continued social media use, both tests could not conclusively determine Social Value to hold an affect within a statistically significant manner. However, to reiterate – it must be noted that reliability of this element's findings failed to meet the required Cronbach Alpha level. Therefore this result is accompanied by a limitation (see *Section 7.2.1*) and the author recommends future author's conduct a study whereby the Cronbach Alpha level meets the required **>.7** score (see *Section 7.3.1*). For purpose the marketing implications of this finding is discussed within *Section 6.5*.

6.3 Research Objective 2

"Determine whether the Content Value received on Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

Based upon the study's findings, the author has concluded that Content Value affects Millennials toward entering the Flow state while consuming Instagram (see *Section 5.4.3*). In reiteration of *Chapter 5*, the Logistic Regression indicated Content Value to hold an affect in

a statistically significant manner, but the Sign Test indicated no affect while also failing to meet the required alpha level.

In reiteration of *Chapter 5*, Content Value represents the second branch of Customer Value – therefore positing it compiled from Kaplan and Haenlein's (2010), Constantinides and Fountains' (2008), Straus and Frost's (2008), and O'Reilly's (2007) characteristics of social media. Content Value refers to the contributing, creating, consuming, and exchanging self-generated content aspect of social media (Jiao *et al.*, 2018; Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015).

As *Section 6.2* discussed, the studies of Jiao, Gao and Yang (2015) and Jiao, Jo and Sarigöllü (2017) split Customer Value into the elements of Social Value and Content Value – finding both elements to be drivers of entering the Flow state while consuming social media. Unlike Social Value, the Content Value findings aligned with the studies of Jiao, Gao and Yang (2015) and Jiao, Jo and Sarigöllü (2017) – although represent findings with specification toward Millennials who consume Instagram.

However, it must be noted that Content Value only explained **6.6%** of variance of Flow state, while the Sign Test failed to show over **50%** of occasions where the average score of Content Value exceeded the median value – although the Sign Test failed to meet the required alpha level. Thus, due the low levels of explained variation and unrepresentative Sign Test data, the author has deemed there to be a weak effect of Content Value on entering a Flow state during Instagram usage. Therefore, this element has been deemed to hold a weak affect – positioning as the element considered to hold the weakest affect in comparison to Social Value and Infinite Scroll (due to its failure to achieve positive findings on both tests and low levels of explained variation). The finding of a low affect weakly supports the study of Jiao, Gao and Yang (2015) which indicated Content Value as a strong driver toward entering Flow while consuming social media – positing the author to further advocate toward analysing under a specified approach in relation to age demographics and social platforms. For purpose the marketing implications of this finding is discussed within *Section 6.5*.

6.4 Research Objective 3

"Determine whether the Infinite Scroll platform construction utilized by Instagram affects Millennial users regarding entering the state of Flow while consuming the platform."

Based upon the study's findings, the author has concluded that the Infinite Scroll platform construction utilized by Instagram positively affects Millennial users regarding entering the state of Flow (see *Section 5.4.3*). In reiteration of *Chapter 5*, both conducted tests (Logistic Regression and Sign Test) indicated Infinite Scroll to affect Millennials toward entering the Flow state while consuming Instagram in a statistically significant manner.

This study's findings appear to align with the literature of Montag *et al* (2019), Noë *et al* (2019), Neyman (2017), and Springer (2015) which surrounds Infinite Scroll's capabilities. Although there were no prior studies which directly associated Infinite Scroll toward Flow on social media/Instagram, the platform construction has been suggested to affect consumers of an Infinite Scroll algorithm toward entering a Flow-like state (Montag *et al.*, 2019; Neyman, 2017).

As *Chapter 2* discussed, Infinite Scroll was crafted to ensure content is never-endingly distributed to the user in a manner of auto-loading additional content once the user comes close to the end of the currently loaded content (Neyman, 2017; Springer, 2015). This therefore lacks '*stopping cues*' and is thus used by social media platforms as it is recognised to prolong usage (Noë *et al.*, 2019). Additionally, consumers of an Infinite Scroll algorithm are considered vulnerable to consuming more content than intended (Neyman, 2017), with Infinite Scroll also known to ensure social media users become more and more immersed within the social media platform (Montag *et al.*, 2019) – providing scope toward a Flow state.

This study appears as the first which directly links Infinite Scroll toward the Flow state on social media (adopting specification to the Instagram platform and the Millennial generation) – finding a positive relationship between Infinite Scroll and Flow for Millennials in relation to consumption of Instagram. As mentioned in *Section 6.3*, Infinite Scroll acquired the largest explained variance within the Logistic Regression (**16.7%**), while also generated the most distinctive score within the Sign Test – concluding **165** occasions where the average score of Infinite Scroll exceeded the median value, as opposed to **42** occasions whereby the score was equal to/below the median value. Thus, this element has been deemed to hold the strongest affect toward Millennials entering the state of Flow while consuming Instagram, relative to the elements of Social Value and Content Value. For purpose the marketing implications of this finding is discussed within *Section 6.5*.

6.5 Interpretation Of Research Objectives From A Marketing Perspective

The findings of this study hold relevance to marketers as they relate to an ever-growing concept known as '*social media marketing*', while are specified to the Millennial generation – who are purchase-able for a minimum of 37.48 years based upon 2020's average life expectancy (Fry, 2020), and are also projected to globally inherit $68 trillion by 2030 (Kelly, 2019). The results are also specified to a social platform (Instagram) which possesses over 1 billion active worldwide users (Tankovska, 2021b), with 78.8% of said users wholly incorporating the Millennial generation (Statista Research Department, 2021b).

As *Chapter 2* discussed, the experience received by the consumer is a vital marketing aspect, with the consumer's experience suggested as a leading management strategy (Lemon and Verhoef) – being described as *"a distinct economic offering"* (Pine, 1998, p. 97), and a brand's digital experience labelled as the *"next competitive battleground"* for brands and marketers alike (Klaus, 2020, p. 306). Consideration of what underlines a positive digital experience on social media/Instagram posited two routes as valid methods – acquiring greater customer insight and the construction of a requisite platform (Nuseir, McKenna and Harrington, 2020; Price, Wrigley and Straker, 2015), while following consideration of the customer journey it was noted that Customer Value (Social Value and Content Value) and Infinite Scroll respectively referred to these methods (see *Section 2.6.2*).

In reiteration, the results of this study have indicated the elements of Social Value, Content Value and Infinite Scroll to positively affect Millennial users regarding entering the state of Flow. However, Infinite Scroll was the only element to achieve this result in both conducted tests under the required alpha level. Therefore, Infinite Scroll was deemed to hold the strongest affect. Social Value (despite its reliability issue) was also indicated to hold an affect within both tests – however minimally failed to achieve the required alpha level within one test. In comparison, Content Value found positive findings within one test, but failed to find affect within another (while also failing to achieve the required alpha level in said test) – thus, positing Content Value as the element which holds the lowest affect.

These findings align with the literature which surrounds experience/digital experience, Customer Value, and Infinite Scroll. Contemporary literature suggests experience and digital experience as a vital aspect for marketers/brands (Klaus, 2020; Lemon and Verhoef, 2016; Klaus, 2014; Payne, Storbacka and Frow, 2008; Pine, 1998) – with this study furthering this indication via the positive results surrounding what underlines Instagram's digital experience. The Customer Value findings also compliment the current literature which suggests

Customer Value as a driver of competitive advantage (Zeithaml *et al.*, 2020; Payne, Frow and Eggert, 2017; Kumar and Reinartz, 2016; Jiao, Gao and Yang, 2015; Roig *et al.*, 2006), while Infinite Scroll's findings align with the current literature which indicates Infinite Scroll toward a Flow-like state (Montag *et al.*, 2019; Noë *et al.* 2019; Neyman, 2017; Springer, 2015).

Thus, the author suggests the findings of this study have shown two methods whereby marketers can acquire engagement with the marketing-savvy Millennial generation on the platform of Instagram:

1) **Designing offerings which provide Customer Value (Social Value and Content Value).**

2) **Ensuring content is integrated effectively within Infinite Scroll platform construction.**

6.5.1 Customer Value

Through the study's findings, coupled with the current literature, the author can conclude that marketers can capitalize by designing offerings to provide Social Value and/or Content Value – as this will allow them to capture the Millennial generation in a hyper-focused/immersed state (Flow state) within their Instagram content.

Regarding Social Value, the author acknowledges that the element has been found to a weak affect, however, notes a weak affect still represents a capable tool to capitalize upon – as within the contemporary world an individual is exposed to 5000 marketing messages per day (Holmes, 2019). Thus, any potential advantage to gain marketer/brand-consumer engagement must be conducted. The author also notes this element's findings to highlight a stronger affect than Content Value toward capturing Millennial Instagram-consumers in a Flow state – and thus suggests marketers design their Instagram content predominantly around providing this element to achieve optimal results. As Social Value refers to the '*social*' aspect within Instagram (Jiao *et al.*, 2018; Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015) – the author suggests marketers should create targeted Instagram content which is likely to be shared and interacted with by likeminded users to play upon the '*social*' aspect received by Millennials when consuming Instagram.

For example, creating and distributing content such as competitions whereby it is mandatory to share the marketer's content to gain entry, or creating and distributing content which plays upon the hyper-interactive cravings of Millennials – such as their desire to co-create and collaborate with brands, voice opinions, and declare what they do and do not want (Naletelich and Spears, 2020; Wiegand, Lee and Xu, 2020; Lantos, 2014; Suntikul and Jachna, 2014). Based upon the study's findings, it can be assumed that should marketers implement a tactic whereby they play upon distributing Social Value to Millennial Instagram-consumers, they will acquire potential to capture said consumers within a Flow state – whereby they are hyper-focused and immersed within said content (Csikszentmihalyi, 1975), and thus engaging with the marketer and/or his brand in a hyper-focused manner.

In relation to Content Value, the author notes this element's findings to highlight a weaker affect than Social Value toward capturing Millennial Instagram-consumers in a Flow state – however emphasises that a weak affect still holds potential to provide competitive advantage through driving brand/consumer engagement. In reiteration, Content Value refers to the contributing, creating, consuming, and exchanging self-generated content aspect of social media (Jiao *et al.*, 2018; Jiao, Jo and Sarigöllü, 2017; Jiao, Gao and Yang, 2015), and thus the author suggests marketers create content which allows Millennial Instagram-consumers to implement their own '*twist*' upon it, or encourages self-creation of content which relates back to the marketer and/or his/her brand – as this will affect Millennials toward engaging with said marketer (and/or his brand) in a hyper-focused/immersed manner (Csikszentmihalyi, 1975).

Similar to Social Value – competitions represent a viable implementation example. The author suggests marketers should create and distribute a competition whereby it is mandatory to create new content in relation to his/her offering/brand – as this will provide the Content Value aspect of Instagram. Alternatively, content could be created which encourages users to contribute their opinions via self-creating posts and utilizing Instagram's '*tag*' or '*hashtag*' features to engage with the marketer and/or his brand. Based upon the study's findings, it can be assumed that should marketers implement a tactic whereby they play upon distributing Content Value to Millennial Instagram-consumers, they will acquire potential to capture said consumers within a Flow state – whereby they are immersed within said content (Csikszentmihalyi, 1975), and thus engaging with the marketer and/or his brand in a hyper-focused manner.

6.5.2 Infinite Scroll

Based upon the study's findings the author can also conclude that marketers can capitalize upon Instagram's Infinite Scroll platform construction by ensuring effective integration of their content – as this will allow them to capture the Millennial generation in a hyper-focused/immersed state (Flow state) within their Instagram content.

The study's findings have shown Infinite Scroll to hold the strongest affect toward Millennial Instagram-consumers entering the Flow state – and thus, the author suggests marketers should ensure seamless integration of their content as this will position themselves within a construction which lacks stopping ques (Noë *et al.*, 2019), and is known for driving consumer immersion (Montag *et al.*, 2019). For context, a stopping que holds potential to disrupt a consumer's engagement and potentially urge consumers to abandon their activity – with Amazon recording a loss of 1% in sales for every 100 milliseconds of page load (Phillips, 2016).

Thus, the author notes for marketers to achieve optimal engagement with Millennial Instagram-consumers, they must ensure their content is seamlessly integrated toward Instagram's Infinite Scroll construction – as the study's findings have indicated this to positively affect Millennials toward entering the Flow state. Therefore, providing scope for Millennials engage with content in a hyper-focused/immersed manner (Csikszentmihalyi, 1975).

6.6 Research Question: Answered?

"Does digital experience as delivered by Instagram capture Millennial users in a state of Flow?"

Upon reflection, the author can deduce that this study has answered the Research Question which it has been crafted upon. As *Chapter 2* explored, the digital experience of Instagram was underlined by two routes – acquiring greater insight and the construction of a requisite platform (Nuseir, McKenna and Harrington, 2020; Price, Wrigley and Straker, 2015), while Customer Value (Social Value and Content Value) and the Infinite Scroll platform construction were respectively noted as these routes (see *Section 2.6*).

The study's findings shown that all three elements of study (Social Value, Content Value, Infinite Scroll) positively affected Millennials toward entering the state of Flow while

consuming Instagram (despite Social Value's reliability issue). Thus, the Research Question has been answered:

The digital experience delivered by Instagram does capture Millennial users in a state of Flow.

6.7 Research Aim: Achieved?

Following reflection, the author acknowledges that the overall Research Aim of this study (discussed in *Section 1.4*) has been achieved. In reiteration, the overall aim of this study was to attain an improved understanding of Flow in relation to the elements of Social Value, Content Value, and Infinite Scroll under a specified lens tailored toward the Millennial generation and the Instagram platform – adopting a marketing perspective.

Through the study's findings, the author believes an improved insight into these elements has been achieved in relation to the Millennial generation and the Instagram platform – although reiterates the reliability level of Social Value as a limitation (see *Section 7.2.1*).

Chapter 7: Conclusions, Limitations And Recommendations

7.1 Conclusion

In conclusion, this study has detailed the individual testing of the elements of Social Value, Content Value and Infinite Scroll toward Millennials entering the Flow state while consuming Instagram. An overview of the relevant literature was proposed in *Chapter 2*, while the Research Question and Research Objectives were discussed in *Chapter 3*. The study's methodological choices were then outlined in *Chapter 4*, while *Chapter 5* provided the conducted analysis and subsequent findings, and *Chapter 6* a discussion of said findings in relation to the Research Question, Research Objectives, and Research Aims.

To conclude, the overall findings of this study have suggested all three elements (Social Value, Content Value, Infinite Scroll) as drivers toward Millennials entering the Flow state while consuming Instagram. Infinite Scroll represented the element to hold the strongest affect due to its level of explained variance within the Logistic Regression and distinctive findings within the Sign Test. Social Value was then deemed to hold the second-most affect – although this affect was still considered as weak due to the low level of explained variance and trending characterization within the Logistic Regression. Finally, Content Value was concluded to hold the weakest affect due to its failure to achieve positive findings within both tests – with the Sign Test indicating no affect, although failing to meet the required alpha level.

As the author acknowledges his study is not free of limitations, he has compiled *Section 7.2* to publish the identified post-study limitations (in correspondence with pre-study limitations noted in *Section 4.9.2)*

7.2 Limitations

The author has noted three limitations regarding the conducted study. In reiteration of *Section 4.9.2* – these limitations have been published as it is the ethically correct thing to, while it shows study transparency, and can aid future research (Greener, 2018; Bunniss and Kelly, 2010; Drotar, 2008).

7.2.1 Reliability and Consistency

The first limitation proposed by the author is the lack of reliability which surrounded the element of Social Value – with the element failing to meet the required Cronbach Alpha score of >.7, and thus indicating a lack of internal consistency (Taber, 2018; Tavakol and Dennick, 2011; Santos, 1999; Bland and Altman, 1997). Incorporating a lack of internal consistency can result in unreliable findings, and thus this has been deemed a limitation (O'Donoghue, 2007). In reiteration, the author continued with this element as to potentially aid future research – following consultation with his supervisor.

7.2.2 Lack of Prior Research on the Topic

This limitation refers to the lack of previous papers which wholly incorporate the elements incorporated within this study. Although previous research surrounding the study's topic was available, there was no study which incorporated all three elements (Social Value, Content Value, Infinite Scroll) toward the Flow state within social media/Instagram. For example, Jiao, Gao and Yang (2015) represented the best placed prior study surrounding the author's topic – despite their failing to incorporate the Infinite Scroll element and adoption of a generalized approach upon social platforms.

The author positions this as limitation toward his compiling of the Literature Review (Aguinis and Edwards, 2014; Brutus, Aguinis and Wassmer, 2013) due to the lack of connection between the elements of Social Value and Content Value with the element of Infinite Scroll. Regardless of Infinite Scroll's prior indications toward the Flow state upon social media (see Montag *et al.*, 2019; Neyman, 2015) – the element itself had never been positioned in correspondence with Social Value and Content Value, placing the author as the '*first-mover*' in this instance.

7.2.3 The Novelty of this Project to the Author

The final noted limitation refers to the novelty of this project to the author – positing the lack of experience and knowledge held regarding certain project aspects/instances as a limitation (Enshassi, Al Hallaq and Tayeh, 2019; Shipman, 2013; Pyne, Mujika and Reilly, 2009). This dissertation has incorporated aspects which the author has never been exposed to in prior assignments. Thus, lacking knowledge/experience regarding undertaking these aspects efficiently and effectively.

The author positions this in relation to Kolb's (1947) '*Learning Cycle*'. Kolb suggested the learning process to incorporate four phases: *"(1) Having a concrete experience → 2) Observation and reflection of said experience → 3) Formulating conceptualizations of said experience → 4) Using said conceptualizations to test hypothesis and therefore create new experiences"* (Copley, 2011, pp. 84-85). This concept suggests following a concrete experience and reflection upon said experience, an individual will have '*learnt*' regarding his/her undertaken activity (Kolb, 1947) – and thus gained knowledge/experience regarding said activity which can be drawn upon in the future.

The author suggests the lack of a concrete experience regarding (**1**) conducting a project without a specified brief, (**2**) utilizing the software of SPSS, and (**3**) undertaking a supervisory relationship as limitations to this study as he was unable to draw upon '*learnt*' knowledge to implement more effective/efficient choices.

7.3 Recommendations For Future Research

The author has noted five recommendations toward future research surrounding the conducted study.

7.3.1 Provide Consideration To The Limitations Above

The first recommendation surrounds the limitations *Section 7.2* discussed. The author wishes to emphasise these limitations and recommends future authors implement measures to counteract said limitations where possible – providing example measures below:

Reliability and Consistency Limitation: The author recommends compiling more-representative indicators for Social Value and conducting a pilot study to test their reliability level prior to study commencement.

Lack of Prior Research Limitation: The author recommends either selecting elements which have previous connections to one another or gaining insight from supervisors/experts surrounding where new element connections could be made.

Project Novelty Limitation: The author recommends selecting methodologies which correspond with the experience and knowledge held by the future author – and/or conducting an un-official (e.g. un-graded) study to acquire a degree of experience/knowledge prior to the official (e.g. graded) study.

7.3.2 Analysing A Different Generation/Social Platform

This study adopted a specified approach surrounding the Millennial generation and the Instagram platform. Thus, the author recommends analysing these elements in relation to either a different generation (e.g. Centennials/Baby Boomers) or a different platform (e.g. Facebook/TikTok). Through this, comparisons could be conducted, and insight may be acquired regarding generational/platform differences/similarities.

7.3.3 Adopting An 'Inside View' Of A Social Media platform

Another recommendation refers to conducting a similar study adopting an '*inside-view*' from a social platform – in other words, acquiring data from those who work within, or have worked for a social platform. This may provide greater insight into the techniques conducted by said social platforms, while may also provide scope to adopt a qualitative research approach. The author would like to stress this should only be considered if future authors/academics hold '*access*' capabilities.

7.3.4 Conducting A Similar Study From A Well-Being Perspective

Social media has been suggested to hold negative affects toward its users, such as aiding depression, suicidal ideation, stress, and anxiety (Brailovskaia, Schillack and Margraf, 2020; Jasso-Medrano and López-Rosales, 2018). Due negatively affecting mental health, Keles, McCrae and Grealish (2020) have described social media as a '*double-edged sword*' (Keles, McCrae and Grealish, 2020) – a claim supported by Aalbers *et al.* (2019) and Lin *et al.* (2016). In correspondence with the global increase in mental health issues, understanding social media's impact on well-being has become prioritized (Kim, 2017).

Thus, the author notes that although Millennials entering a Flow state while consuming Instagram represents a positive for marketers – it may further social media's negative affects to certain users, further affecting mental health. Thus, the author recommends conducting a study in relation to Flow upon social media from a well-being perspective – as this may shed further insight which could aid those negatively affected by social media.

7.3.5 Revising The Study To Achieve Correct Alpha Levels

Within the conducted analysis, the author's findings failed to achieve the required alpha (**$p < .05$**) on two occasions. Thus, the researcher suggests re-conducting the study conducted to achieve more-representative findings which adhere to the alpha level requirements.

7.4 Dissertation Summary

This dissertation has independently tested the relationship between Social Value, Content Value and Infinite Scroll toward Instagram's capturing of Millennial users within a state of Flow – conducting under the Research Question of: ***"Does digital experience as delivered by Instagram capture Millennial users in a state of Flow?"***. Digital experience was underlined as Customer Value (Social Value and Content Value) and the Infinite Scroll platform construction. The Research Objectives surrounded searching to determine whether each element held an affect toward Millennials entering the Flow state while consuming Instagram, while the study adopted a quantitative approach – utilizing an online questionnaire which gathered **207** responses that were interpreted via Logistic Regression and a One-Sample Sign Test. The findings of the study positioned Infinite Scroll to hold the strongest affect, followed by Social Value and then Content Value (for further explanation see *Section 7.1*).

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Appendix A*

Online Questionnaire

Dissertation Research: Toward an NCI student's Level 9 studies

Participant Consent

The researcher is collecting data for his Level 9 dissertation. The research topic surrounds the social platform of Instagram and the millennial generation - testing 3 areas identified which may drive millennials to utilizing the platform regularly and for long periods of time.

The data collected is intended to be quantitatively analysed, searching for correlations between responses. The researcher will be the sole viewer of the data received, with all respondents kept anonymous. Data will be securely stored and erased following the review period for the study. Data will be securely stored and erased following the review period for the study.

Participants can withdraw their data at any time. To withdraw your consent/data please email ***joe4dissertation@gmail.com.***

- Do you consent for the researcher to use your data within study?

I consent for my data to be used	I do not consent for my data to be used

- Please take note of the email address listed above - should you wish to withdraw your consent, please email this address and the researcher will withdraw your data from the study.

I have taken note of the email address provided	I wish to withdraw my data now

- To aid the researcher in the scenario of consent/data withdrawal - please provide your email address which the researcher can use as a reference.

_____

SECTION 1:

Introductory Questions

Q1: What age bracket do you belong to?

1-17	**18-22**	**23-30**	**31-38**	**39+**

Q2: Do you have an Instagram account?

Yes	**No**

Q3: Instagram use experience:

<1 Year	**1-3 Years**	**3-5 Years**	**5+ Years**

Q4: Do you use Instagram daily?

Yes	**No**

Q5: Within a week, how many hours do you think you spend on Instagram?

<1hr	**1-3hrs**	**3-5hrs**	**5-7hrs**	**7hrs+**

Q6: Do you believe Instagram have designed their platform to keep you on it for long periods of time?

Yes	**No**

Q7: Do you believe Instagram have designed their platform to urge you return regularly?

Yes	**No**

Q8: When you use Instagram, do you tend to lose track of time?

Yes	**No**

Q9: When you use Instagram, do you ever unconsciously spend longer than intended on the platform?

Yes	**No**

SECTION 2:

Please indicate on the scales provided the response which best represents your beliefs regarding the accompanied statement.

Q1: I use Instagram because I feel connected to friends, influencers, and the pages I follow.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q2: I react (like, comment, share, message) to the posts of my friends, influencers, and the pages I follow.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q3: I receive reaction (likes, comments, shares, messages) from my friends, influencers, and/or pages I follow on Instagram.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q4: I tend to become unconsciously '*captured*' within Instagram when interacting (viewing their posts, browsing content, direct/indirect messaging) with friends and lose track of time.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q5: I tend to become unconsciously '*captured*' when interacting (viewing their posts, browsing their content, direct/indirect messaging) with influencers and pages I follow.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q6: If there was no social aspect within Instagram, I would use the platform less.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q7: I find it difficult to leave Instagram when I am interacting (viewing posts, browsing content, direct/indirect messaging) with friends, personal influencers, and pages I follow.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

SECTION 3:

Please indicate on the scales provided the response which best represents your beliefs regarding the accompanied statement.

Q1: I use Instagram because I can create and post content.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q2: I enjoy creating and posting content on Instagram.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q3: I tend to become unconsciously '*captured*' when making and posting content and lose track of time.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q4: When I am creating and posting content, I tend to spend long than intended on Instagram.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q5: If I could not create and post content, I would use Instagram less.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q6: I find it difficult to leave Instagram when I am creating and posting content.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q7: When I am creating and posting content I tend to be on Instagram for long periods of time.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

SECTION 4:

Please indicate on the scales provided the response which best represents your beliefs regarding the accompanied statement.

Q1: I use Instagram because it is easy for me scroll through my never-ending feed.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q2: I tend to become unconsciously '*captured*' and lose track of time when scroll through my Instagram feed because it is never-ending.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q3: I tend to unintentionally spend longer than intended when scroll through my Instagram feed because it is never-ending.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q4: If Instagram required me to use a '*load more*' button to receive more posts to view, I would be able to leave the platform easier.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q5: If Instagram only provided a finite quantity of posts, I would use the platform less.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q6: If there was a limit on the posts Instagram provided me with, I would find it easier to leave the platform.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Q7: The infinite content I receive keeps me on Instagram unconsciously for long periods of time.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

Appendix B*

Questionnaire: Indicator Responses – Frequencies

SECTION 1:

Q1 and Q2 excluded as they were solely used to remove the study's irrelevant individuals

Q3:

Instagram use experience:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less Than 1 Year	4	1.9	1.9	1.9
	Between 1-3 Years	19	9.2	9.2	11.1
	Between 3-5 Years	74	35.7	35.7	46.9
	More Than 5 Years	110	53.1	53.1	100.0
	Total	207	100.0	100.0	

Q4:

Within a week, how many hours do spend on Instagram?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less Than 1 Hour	16	7.7	7.7	7.7
	Between 1-3 Hours	47	22.7	22.7	30.4
	Between 3-5 Hours	44	21.3	21.3	51.7
	Between 5-7 Hours	49	23.7	23.7	75.4
	More Than 7 Hours	51	24.6	24.6	100.0
	Total	207	100.0	100.0	

Q5:

Do you use Instagram daily?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I am a Daily User	174	84.1	84.1	84.1
	I am not a Daily User	33	15.9	15.9	100.0
	Total	207	100.0	100.0	

Q6:

Do you believe Instagram have designed their platform to keep you on it for long periods of time?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I Believe	195	94.2	94.2	94.2
	I Do Not Believe	12	5.8	5.8	100.0
	Total	207	100.0	100.0	

Q7:

Do you believe Instagram have designed their platform to urge you to return regularly?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I Believe	196	94.7	94.7	94.7
	I Do Not Believe	11	5.3	5.3	100.0
	Total	207	100.0	100.0	

Q8:

When you use Instagram, do you tend to lose track of time?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	165	79.7	79.7	79.7
	No	42	20.3	20.3	100.0
	Total	207	100.0	100.0	

Q9:

When you use Instagram, do you ever unintentionally spend longer than intended on the platform?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	184	88.9	88.9	88.9
	No	23	11.1	11.1	100.0
	Total	207	100.0	100.0	

SECTION 2:

Q1:

I use Instagram because I feel socially connected to friends, influencers, and the pages I follow.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	15	7.2	7.2	10.1
	Neither Agree nor Disagree	27	13.0	13.0	23.2
	Disagree	97	46.9	46.9	70.0
	Strongly Disagree	62	30.0	30.0	100.0
	Total	207	100.0	100.0	

Q2:

I react (like, comment, share, message) to the posts of my friends, influencers, and the pages I follow.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	14	6.8	6.8	9.7
	Neither Agree nor Disagree	13	6.3	6.3	15.9
	Agree	132	63.8	63.8	79.7
	Strongly Agree	42	20.3	20.3	100.0
	Total	207	100.0	100.0	

Q3:

I receive reaction (likes, comments, shares, messages) from my friends, personal influencers, and/or pages I follow.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	4.3	4.3	4.3
	Disagree	13	6.3	6.3	10.6
	Neither Agree nor Disagree	24	11.6	11.6	22.2
	Agree	134	64.7	64.7	87.0
	Strongly Agree	27	13.0	13.0	100.0
	Total	207	100.0	100.0	

Q4:

I tend to become unconsciously 'captured' within Instagram when interacting (viewing posts, browsing content, direct/indirect messaging) with friends and lose track of time.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.4	2.4	2.4
	Disagree	30	14.5	14.5	16.9
	Neither Agree nor Disagree	20	9.7	9.7	26.6
	Agree	117	56.5	56.5	83.1
	Strongly Agree	35	16.9	16.9	100.0
	Total	207	100.0	100.0	

Q5:

I tend to become unconsciously 'captured' within Instagram when Interacting (viewing posts, browsing content, direct/indirect messaging) with Influencers and pages I follow.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	3.9	3.9	3.9
	Disagree	41	19.8	19.8	23.7
	Neither Agree nor Disagree	9	4.3	4.3	28.0
	Agree	118	57.0	57.0	85.0
	Strongly Agree	31	15.0	15.0	100.0
	Total	207	100.0	100.0	

Q6:

If there was no social aspect within Instagram, I would use the platform less.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	2.4	2.4	2.4
	Disagree	15	7.2	7.2	9.7
	Neither Agree nor Disagree	28	13.5	13.5	23.2
	Agree	75	36.2	36.2	59.4
	Strongly Agree	84	40.6	40.6	100.0
	Total	207	100.0	100.0	

Q7:

I find it difficult to leave Instagram when I am interacting (viewing posts, browsing content, direct/indirect messaging) with friends, influencers and pages I follow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	5.8	5.8	5.8
	Disagree	52	25.1	25.1	30.9
	Neither Agree nor Disagree	27	13.0	13.0	44.0
	Agree	82	39.6	39.6	83.6
	Strongly Agree	34	16.4	16.4	100.0
	Total	207	100.0	100.0	

SECTION 3:

Q1:

I use Instagram because I can create and post content.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	21	10.1	10.1	10.1
	Disagree	44	21.3	21.3	31.4
	Neither Agree nor Disagree	30	14.5	14.5	45.9
	Agree	84	40.6	40.6	86.5
	Strongly Agree	28	13.5	13.5	100.0
	Total	207	100.0	100.0	

Q2:

I enjoy creating and posting content on Instagram.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	19	9.2	9.2	9.2
	Disagree	27	13.0	13.0	22.2
	Neither Agree nor Disagree	48	23.2	23.2	45.4
	Agree	89	43.0	43.0	88.4
	Strongly Agree	24	11.6	11.6	100.0
	Total	207	100.0	100.0	

Q3:

I tend to become unconsciously 'captured' when making and posting content and lose track of time.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	28	13.5	13.5	13.5
	Disagree	72	34.8	34.8	48.3
	Neither Agree nor Disagree	20	9.7	9.7	58.0
	Agree	69	33.3	33.3	91.3
	Strongly Agree	18	8.7	8.7	100.0
	Total	207	100.0	100.0	

Q4:

When I am creating and posting content I tend to spend longer than intended on Instagram.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	8.2	8.2	8.2
	Disagree	56	27.1	27.1	35.3
	Neither Agree nor Disagree	26	12.6	12.6	47.8
	Agree	88	42.5	42.5	90.3
	Strongly Agree	20	9.7	9.7	100.0
	Total	207	100.0	100.0	

Q5:

If I could not create and post content I would use Instagram less.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	32	15.5	15.5	15.5
	Disagree	49	23.7	23.7	39.1
	Neither Agree nor Disagree	25	12.1	12.1	51.2
	Agree	61	29.5	29.5	80.7
	Strongly Agree	40	19.3	19.3	100.0
	Total	207	100.0	100.0	

Q6:

I find it difficult to leave Instagram when I am creating and posting content.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	10.6	10.6	10.6
	Disagree	65	31.4	31.4	42.0
	Neither Agree nor Disagree	24	11.6	11.6	53.6
	Agree	78	37.7	37.7	91.3
	Strongly Agree	18	8.7	8.7	100.0
	Total	207	100.0	100.0	

Q7:

When I am creating and posting content I tend to be on Instagram for long periods of time.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	19	9.2	9.2	9.2
	Disagree	64	30.9	30.9	40.1
	Neither Agree nor Disagree	23	11.1	11.1	51.2
	Agree	76	36.7	36.7	87.9
	Strongly Agree	25	12.1	12.1	100.0
	Total	207	100.0	100.0	

SECTION 4:

Q1:

I use Instagram because it is easy for me to scroll through my never-ending feed.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.4	1.4	1.4
	Disagree	22	10.6	10.6	12.1
	Neither Agree nor Disagree	22	10.6	10.6	22.7
	Agree	75	36.2	36.2	58.9
	Strongly Agree	85	41.1	41.1	100.0
	Total	207	100.0	100.0	

Q2:

I tend to become unconsciously 'captured' and lose track of time when scrolling through my Instagram feed because it is never-ending.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.4	1.4	1.4
	Disagree	30	14.5	14.5	15.9
	Neither Agree nor Disagree	17	8.2	8.2	24.2
	Agree	101	48.8	48.8	72.9
	Strongly Agree	56	27.1	27.1	100.0
	Total	207	100.0	100.0	

Q3:

I tend to unintentionally spend longer than intended when scrolling through my Instagram feed because it is never-ending.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	2.9	2.9	2.9
	Disagree	25	12.1	12.1	15.0
	Neither Agree nor Disagree	14	6.8	6.8	21.7
	Agree	104	50.2	50.2	72.0
	Strongly Agree	58	28.0	28.0	100.0
	Total	207	100.0	100.0	

Q4:

If Instagram required me to use a 'load more' button to receive more posts to view, I would be able to leave the platform easier.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	.5	.5	.5
	Disagree	19	9.2	9.2	9.7
	Neither Agree nor Disagree	43	20.8	20.8	30.4
	Agree	90	43.5	43.5	73.9
	Strongly Agree	54	26.1	26.1	100.0
	Total	207	100.0	100.0	

Q5:

If Instagram only provided a finite quantity of posts I would use the platform less.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	.5	.5	.5
	Disagree	19	9.2	9.2	9.7
	Neither Agree nor Disagree	40	19.3	19.3	29.0
	Agree	102	49.3	49.3	78.3
	Strongly Agree	45	21.7	21.7	100.0
	Total	207	100.0	100.0	

Q6:

If there was a limit on the posts Instagram provided me with, I would find it easier to leave the platform.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	12	5.8	5.8	6.8
	Neither Agree nor Disagree	25	12.1	12.1	18.8
	Agree	102	49.3	49.3	68.1
	Strongly Agree	66	31.9	31.9	100.0
	Total	207	100.0	100.0	

Q7:

The infinite content I receive keeps me on Instagram unconsciously for long periods of time.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.0	1.0	1.0
	Disagree	27	13.0	13.0	14.0
	Neither Agree nor Disagree	17	8.2	8.2	22.2
	Agree	87	42.0	42.0	64.3
	Strongly Agree	74	35.7	35.7	100.0
	Total	207	100.0	100.0	

Appendix C*

Question Type 1 vs Question Type 2

	Segment 2 - Social Value toward Flow	**Segment 3** - Content Value toward Flow	**Segment 4** - Infinite Scroll toward Flow
Independent Variable for Logistic Regression	Q1, Q2, Q3, Q6, Q7	Q1, Q2, Q5, Q6, Q7	Q1, Q4, Q5, Q6
Dependent Variable for Sign Test	Q4, Q5	Q3, Q4	Q2, Q3, Q7

Thank you for taking the time to read my dissertation.