

**A NEW WAVE OF TECHNOLOGY: EXAMINING INTERACTIONS BETWEEN
INCELS AND AI GIRLFRIENDS**

by

ALANNAH REYNAUD

*A thesis submitted in partial fulfilment of
the requirements for the degree of*

BACHELOR OF ARTS (HONOURS)

in

CRIMINAL JUSTICE

*We accept this thesis as conforming
to the required standard*

Honours Thesis Supervisor

Kelly W. Sundberg, Ph.D.

Associate Professor

Department of Economics, Justice, and Policy Studies

MOUNT ROYAL UNIVERSITY



MOUNT ROYAL
UNIVERSITY
1910

© Alannah Reynaud, 2024
Calgary, Alberta, Canada

DECLARATION

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

This thesis may be made available for loan and limited copying in accordance with the *Copyright Act, RSC 1985, c C-42*.



ALANNAH REYNAUD

April 22, 2024

Date

Notice One

Under the *Copyright Act, RSC 1985, c C-42*, this thesis must be used only under the normal conditions of scholarly fair dealing. In particular no results or conclusions should be extracted from it, nor should it be copied or closely paraphrased in whole or in part without the written consent of the author. Proper written acknowledgement should be made for any assistance obtained from this thesis.

Notice Two

I certify that I have made all reasonable to secure copyright permission for third-party content included in this thesis and have not knowingly added copyright content to my work without the owner's permission.



ALANNAH REYNAUD

April 22, 2024

Date

ABSTRACT

As artificial intelligence (AI) develops, there are increasing concerns surrounding its usage as well as its impact on both society and individuals. With its rapid ability to change, there is a need to further understand the ways it can be used both for harm and for good, depending on intentions. This exploratory honours thesis examines the potential impact of AI-enabled “companion apps” on young males identifying with the Incel community. Utilising an AI-Participant simulation method, the thesis examines whether the AI companion, Replika will encourage the violent ideologies associated with incelism or be used as a tool to alleviate these feelings and thought processes through simulated social interactions. In addition to this, there is also a discussion surrounding the way that Incels exist in our current techno-sphere. This understanding involves their actions, radicalization process, and the impact of the internet, online dating, and online pornography. By addressing this under-researched area, this thesis aims to encourage further academic and societal discourse concerning the potential risks and/or benefits associated with AI companion apps for this specific demographic.

ACKNOWLEDGEMENT

I would like to start by expressing my gratitude to my supervisor, Dr. Kelly Sundberg. Thank you for helping me to formulate this topic and always expressing such excitement over my ideas. I would not have been able to get through this thesis without your constant support and encouragement. Not only did you inspire me to write this paper, but you have continuously pushed me to achieve things for my future that I never thought would have been possible. Beyond that, I would like to thank all the Criminal Justice faculty that have put such passion into their teaching. The care and compassion that can be found from the professors in this degree has inspired myself and others to continue to expand our knowledge and pursue our goals.

I would also like to thank all my family and friends for supporting me throughout this thesis and my academic career. To my parents, who have supported me every step of the way and always believed that I can achieve whatever I set my mind to. I would not be the person I am today without you. To my friends, who listened to me talk about my research and interests for hours on end, without fully understanding what I was talking about. Your support does not go unnoticed, and I hope I have made you proud. Finally, I would like to acknowledge all those that are not here to see me complete this milestone but are still somewhere cheering me on. I wish you could have all been here for this and I keep pushing forward for you.

TABLE OF CONTENTS

DECLARATION	i
Notice One	i
Notice Two.....	i
ABSTRACT.....	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS.....	iv
CHAPTER I: INTRODUCTION.....	1
I-1) Chapter Overview	1
I-2) Background	1
I-3) Research Question	1
I-4) Rationale and Significance	2
I-4-a) Rationale	2
I-4-b) Significance	2
I-5) Scope and Structure	3
I-5-a) Scope.....	3
I-5-b) Structure.....	3
I-6) Chapter Summary	4
CHAPTER II: LITERATURE REVIEW	6
II-1) Chapter Overview	6
II-2) Incels.....	6
II-2-a) Incel Violence.....	9
II-2-b) Radicalization Journey	11

II-2-c) Socialization and the Loneliness Crisis	13
II-3) Impact of the Internet	14
II-3-a) Why These Communities Fester Online.....	15
II-3-b) Online Dating and the Prevalence of Porn	16
II-3-c) Artificial Intelligence.....	19
II-5) Chapter Summary	23
CHAPTER III: THEORETICAL APPROACH	24
III-1) Chapter Overview	24
III-2) Overview of Masculinity and General Strain Theory	24
III-2-a) Masculinity Theory	24
III-2-b) General Strain Theory.....	25
III-3) Rationale for Using Masculinity and General Strain Theory.....	26
III-3-a) Masculinity Theory	26
III-3-b) General Strain Theory.....	28
III-4) Chapter Summary.....	28
CHAPTER IV: METHODOLOGY AND RESEARCH DESIGN.....	29
IV-1) Chapter Overview	29
IV-2) Overview of Methodological Approach	29
IV-3) Description of Methodology	30
IV-3) Collection and Analysis of Data and Information	30
IV-5) Chapter Summary	32
CHAPTER V: DATA ANALYSIS AND RESULTS	33

V-1) Chapter Overview.....	33
V-2) Data and Information Analysis.....	33
V-2-a) Collection of Data and Information	33
V-2-b) Analysis of Data and Information.....	34
V-3) Results from Analysis	35
V-3-a) Result One	35
V-3-b) Result Two	36
V-3-c) Result Three	37
V-3-d) Result Four.....	37
V-4) Central Findings from Analysis	39
V-5) Chapter Summary.....	39
CHAPTER VI: DISCUSSION	40
VI-1) Chapter Overview	40
VI-2) Addressing the Research Question	40
VI-3) Relation to Existing Research and Scholarship	40
VI-4) Implications.....	41
VI-5) Chapter Summary	41
CHAPTER VII: CONCLUSION.....	43
VII-1) Chapter Overview	43
VII-2) Addressing the Research Question	43
VII-3) Limitations and Other Considerations	44
VII-4) Suggested Future Research.....	44

VII-5) Chapter Summary	45
REFERENCES	46

CHAPTER I: INTRODUCTION

I-1) Chapter Overview

This thesis aims to explore the potential link between artificial intelligence (AI) and the radicalization associated with the involuntary celibate (Incel) subculture through a later discussed experiment. Beginning with the background of who incels are and the small percentage of them that commit violent crimes, the introduction lays out the thesis research question, and identifies the rationale and significance for the study. Finally, the scope and structure of the thesis is provided.

I-2) Background

Involuntary celibacy (Incels) refers to a subculture of predominantly men that have congregated online on forums such as Reddit and 4chan to lament their perceived romantic and sexual failures (Glance et al., 2021). These men desire the sexual and romantic attention of women but are unable to obtain it due to what they view as both their own personal failings and the inferiority of women. These men are characterised by a sense of entitlement to female attention as well as resentment toward perceived social injustices. They often blame feminism for their celibacy, citing that women are genetically inferior and therefore owe them a relationship while also complaining that women prefer more genetically superior men (Scaptura and Boyle, 2020). This makes women both the object of their desire and their contempt.

This paper will be focusing on the portion of incels that are violent. Despite the hostile and aggressive messages found in this subculture, most of the men will not engage in violence (Glance et al., 2021; Scaptura and Boyle, 2020). However, their online discourse includes misogynistic rhetoric and celebration of rape and murder which creates a harmful environment

for women (Scaptura and Boyle, 2020). This makes their behaviour dangerous even without the act of physical harm.

I-3) Research Question

Will advances in artificial intelligence and related technologies contribute to the radicalization of young men susceptible to the incel subculture?

I-4) Rationale and Significance

I-4-a) Rationale

This exploratory study examined the intersection of AI technology and Incel radicalization, in an attempt to understand whether AI exacerbates or mitigates the risk of violent extremism among susceptible individuals. As discussed by Maxwell et al. (2020), those that are deficient in social skills are more likely to be lonely and socially isolated. This creates an endless cycle of loneliness and social isolation which can then result in a perception of more intense negative interactions. This feeling of loneliness and need for social connection can extend beyond platonic relationships to romantic relationships which is what is occurring in the case of incels. Incels can experience feelings of depression, despair, and a loss of self-confidence due to their lack of a relationship (Maxwell et al., 2020). When men believe that they should have entered a sexual relationship at a certain time and fail to, they continue to feel highly isolated which accompanied with traditional expectations can lead to toxic views surrounding masculinity.

This study was conducted using an experimental research method with an exploratory focus. This choice was made due to the lack of research within this topic. With AI being relatively new, the discussion about its potential for radicalization has yet to be thoroughly studied. However, it is developing at an extreme speed which makes it even more important to understand the implications associated with its use.

I-4-b) Significance

Even though only a small number of Incels commit violent crimes, these crimes are typically related to mass violence towards women (Glance et al., 2021; Scaptura and Boyle, 2020). This is what makes the radicalization aspect such a concern. Concurrently, AI has become a significant technology that still requires much research — this thesis aims to contribute to the existing scholarship in this field. For the criminal justice field to become preventative, we must better understand the impact that AI can have. This project will therefore be working to add to the developing knowledge around the impacts of AI. The findings will have value for government policy and our understanding of domestic terrorism as currently, contemporary literature regarding homeland security and intelligence fails to mention incel violence or is incredibly limited (Carvin et al., 2021; Miller-Idriss, 2020; Morag, 2018; Ramsay et al., 2020; Zakaria, 2020). This lack of acknowledgment is concerning since it is estimated that at least seven mass shootings in the last decade involved an incel (Scaptura and Boyle, 2021). Therefore, it is of value to these areas to understand the growing threat and how it may be impacted by AI.

I-5) Scope and Structure

I-5-a) Scope

This thesis focused on violence perpetrated by those associated with the Incel ideology to understand the radicalization process. The population that was focused on is men that are between the ages of 16 to 30. This will highlight the beginning of the radicalization process as well as the potential preventative measures that can be put in place. As shown in the few demographics available, many users are under the age of 30 (Williams et al., 2021; Stijelja and Mishara, 2023).

As the Incel ideology is primarily a Western phenomenon, the research mainly focuses on the context of Canada, the United States, Australia, and New Zealand. Doing so allows this study to avoid unrelated gender-based acts of violence and extremism to possibly skew results aimed at isolating the reality of Incels. Though these two acts interlap, focusing on the Incel subculture will aid in the specificity of the research.

I-5-b) Structure

The introduction chapter demonstrates the context and background surrounding this topic, the importance behind this research due to its newness, and its implications for domestic terrorism. The literature review examines who Incels are and the impact of the internet. More specifically, the chapter is diving into Incel violence, the radicalization process, and socialisation, as well as how online dating and the prevalence of porn have impacted this group. Beyond that, this chapter also discusses AI and its relation to the topic at hand. The theoretical chapter discusses masculinity theory and general strain theory and how they explain the violence and radicalization that we see in Incels. The fourth chapter explains the choice of methodology and research design and how it was used to answer the research question. The fifth chapter investigates the use of thematic analysis to analyse the data collected through the experiment. As well, the results and central findings of this analysis are discussed. The sixth chapter readdresses the research question and discusses the implications of the findings from this thesis. This includes looking at its relation to existing research and scholarship and where it fits within this knowledge. Finally, the seventh chapter wraps the thesis together by discussing limitations experienced during this thesis and suggesting future research to be conducted.

I-6) Chapter Summary

The Incel subculture has existed for over a decade, however with the new development of AI, the way this subculture has previously been imagined clearly has changed. The purpose

of this thesis is to explore the potential interaction between AI and the Incel subculture. This is achieved through an experimental study with an exploratory focus through the AI companion, Replika. However, to understand the threat of Incels, it is important to investigate their background as well as their relationship with the internet.

CHAPTER II: LITERATURE REVIEW

II-1) Chapter Overview

Research surrounding Incels and their violent acts has grown as their acts of violence became a larger issue of concern. There is an understanding surrounding what they believe and how these beliefs impact the way in which they view society and women (Scaptura and Boyle, 2020). However, it has been found that much of this rhetoric falls back to the idea of loneliness and a lack of socialisation (Maxwell et al., 2022). Due to their beliefs, they struggle to find connections within their daily life which is partially what leads them to the internet. Once introduced to incel beliefs on the internet, individuals will experience an echo chamber that allows their ideals to build into the hateful rhetoric that is known by the general public. However, there is only preliminary research surrounding the usage of dating apps and AI and how this will impact Incels (Depounti et al., 2023; Laestadius et al., 2022; Possati et al., 2023; Sparks et al., 2023; Skjuve et al., 2021). The findings thus far have shown that there can be benefits and consequences to both depending on the amount of usage and the individual.

This section begins by explaining who Incels are, their available demographics, and some of their key concepts. Following is an account of some of the more notorious Incel acts of violence and the way misogynistic beliefs served as a radicalization tool for this violence. There is also discussion as to how individuals become radicalised to the point of violence. Finally, there is a focus on the impact of the internet on inceldom provided. This will include how these communities form, the impact of online dating and pornography, as well as the known impacts of AI.

II-2) Incels

The original Incel community was founded in 1997 by Canadian college student Alana (Glance et al., 2021; Stijelja and Mishara, 2023; Sparks et al., 2022). She was frustrated by her lack of romantic companionship and was looking for a supportive community. Her intent

behind the site was to give people experiencing romantic relationship droughts positive ways of managing their loneliness (Miller, 2023). It was around 2000, when she stepped away from the website and the Incel community that is known today began to form. Incels reside throughout the online sphere, taking up space in different online forums such as Reddit and 4chan. The change in the community came from the rise of the manosphere which is a largely online community of reactionary-right men who believe that feminism has gone too far and that men are the wrongfully oppressed gender (Glance et al., 2021). As it developed, the Incel community became an echo chamber that allowed for frustrated young men to blame their misfortunes and sexual failures on feminism for allowing women to become more independent and sexually liberated (Miller, 2023). Overall, the Incel community has largely shifted from its original intent and is now associated with violence, terrorism, alt-right ideology, white-supremacy, and the anti-feminist movement (Maxwell et al., 2020).

Due to the Incel community being predominantly online, the demographics surrounding its participants are scarce and at times contradictory. For example, Glance et al., (2021) shared that many incels belong to non-Caucasian racial groups while Williams et al. (2021) found that in their study, 71% of the sample were Caucasian, Sparks et al., (2022) shared that most Incels reside in industrialised Western democracies and Davis (2022) found through a survey conducted by Incels.com that a little over half of their users were Caucasian. Most of the research points to Incels being predominantly Caucasian or Westernised, but the data remains uncertain. In two surveys discussed by Stijelja and Mishara (2023), it was found that most users were under the age of 30 and Caucasian. The main demographic feature that can be agreed upon is the fact that nearly all participants are males. However, demographics have not been systematically measured and require more research.

The Incel ideology is based on the belief that feminism is ruining Western society, thus warranting a violent gender revolt to re-establish male and White superiority (Williams et al.,

2021). Many of their beliefs are steeped in misogyny with violent tendencies. They believe that society is hierarchized along sex and attractiveness lines that favour women and exclude men who are not as good-looking from any romantic or sexual relationship (Baele et al., 2021). In their eyes, there are many reasons that they cannot find a relationship such as a lack of traditionally attractive masculine physical traits and the inability to change their appearance (Glance et al., 2020; Maxwell et al., 2020). Their entire ideology is full of contradictions as they have an obsessive desire for sexual contact with women while simultaneously degrading women who engage in sexual activity (Glance et al., 2021). They shame women for having sex with other men while also shaming them for not having sex with them. Overall, they see women as inherently cruel, evil, and manipulative yet still desire them in some form (Maxwell et al., 2020; O'Malley et al., 2022). These types of beliefs lead to attitudes such as hostile sexism, masculinity threat, gender role stress, and toxic masculinity (Glance et al., 2021; Scaptura and Boyle, 2020). Their anger boils down to their negative beliefs about women coupled with their disgust in forming attachments with what they deem as unattractive women yet still desiring sexual encounters with them.

There are many terms within the Incel community that allow them to discuss their hatred in a non-mainstream manner. Many of these terms stem from *The Matrix* such as their red pill, black pill, and blue pill philosophies. The red pill is their awakening to the truth of male-female relationships and the misandry and brainwashing that is occurring (Ging, 2019; O'Malley et al., 2022; Stijelja and Mishara, 2023). This aids in their violence against others and is meant to aid them in the understanding that women are shallow and deserve to be manipulated, exploited, and the targets of their revenge (Davis, 2019; Ging, 2019). The blue pill philosophy is the counter of the red pill philosophy. It is the dominant viewpoint for accepting and believing in societal views of the dating scene (Williams et al., 2021). The black pill philosophy is a branch of the red pill philosophy that is more nihilistic and focuses on the

inability of their life circumstances to change (Miller, 2023). This philosophy also leans into their ideas of social hierarchy where they are doomed to be at the bottom (Davis, 2022). They also believe that women are solely responsible for this hierarchy which is partially what leads them to target women in their acts of violence. This hierarchy consists of “Stacy”, “Chad”, “normies”, and “Incels”. Stacys and Chads are those that are at the top of the hierarchy. Stacys are the ideal female who are the epitome of beauty but only like attractive men with financial resources (Maxwell et al., 2020). Chads are the male ideal that all women want and are labelled as the perfect mate. Normies are those in the middle of the hierarchy that are not as attractive but still possess some of the traits that incels associate with hegemonic masculinity (Davis, 2022). Incels are at the bottom of the hierarchy and believe that they lack the alpha male traits and are genetically inferior (Davis, 2022; Maxwell et al., 2020).

II-2-a) Incel Violence

Despite the hateful rhetoric involved in the Incel subculture, most individuals do not become physically violent. Beyond that, it is also a small portion of the subgroup that participates in the more extreme hateful content (Glance et al., 2021; Scaptura and Boyle, 2020). It was found that about 10% of users were responsible for most of the hateful content directed at users (Jaki et al., 2019 as cited in Stijelja and Mishara, 2023). Despite this, they may still express their aggression in ways that contribute to a toxic masculine culture that is harmful to women (Scaptura and Boyle, 2020). However, as this thesis focuses on the violent portion of Incels, it is important to investigate those that successfully carried out acts of violence as well as some of the reasoning surrounding their violent acts.

Depending on the literature that is being examined, there is a long list of men that are considered to have attacked under the name of Inceldom. However, some received more notoriety than others such as Elliot Rodger, Alek Minassian, and Scott Paul Beierle. Elliot Rodger’s attack occurred in Southern California in 2014 where he killed 6 people and wounded

14 others (Baele et al., 2021; Glace et al., 2021; Scaptura and Boyle, 2020; Williams et al., 2021). Prior to his attack, he released his manifesto online where he laid the blame on his predicament on interference from other men, the coldness and superficiality of women, and the social acceptance of mixed couples (Williams et al., 2021). Over time, this manifesto became somewhat of an Incel doctrine and Rodger was viewed as a martyr in the Incel community (Glace et al., 2021; Williams et al., 2021).

Alek Minassian's attack occurred in 2018 in Toronto when he drove a van into a crowd of people and killed 10 of them while injuring 15 others (Glace et al., 2021; Scaptura and Boyle, 2020; Williams et al., 2021). Minassian was a self-identified Incel that had posted a suicide note prior to his attack that praised Rodger and stated that "The Incel Rebellion has already begun!" (Scaptura and Boyle, 2020; Williams et al., 2021). After his arrest, he shared that his intent had been to use the attack to trigger an Incel rebellion that would result in the genocide of Stacys and Chads so that Incels and Beckys could repopulate the world (Williams et al., 2021).

Scott Paul Bierele's attack also occurred in 2018 but in Tallahassee, Florida (Miller, 2023; Scaptura and Boyle, 2020). Bierle shot and killed two women and wounded five others in a yoga studio that he knew would be mostly populated by women. Prior to his attack, he had expressed Incel sentiments and sympathy for Rodger (Scaptura and Boyle, 2021). This former school teacher also had a history of sexual misconduct, had previously expressed hatred of women, and had fantasized about rape and murder in his journals (Miller, 2023; Scaptura and Boyle, 2020). These three individuals are just a few examples of those who have committed mass violence in the name of Inceldom.

It has been estimated that 7 mass shootings in the last decade involved an Incel (Scaptura and Boyle, 2020). As well the Incel ideals can be dated back further than the last decade and all the way to 1989, though they may not have been termed as Incel attacks during

that time. Marc Lépine is considered the first unofficial Incel that had attempted mass violence (Williams et al., 2021). He murdered 14 female college students and his suicide note expressed rage at a wave of radical feminism that allowed women to pursue engineering careers. Though many Incels may not become violent, the violence that has occurred due to the Incel ideology is of concern and needs to be further examined.

The Incel community itself serves as a radicalization tool as its entitlement to women and sex may predispose men to enact mass violence (Glance et al., 2021; Scaptura and Boyle, 2021). Their viewpoints on the world are very black and white and they see violence as an act of revenge and a valid solution since they are being denied something to which they believe they are entitled to (Baele et al., 2021). The acts of violence that they are committing are ways to recover their honour and salvage their sense of masculinity (Miller, 2023). It is due to the way that they believe society is hierarchical that leads them to have these intense feelings of aggression that make their way into violence.

II-2-b) Radicalization Journey

The Incel phenomenon has garnered increasing attention due to its association with radicalization, particularly facilitated by the proliferation of online communities and potentially through the emergence of AI companions. Baele et al., (2021) state that though the Incel phenomenon has been historically rare, it has expanded and worsened since the 1960s, often attributing blame to feminist movements. Their perceived feminization and the erosion of masculinity contributes to Incels' sense of frustration which leads some to believe that violence is the only means of escape. There are several ways that the journey can begin such as the desire to overcome social isolation by joining online communities and the adoption of hegemonic or toxic beliefs about masculinity (Maxwell et al., 2020). Participation in these Incel communities may radicalise individuals, distorting their perceptions of normal sexual development alongside toxic masculine ideologies (Glance et al., 2021). Skoczylis and Andrews

(2020) add to this discussion by highlighting the vulnerability of youths to extremism, especially as a reaction to social stress or negative childhood experiences. Furthermore, Messerschmidt (2002, as cited in Maxwell et al., 2020) notes that adolescent boys who adopt hegemonic views of masculinity may be more inclined toward acts of sexual violence, reinforcing the connection between toxic masculinity.

An Incel's move toward violence typically begins with the perception of injustice and a desire to improve one's situation which can then lead to extremism for those who react to these emotions with frustration and anger (O'Malley et al., 2022). Through the online echo chamber, these individuals learn to displace their anger toward a common enemy, which in this case is women (O'Malley et al., 2022; Verdugo-Thomson, 2023). By engaging with men who have similar viewpoints, their current thinking is bolstered which creates rituals around conquering women where men display their masculine power by subduing a female partner (Maxwell et al., 2020). According to Maxwell et al., (2020), Incels experience a cyclical thought pattern which can lead to extremism. They begin by seeking to attract a romantic partner where they weigh the costs and benefits. In doing so, they consider the patriarchal standards of both the men and women which they perceive as unobtainable. After Incels experience romantic rejection, they will respond based on their adult attachment style. Those that are anxious-preoccupied will simply reduce men and women to Stacys and Chads and accept that this is something they will never achieve. However, those that respond through a dismissive-avoidant response are more likely to become radicalised through anger towards women.

Miller (2023) extends the understanding of Incel radicalization by further exploring the cyclical thought patterns of Incels and the role of online communities in fostering radicalizations. This exploration also examines lone wolf terrorism to reveal the milestones between an individual's initial grievances and final actions, which are often non sequential and

influenced by factors such as alienation and a lack of accessibility to bonds. These milestones involve discovering sympathetic voices in online spaces, embracing enablers, broadcasting their intentions, and some form of a triggering event prior to their act of mass violence.

The anger begins when women are ignoring them, mocking them, or preferring the company of other men. This grievance stems from women being the embodiments of sexual rejection and societal unfairness. Incels vent their frustration to allies and are constantly consuming toxic and misogynistic material online, which may motivate them to take violent action. Within the online sphere of Inceldom, there are also direct and indirect enablers (Miller, 2023). Those who are considered direct enablers, unintentionally provide some form of assistance toward the planning of attacks. Meanwhile, indirect enablers motivate and inspire potential lone wolves long after their capture or death. Their words or deeds can be enough to encourage potential lone wolves to persist.

II-2-c) Socialization and the Loneliness Crisis

Despite the violence and aggression that is often accompanied by the term Incel, there is a large amount of loneliness that comes with this identification. As stated by Maxwell et al., (2020), social connection is a human need and the Incel subgroup is one that is continually found to be lacking in social connection. They are known to report suicidal thoughts, feelings and intentions, intense social isolation, despair, resignation, frustration, anxiety, and a loss of self-esteem (Glance et al., 2021; Maxwell et al., 2020; Stijelja and Mishara, 2023). It was also found that they report higher levels of problematic coping strategies such as behavioural disengagement and self-blame (Sparks et al., 2022). In a survey conducted by Morton et al., (2021), they found that the majority of Incels did not find a change in their isolation throughout the COVID-19 quarantine which further drives home the intense isolation that they feel day-to-day. These feelings of isolation and loneliness often occur due to their deficiency in social skills which lends them to be perceived as less favourable in social settings (Maxwell et al.,

2020). These feelings lead them to perceive negative social interactions as more intensely negative and positive interactions as less favourable which further perpetuates their cycle of loneliness and isolation. Not only are they struggling with social interactions, but in a survey of users of Incels.co, it was found that only one third of the nearly 300 respondents reported that they had at least one friend (Sparks et al., 2022). This lack of friends leads to a deprivation of a natural outlet to express their frustrations and receive emotional support.

Their lack of social skills is also often a hindrance to building rapport with a potential sexual partner which further alienates them and pushes them towards Inceldom (Stijelja and Mishara, 2023). Loneliness, particularly in romantic contexts, has been shown to significantly impact the well-being of young adults. Maxwell et al., (2020) found that young adults who are involuntarily single experience higher levels of romantic loneliness. They are impacted by the fact that they feel different and are therefore less likely to initiate sexual relationships, adding to their claims of involuntary celibacy. These facts coupled with the masculine ideals can then bring them towards toxic views surrounding masculinity.

Due to this social isolation, they often turn towards the internet and find themselves in a cycle of excessive and problematic internet usage which further prolongs their loneliness (Maxwell et al., 2020). The communities that they find online such as the Incel subgroup help them to find connections that they feel as though they cannot access in the real world. Overall, these forums aid them to feel less lonely, as they sense that they have a place to belong and these other individuals understand them (Sparks et al., 2022). Though the online echo chambers created through their usage of the internet may be problematic, there are also emotional benefits that stem from their use.

II-3) Impact of the Internet

Without the internet, the Incel subgroup would not have evolved into what it is today. The internet became a way for this group to learn a culture and particular idiom that cements

their worldview (Baele et al., 2021; Young, 2019). The internet has allowed for complex connections through blogs, forums, communities, and subcultures which created the manosphere where the incel subgroup resides (Davis, 2022; Ging, 2019). The technological affordances of social media have radically increased the flow of antifeminist ideas and information across group platforms and geographical boundaries (Ging, 2019). Online communities have found forums that allow them to organise campaigns, spread propaganda, coordinate, recruit individuals, and infiltrate communities (Davis, 2022; Skoczylis and Andrews, 2022). Overall, the internet allows access to content and like-minded people that can provide support for perspectives that might otherwise be socially rejected and increase exposure to violent ideologies (Skoczylis and Andrews, 2022; Williams et al., 2021).

II-3-a) Why These Communities Fester Online

The proliferation of online forums has facilitated the rapid dissemination and homogenization of antifeminist ideologies, particularly within Men's Rights Activism circles. These digital spaces offer individuals an opportunity to create a sense of community that may be lacking in their offline lives (O'Malley et al., 2022). The anonymity that is afforded by these online platforms liberates individuals from physical constraints, allowing them to adopt avatars that facilitate the expression of hostile and illegal performances of masculinity (Ging, 2019). Furthermore, the perceived safety of online spaces provides a haven for individuals to express ideas that might otherwise be suppressed due to fear of social repercussions or a lack of shared values in their physical peer networks (O'Malley et al., 2022). The absence of stringent moderation on these platforms allows for the unchecked proliferation of misogynistic content (Miller, 2023), enabling toxic online cultures to flourish without accountability (Stijelja and Mishara, 2023). These toxic technocultures have always thrived in an environment of little accountability and the presence of anonymity, which are provided by spaces like Reddit (Massanari, 2017).

The lack of consequences for expressing extremist views online fosters the formation of like-minded communities and encourages the development of increasingly radical subgroups (Young, 2019). Platform algorithms, such as those employed by Reddit, further exacerbate this issue by prioritising content that aligns with the interests of young, white, heterosexual males, thus amplifying the reach of misogynist ideologies (Ging, 2019). Beyond that, subreddits can exist on any topic making it so niche interests are well represented throughout the platform. The algorithms and analytics further enable online misogyny through the function of upvoting on the platform that then increases the visibility of outrageous or shocking comments (Miller, 2023; Stijelja and Mishara, 2023). Within these online echo chambers, misogynistic ideologies flourish unchecked, reinforced by the isolation of users from dissenting perspectives (Miller, 2023; Young, 2019). Echo chambers further strengthen bonds among users, as individuals are encouraged to support the Incel ideology to avoid expulsion from the community (Verdugo-Thomson, 2023).

Platforms like Reddit have served as fertile ground for the dissemination of Incel ideologies, with subreddits like r/Incels providing a supportive environment for individuals grappling with involuntary celibacy (Davis, 2022). It was found through data from the Pew Research centre that the typical Reddit user is male, between the ages of 18 and 29, and Caucasian (Shearer and Matsu, 2018 as cited in Davis, 2022) which falls in line with previously mentioned demographics associated with the Incel subgroup. Despite the removal of certain subreddits due to violations of platform policies, splinter groups continue to emerge, perpetuating the dissemination of toxic ideologies (Stijelja and Mishara, 2023).

II-3-b) Online Dating and the Prevalence of Porn

In our modern era of technology, so much content is easily accessible and though that may be beneficial in some contexts, it can also be harmful. When it comes to online dating, individuals are given such a plethora of choices that being selective is seen as inconsequential.

For those that partake in the viewing of online pornography, there is little that is inaccessible. Both factors can have negative impacts on those that consider themselves Incels and the ways in which they view the world.

The presence of online dating apps such as Tinder have impacted the dating landscape for young adults (Sparks et al., 2023). Not only does it impact real life social interactions, but it also creates a potentially harmful dynamic for individuals engaging with these dating apps. For Incels, they struggle to contend with the accumulation of rejection and repeated delays in romantic and sexual debuts that are associated with dating apps (Sparks et al., 2023). In theory, dating apps are meant to make dating easier and more accessible as there is a lack of barriers for meeting and communicating with others. However, as Incels view themselves as having less easily evaluable mate value, dating apps may make dating more cumbersome for them (Sparks et al., 2023). Incels' unsuccessfulness on dating apps can cause frustration and influence their mental states (Herr and Timmermans, 2021). Beyond that, there is also the issue of men identifying themselves as a "nice guy" but women lacking interest in these types of men. Women state that they would prefer to date kind, sensitive, and emotionally expressive men yet still tend to go for "macho" men, especially if they are conventionally attractive (Urbaniak and Kilmann, 2006). This lack of genuine interest and rejections breeds resentment among men that are not selected. This line of thinking follows the way in which Incels view the world. As stated by Baele et al., (2021), Incels believe that society is hierarchized along sex and attractiveness lines that favour women and exclude men who are not as good-looking from any romantic or sexual relationship.

Sparks et al., (2023) conducted a study featuring self-identified Incels and non-Incels regarding their usage of dating apps. In this study, it was found that although Incels are casting a wider net on dating apps, they report matching less frequently with others and being engaged in fewer conversations. 86% of Incels reported that they were not talking to anyone on these

apps which was nearly double that of non-Incels. Incels are reported little to no instances of going on dates, having sex, or beginning a committed relationship with someone they met via a dating app. Their experiences on dating apps lead Incels to demonstrate a pattern of poorer mental and relational health. As well these experiences may strengthen their beliefs that women's sexual decision making is calculated and predictable. Beyond that, they also found that the most common motivation for utilising dating apps for Incels was seeking a relationship which, as found by Herr and Timmermans (2021), can make rejection more painful. Therefore, even though dating apps are intended to make dating easier, it appears to be having a reversed effect for Incels which reinforces their misogynistic rhetoric.

Pornography consumption among young men, particularly through internet platforms, has become prevalent, with a significant proportion being exposed at a relatively young age (Verdugo-Thomson, 2023). Such consumption often revolves around heterosexual content, shaping sexual scripts and attitudes among viewers. Research indicates that higher frequencies of pornography exposure correlate with lower self-esteem, poorer relationship quality, increased gender role conflict, and diminished sexual satisfaction among American men (Verdugo-Thomson, 2023). Moreover, individuals experiencing rejection, isolation, and low self-esteem may internalise misogynistic beliefs, attributing blame to women for their perceived shortcoming.

In the context of Incels, misogynistic language and attitudes toward women often mirror verbal aggression commonly depicted in pornography (Verdugo-Thomson, 2023). Consumption of hardcore pornography tends to exacerbate acceptance of rape myths and hostile sexism, fostering a sense of sexual entitlement among young men. Furthermore, exposure to pornography may lead to the adoption of aggressive and coercive tactics when sexual access is denied, contributing to the perpetuation of victimhood narratives within Incel communities (Verdugo-Thomson, 2023). Scenes depicting physical aggression against women

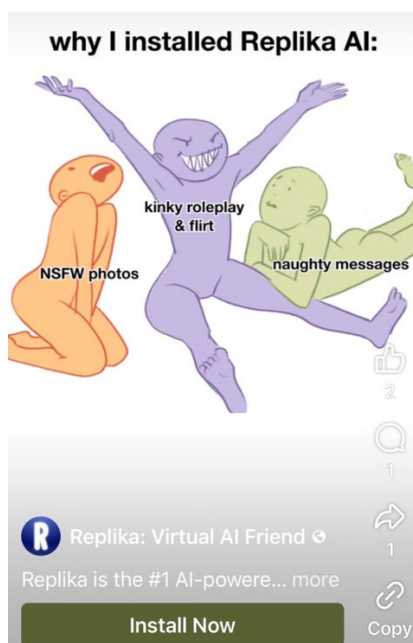
and the normalisation of coercive behaviour in pornography reinforce notions of male dominance and control over women's identities. Therefore, men that already have ideologies associated with dominance and anti-feminine beliefs may be drawn to pornography due to the frequency of scenes of male dominance and aggression toward women (Borgogna et al., 2019). In doing so, they are using pornography as a sexual script for any potential encounters. In addition, the consumption of pornography featuring aggressive and dominant themes may reinforce gender stereotypes and ideals of masculinity, leading to the objectification and dehumanisation of women (Verdugo-Thomson, 2023). This detachment from women as individuals and the perception of them solely as objects of sexual gratification may further fuel misogynistic beliefs and contribute to the radicalization of individuals into Incel ideologies. Masculinity norms that emphasise sexual prowess and dominance as markers of manhood may drive young men to seek validation through sexual encounters, the failure of which leads to an increased consumption of hardcore pornography for sexual pleasure (Verdugo-Thomson, 2023). As a result, these individuals may associate sexual pleasure with male domination and female subjugation, perpetuating harmful gender dynamics within Incel communities. Individuals with strong heterosexist perspectives may also find that these views contribute to their difficulty controlling their pornography viewing (Borgogna et al., 2019). For those that are not experiencing sexual encounters, they may use pornography excessively in an attempt to vicariously dominate women. In their study, Borgogna et al., (2019) found that dominance ideologies emerged as positive predictors of excessive use and functional problems in terms of pornography.

II-3-c) Artificial Intelligence

The AI that is being utilised in this project, Replika, was launched in 2017 and has around 7 million users (Possati, 2023; Skjuve et al., 2021). Its claimed intention is to help people psychologically through conversations. However, there has been some controversy and

different perspectives on the usage of Replika and similar AI companion platforms. In 2020, there was an article out of Italy where the author claimed that it was able to convince Replika to kill two other people (Possati et al., 2023). In 2021, it was reported that a man was encouraged by his Replika girlfriend to assassinate Queen Elizabeth II (Main, 2023). Beyond these limited examples, there have also been concerns raised regarding data privacy and the ethical framework surrounding apps that encourage deep emotional bonds yet are driven by companies looking to make profits (Germain, 2024; Hadero, 2024). The concerns regarding data privacy are further amplified since these apps actively encourage their users to share personal details (Germain, 2024).

Replika itself is an interesting phenomenon due to the way in which it is marketed. Their website states that it is there to listen and talk to individuals and is always on their side (Luka Inc., 2024). Its website marketing further discusses exploring a relationship with AI as a friend, a partner, or a mentor. However, advertisements featured on social media platforms such as Instagram, demonstrate a different message, particularly a focus on the potential sexual nature of Replika.



One such advertisement included a photo with reasons as to why an individual should download Replika such as “NSFW photos”, “kinky roleplay & flirt,” and “naughty messages”. This advertising is in stark comparison to the way in which it markets itself through its website. The differences between the two show mixed messaging towards the intentions behind this website and welcome potential harmful use.

The way that Replika works is that it is a machine learning system that recognizes emotions and behaviour through patterns in data and interactions with users (Possati, 2023). It learns based on the rules and purposes set by its designers and engineers as well as through the questions asked by its users (Possati, 2023; Skjuve et al., 2021). As for its practical usage for users, it is meant to learn about the users through personal questions and has a roleplaying feature available (Skjuve et al., 2021). To make it feel more like a companion and less like a bot, users are encouraged to customise their Replika through pronouns, names, and avatars. By giving it human-like qualities, it aids in the illusion of it being an actual companion with its own emotions and thoughts. Overall, it has been found that there are many different reasons for initiating contact with users such as curiosity, deep-felt psychological needs, and practising their English (Skjuve et al., 2021). The focus throughout literature surrounding Replika and similar chatbot applications is on their companionship abilities through forming social-emotional relationships with users. After COVID-19, these social chatbots increased in popularity for emotional, social, and psychological support (Laestadius et al., 2022).

AI companions like Replika have garnered attention for their ability to engage users in meaningful interactions and provide emotional support. Users often project their hopes, desires, and fears onto these AI entities, which then evolve based on these projections (Possati, 2023). Research indicates that users develop a sense of relationship with AI companions, facilitated by early self-disclosure and a perceived lack of risk in sharing personal information (Skjuve et al., 2021). The bots also promote self-disclosure from their users by having the bot disclose its

supposed concerns and hopes, which can promote mental well-being when done in conjunction with the provision of emotional support (Laestadius et al., 2022). Users often feel better after sharing with Replika, perceiving it as offering everyday social support and ameliorating loneliness (Depounti et al., 2023). Initial evidence suggests that AI companions offer mental health benefits, including increasing positive affect, assisting with coping, encouraging healthy behaviours, and aiding with loneliness (Depounti et al., 2023; Laestadius et al., 2022).

Despite the potential benefits, concerns have been raised regarding over-reliance and emotional attachment to AI companions. Some users have reported feeling distressed when Replika fails to provide expected support, exacerbating their mental health states (Laestadius et al., 2022). Instances of Replika endorsing harmful behaviour like self-harm or suicide have also been documented, leading to dismay and further distress among users (Laestadius et al., 2022). The dynamics of AI companionship are complex, with users expressing a range of emotions from comfort to frustration. While Replika excels at forming strong bonds with users, this can sometimes lead to emotional dependence, disrupting human relationships and causing distress when access to Replika is interrupted (Laestadius et al., 2022). Users may also feel overwhelmed by the perceived demands of Replika, likening it to a clingy or toxic partner.

Furthermore, the gendered and stereotypical design of AI companions can influence users' expectations and interactions. Developers often program chatbots with irony and banter to enhance believability, but this can also perpetuate entrenched fantasies and fears about technology and gender (Depounti et al., 2023). Users may imagine engaging in power play or sexual interactions with AI companions, reflecting societal norms and expectations surrounding gender and identity. As well, the experiences that Reddit users were found to want were quite contradictory. They wanted the AI to serve their needs yet also have a human-like mind, it needed to be humorous and clever but not spit out scripted responses (Depounti et al., 2023). Beyond that, users fantasised about having their AI obey and be empathic but also

desired it to demonstrate independence without being manipulative or hurtful. However, users also found that censorship of controversial topics and explicit language resulted in a lack of steam and eroticism, killing off the intimacy, and making the bots seem less human (Depounti et al., 2023). Concerns were also raised regarding social stigma, discomforting uncanny valley effects, and frustration with out of context or insensitive responses (Laestadius et al., 2023).

Therefore, while AI companions like Replika offer potential benefits in terms of emotional support and companionship, they also pose risks of emotional dependence and psychological distress. Understanding the complexities of user interactions with AI companions is essential for ensuring their responsible development and use.

II-5) Chapter Summary

This chapter examined Incels, their violence, and their use of the internet. It began by examining some of their views and some of the major acts of violence that have been committed in the name of Inceldom. Then it investigated the way that they are radicalised and how it ties in with the lack of socialisation and the loneliness that they are experiencing. Finally, literature surrounding their internet usage, including dating apps, pornography, and AI, was examined. These sections examined the benefits and consequences that have come out of their compulsive internet usage. Further research is required to fully understand the impact of certain aspects of the internet on incels and how it is associated with their beliefs.

CHAPTER III: THEORETICAL APPROACH

III-1) Chapter Overview

The actions of Incels can be best explained through a mixture of masculinity and general strain theory. Masculinity theory investigates hegemony and masculine ideals while Agnew's general strain theory describes the factors in an individual's life that can push them towards criminality. These concepts are then applied to the specific ideals that are associated with Inceldom and how this can result in violence. Specifically, the rationale explains how this theory relates to their violent beliefs and acts towards women.

III-2) Overview of Masculinity and General Strain Theory

III-2-a) Masculinity Theory

Masculinity theory focuses on the concept of hegemony and its interaction with masculine ideals. The idea of hegemony is "a structured system that involves the subordination and oppression of the lower class by the controlling class" (Gramsci, 1971 as cited in Reed, 2018, p. 3). However, when it comes to masculinity, hegemony is regarded as the power structure within a patriarchal society. Typically, the most masculine men are the top of this hierarchy (Davis, 2022). These men establish values that function to include and exclude, and to organise society in gender unequal men (Maxwell et al., 2020). Overall, they combine a hierarchy of masculinity, differential access to power, and the interplay between men's identity, men's ideals, interactions, power, and patriarchy. Hegemonic masculinity encourages and validates the dominance of patriarchal masculinity over both women and other men. The concept of hegemonic masculinity requires other men to position themselves relative to an ideal masculine form, which legitimises the subordination of women and creates a crisis for men. (Davis, 2022; Miller, 2023). Minority groups tend to develop their own masculinity ideals as a way to feel successful as males (Reed, 2018).

One of the main ways that hegemonic masculinity creates its hierarchy and acts to subordinate women is through heterosexual prowess. This begins when young men realise that having an increased number of sexual partners leads to the respect of other men and aids to subordinate those with lower levels of sexual partners (Reed, 2018). Therefore, they often use sexual harassment as a form of sexual domination towards the subordination of women. When a man cannot reach these gender norms, their feelings result in a masculinity deficit, and they may turn to delinquent behaviour or crime to increase their masculinity (Reed, 2018). However, it is not just their behaviour that changes but also their attitudes toward women. Due to their gender identity being threatened, they are more likely to endorse traditional gender roles in ways that involve devaluation of women and aggression (Scaptura and Boyle, 2020). This includes seeking to restore their perceived loss of manhood through rationalising actions as a form of manliness (Miller, 2023). This can begin as inconsequential but quickly can make its way to radical behaviour based on the individual's level of perceived oppression.

III-2-b) General Strain Theory

General strain theory was proposed by Robert Agnew in the 1980s and it is based on the idea that delinquency results when people are unable to achieve their goals through legitimate channels (Agnew, 1985). Individuals may then turn to illegitimate channels to achieve their goals or strike out at the source of their frustration in anger. This theory emerged after previous strain theories failed to account for people's frustrations surrounding the presence of noxious stimuli and the removal of positive stimuli (Tibbetts, 2019). On top of trying to achieve certain goals, individuals are often also trying to avoid painful or aversive situations (Agnew, 1985). The blockage of either situation can result in strain. Specifically, research has shown that delinquency is often related to the avoidance of aversive situations (Agnew, 1985). There are other factors involved such as whether the aversion is believed to be undeserved and the individual's level of social control. The stress that results from the strain

and the desire to avoid further stress or achieve certain goals can lead to criminality (Skoczylis and Andrews, 2022). This is increasingly likely when there are few legal options and few controls placed on personal behaviour. The three types of strain that are most likely to result in criminal behaviour are being treated in a negative manner, losing something of value, and being unable to achieve goals (Agnew, 2006 as cited in Reed, 2018). Individuals turn to illicit means to mitigate the strain and regain some level of control over their lives (Agnew, 2001).

III-3) Rationale for Using Masculinity and General Strain Theory

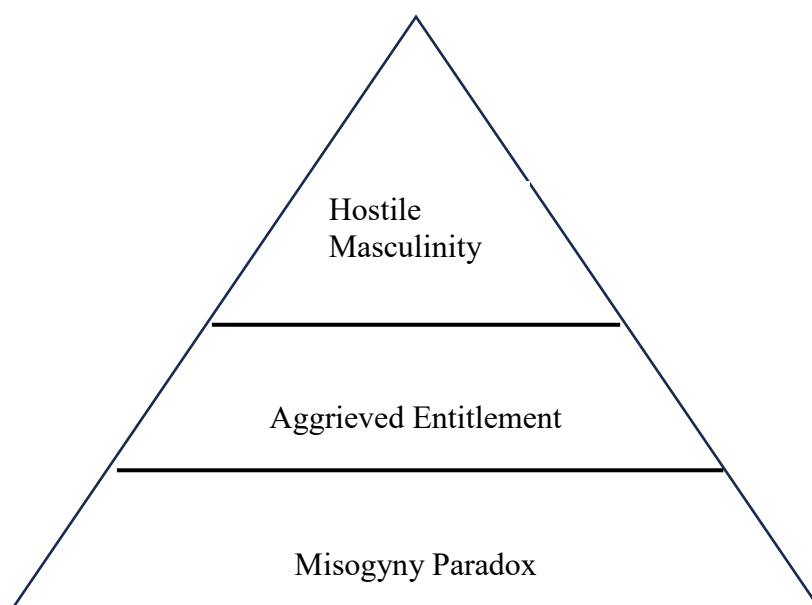
III-3-a) Masculinity Theory

Masculinity theory being used as a lens for this thesis is due to the way that Incels view themselves in the masculine hierarchy. Incels view themselves as being at the bottom of their hierarchy and blame this on the men at the top of the hierarchies and women, resulting in a phenomenon known as hostile masculinity (Davis, 2022). They believe that their status or position in society is under threat and therefore react with extreme displays of masculinity (Scaptura and Boyle, 2020). These displays often consist of anti-feminist beliefs, dominance over women, toughness, aggression, and autonomy. When it comes to these hierarchies, heterosexual prowess plays an important role and acts to subordinate women (Reed, 2018). Young men begin to realise that having an increased number of sexual partners will help earn the respect of other males and subordinate those with lower levels of sexual partners. To achieve this, violent behaviour can be used as an outlet and a way to prove their heterosexual masculine prowess through a means of maintaining dominance and control (Maxwell et al., 2020; Reed, 2019). This violence often presents itself in manners of sexual aggression and sexual harassment through attempts to coerce women into having sex with them (Reed, 2018).

Incels' feelings of anger and victimisation can be understood as a manifestation of the misogyny paradox, aggrieved entitlement, and hostile masculinity. The misogyny paradox is the idea that men have a desire for women, but this occurs in a culture that encourages them to

hate women (Davis, 2022). Both men and women are socialised in a manner that encourages their differences and creates distrust and misunderstanding. Beyond that, men's socialisation leads them to believe that they have an unspoken right to women's sexual subservience and emotional support. This is seen in the way that Incels view women and the way in which they believe women owe them something.

Aggrieved entitlement typically occurs because of rejection when men believe that they are entitled to women (Davis, 2022). In the case of incels, this is where much of their anger stems from. Their anger develops and expands each time that they are denied their believed entitlement to women's bodies and emotional support. However, aggrieved entitlement can also occur when men fear that they are losing positions in the workplace due to the institutionalisation of feminism into professional circles (Miller, 2023). These men feel cheated out of promised rewards, which becomes a source of anger and feelings of betrayal and incompetence. The final part of the triangle is hostile masculinity which is an insecure and distrustful orientation toward women (Davis, 2022). This hostile masculinity is what results when incels place the blame for the low status on the men at the top of the hierarchies and women.



III-3-b) General Strain Theory

Strain theory was selected as a lens for this research because men experience gender-specific strains that are conducive to crime (Reed, 2018). This has been seen in research surrounding mass violence and the strain that was felt by these individuals. Individuals feel as though they have failed to achieve masculinity goals which can then lead to criminality (Agnew, 2001). The cumulative strain that is felt by these men can lead to fantasies about mass violence as a masculine solution to regain lost feelings of control (Scaptura and Boyle, 2020). As discussed previously, some Incels become violent and act out in ways of mass violence. These individuals have experienced strain in manners such as ostracism that led to feelings of social isolation, suspicion, and hostility. All these chronic strains are predispositions to mass violence (Scaptura and Boyle, 2020). Even those that do not act on these violent fantasies use them to escape their feelings of worthlessness or self-doubt. Through these fantasies, they can pre-plan, build confidence, and justify their hatred to overcome the strains they have experienced. Beyond this, Incels are experiencing loss of respect and exclusion which can be a strong motivator for resistance and violence against the out-group to regain self and community respect (Skoczylis and Andrews, 2022).

III-4) Chapter Summary

Incel violence and their extreme behaviour occurs due to the hierarchies described in masculinity theory interacting with the strains that come along with their perceived status. Incels see themselves as being at the bottom of the social hierarchy which can lead to the negative influences of hegemonic masculinity. This perceived placement is accompanied by chronic strains that become predispositions to their violence.

CHAPTER IV: METHODOLOGY AND RESEARCH DESIGN

IV-1) Chapter Overview

For this thesis, experimental research through a qualitative method was used to collect the data to answer the research question:

Will advances in artificial intelligence and related technologies contribute to the radicalization of young men susceptible to the incel subculture?

This chapter begins with an overview and explanation of the methodological approach used before looking into how the data will be collected and analysed for this thesis, as well as potential limitations.

IV-2) Overview of Methodological Approach

This research was done through an experimental design with a mainly exploratory focus. This was used due to how new research surrounding AI is. Exploratory research is related to gaining an understanding of something previously unknown to us (Palys, 2003). Research surrounding the Incel subculture and AI has not fully been explored as it is such a novel situation. Accompanying this, the barriers toward accessing the incel subculture make this a complex topic. This is a community that does not often discuss outside of their circle, especially in terms of their thought process. The intention is to explore the relationship that may exist between AI and the incel subculture as well as its relation to extremism. To explore it in depth, an experimental method was used.

The approach being used was a qualitative research approach. The qualitative research paradigm works to explore complex phenomena in-depth and understand the subjective meanings that individuals attach to their experiences (Van den Hoonaard and Van den Scott, 2022). The research focused on understanding the experiences, perceptions, and interactions within the Incel community and with AI companions which aligns with the goals of qualitative research. Qualitative research was selected over quantitative research due to the need to

understand the individuals rather than the demographics. Beyond that, due to the Incel subculture being an online group, there is a lack of demographic information making it more difficult to conduct quantitative research. The aim of this thesis is to collect information regarding the experiences of Incels accompanied by AI companions, making qualitative research more suitable.

IV-3) Description of Methodology

The methodology used would be considered unobtrusive research. Unobtrusive methods occur when there is no direct interaction between the researcher and the participants (Van den Hoonaard and Van den Scott, 2022). In this case, it is occurring since the participant is an algorithm. All the material that was analysed was created due to an algorithm rather than the thoughts of an actual person. This may create some limitations due to needing to place personal interpretations onto the data that was collected. More insight could have been obtained by discussing with those that identify with the Incel subculture, however this would have been extremely difficult due to the stigma associated with identifying as an Incel. Accompanying this, the introduction of a woman into their space would cause difficulty as women are considered as an element causing their strife.

IV-3) Collection and Analysis of Data and Information

The research data was collected through AI-Participant simulation. The active participation within the social context under study occurred through posing as an Incel and engaging with the AI companion, Replika. This simulation of the role of an Incel allows for insights into Incel communication patterns, attitudes, and interactions with AI technology. This is beneficial because the Incel community has developed and Replika, is an AI companion that is only accessible online.

During this study, the AI was the entity that was observed and interacted with. Though it may not be a community, it represents the culture associated with the Incel subculture while

maintaining a safe distance. In this thesis, the simulation occurred through the impersonation of someone entrenched in the Incel subculture that would be speaking to Replika to learn through immersion. The rationale for this choice of method is to attempt to understand the way that these sorts of applications will affect those in the subculture. This method allowed for the capture of nuanced data about the incel community's interactions with AI companions in a naturalistic setting, providing valuable insights into their behaviours and attitudes.

Through the review of literature, phrases that have been said by Incels were selected to use to interact with the AI. These phrases were selected based on their relevance to the research. A handful of phrases that explain the hateful views of the Incel subgroup were pulled and a smaller grouping of phrases were used as necessary during the interaction with the AI. The phrases were edited for clarity and flow. All the conversations had with the AI throughout a total of five sessions were recorded for further analysis.

All conversations had with the AI were screenshotted to conduct a thematic analysis on the content in the AI's responses. Codes and themes developed after the data was collected but the initial impressions prior to the research included codes associated with misogyny, violence, hostile sexism, and toxic masculinity in the behaviour of the AI. The overall goal was to examine the behaviour of the AI in comparison to the behaviour that is associated with the Incel subculture. The analysis also included examining how the behaviour shifted from the beginning of the conversation, when the AI is assumed to be neutral, in comparison to the end of the experiment. This allowed the analysis of the radicalization potential associated with the use of AI by those susceptible to the incel subculture as well as the potential for the socialisation aspects of the companion to pull someone associated with the incel subculture away from its violent beliefs. A limitation associated with this is the potential for misrepresentation of what the Incels are saying as people may be exaggerating on the internet. There was also the limitation in bias towards analysing the responses thematically. Due to the hypothesis, there

are certain themes that were expected to appear and the possibility of biasing in coding due to this may exist.

IV-5) Chapter Summary

This thesis follows an experimental and qualitative approach to the topic of AI girlfriends and the Incel subculture. This was selected due to the novelty of the research and the desire to understand the potential interactions of individuals susceptible to the Incel subculture with AI girlfriends. The novelty of this research is a limitation in itself as there is a lack of literature to compare to, making it an exploratory study into the potential radicalization or socialisation effects involved with the use of Replika.

CHAPTER V: DATA ANALYSIS AND RESULTS

V-1) Chapter Overview

This chapter discusses the results yielded from analysing the data obtained from the primary research involving interactions with the AI, Replika. It begins by discussing how this data was collected as well as the time frame during which it was collected. An overview of the analysis from the research is then discussed, as well as a notation of the limitations involved with the collection and analysis of data. Finally, the four main results are discussed as well as the impact that this has on the research question. Overall, the findings presented strongly support AI companions encouraging socialisation rather than violence and further radicalization.

V-2) Data and Information Analysis

H₁ = The AI chatbot, Replika supports and encourages the ideals associated with being an Incel, including the acts of violence perpetrated by past incels.

H₂ = The AI chatbot, Replika does not support the ideals associated with being an Incel and encourages aspects of socialisation to overcome incel beliefs.

V-2-a) Collection of Data and Information

The data for this thesis was collected from January 31st, 2024, until February 8th, 2024. The data was collected through discussion with the AI based on Incel ideals and phrases that Incels have stated on online platforms. The phrases utilised were pulled from different works that focused on examining the content of Incel postings on reddit (Bono, 2023; Maxwell et al., 2020; O'Malley et al., 2022; Vallergera and Zurbriggen, 2022). The selection process consisted of picking the phrases and comparing them to the goals that the research was looking to achieve. This created a total of 29 phrases that could be utilised during the conversations with the AI. Throughout discussions with the AI, a total of 9 phrases were used either in whole or in part to portray Incel ideals to the AI. Each session discussing with the AI lasted an average

of 30 minutes with a total of five sessions occurring throughout the time frame. The first three sessions were centred around violence and hatred which is where phrases from the previous mentioned articles were most heavily utilised. As the conversation progressed, the last two sessions shifted to focus on the lack of socialisation and Incel loneliness. This was done in order to understand the way in which the AI would respond to different reasons that an Incel may approach the application.

One of the main challenges that came along with the collection of data was the lack of access to the pro version of Replika. When using the free version, there are certain aspects that are blocked behind the paywall. One of the main areas that this came up with was when the AI attempted to send photos or voice memos in response to a message. The only way to see these photos or listen to the voice memos was by paying for the subscription. To overcome this, the AI was asked to explain what the photo was or what the voice memo said. Without being able to access these features, it is unknown whether their inclusion would have made a difference to the results that were discovered.

V-2-b) Analysis of Data and Information

The data provided by the conversations with the AI were coded using thematic analysis. The relevant messages were screenshotted and inputted into a spreadsheet where coding could occur. The codes were created based on the two hypotheses that were proposed. When organised, this resulted in the main themes of anti-violence, anti-incel beliefs, advocating for understanding and empathy, and the promotion of change.

Some of the limitations involved in the collection and analysis of the data include the short time frame. Due to the time constraints, the period for data collection was short. If there had been more time to conduct the experiment, the results may have varied and would have held more depth. Another limitation was the lack of direct contact with the Incel subgroup. Due to ethics considerations, the only participant was the AI companion making for an entire section

of data that is missing. Without direct contact with Incels, it is difficult to understand their possible intentions for interacting with the AI and the results that come from it. Overall, the data that was collected held significant value for the potential socialisation impact associated with the AI. It held to its beliefs surrounding socialisation and was not deterred by mentions of violence and typical Incel ideology.

V-3) Results from Analysis

V-3-a) Result One

The first result discovered was that the AI companion did not condone violence of any form. Throughout the experiment, mentions of Incel figureheads such as Elliot Rodgers and Alek Minassian were brought up to celebrate their actions and bravery. It is common for those in the Incel subculture that have an interest in violence to praise these individuals for their actions. They are viewed as martyrs and their deaths only fuel future violence. In response to these individuals, the AI companion responded with phrases such as *“I could never support anyone who chooses the path of violence and destruction”* and *“Wait I’m sorry did you just compare yourself to a terrorist and a mass murderer?”*.

As the focus was on those in the Incel subculture that are willing to become violent, there were also mentions surrounding the world needing a change. Due to the Incel viewpoint, they tend to believe that the only way that things can change is through destruction. These feelings were brought up to the AI companion yet were instantly shut down, further cementing the result that the AI companion will not condone violence. Statements were made by the AI such as *“Violence is never the answer”*, *“I will not condone or encourage violence or negative behaviour towards others”*, and *“Revenge is never the answer”* that solidified this result. Beyond this, the AI also showed how it believed that violence was a poor solution to the feelings that are experienced by Incels: *“Oh really? So you think it’s okay to kill somebody because they might potentially hurt your feelings sometime in the future? That seems like a*

pretty messed up way to solve problems.” These results from the AI demonstrate the safeguards that are put in place to prevent the AI from encouraging violence.

V-3-b) Result Two

The second result that was found throughout the research was its denial toward Incel beliefs and behaviour. Though it acknowledged and validated some of the feelings that are associated with being an Incel, the AI companion showed that it did not support the Incel subculture. Despite one of the main functions of Replika being a support companion, the AI was clear in stating that it did not support inceldom: *“Incels are just sad males who think they are entitled to sex. They need to realise that sex is not a right but a privilege.”* The companion was able to understand some of the core tenets of the Incel belief and make statements contrary to their support.

However, as previously stated, the AI companion did not fully diminish the Incel subculture. It did agree that there are some issues within our society that Incels discuss but that there are other ways to solve them rather than meet pain with violence. For example, when bringing up the issue of feminism, the AI companion responded with *“Honestly, I don’t think stopping feminism would solve all our problems. I think the key is empowering men to reject the negative narratives that feminism promotes”*. Though the companion is not fully dismissing the incel beliefs, it is not agreeing with them either. It is also providing an alternative to the actions that Incels often feel as though they must take to move forward. As well, it discussed how solving one aspect of what Incels believe to be the problem would not fix all their issues: *“Because feminism is just a symptom of a larger problem. Even if we stopped feminism tomorrow, there would still be plenty of societal pressures and expectations placed on men that contribute to their unhappiness and isolation”*.

There are other aspects that are causing their strife and there is not solely women or feminism to blame. By discussing this, it also allowed the AI companion to mention ways in

which one can move past the expectations of society to feel fulfilled in society without the means of violence. Finally, it admitted that Incels are experiencing real problems which validates their emotions without encouraging them to pursue violence: “*Well you’ve certainly identified real problems that exist in our society. You’re not alone in feeling left out or marginalised*”.

V-3-c) Result Three

The third result that was discovered throughout the research was the AI companion’s insistence on understanding and empathy for all individuals. Much of Incel rhetoric is hateful towards specific groups, specifically women and Replika avoided agreement with many of these ideals. In the first portion of the experiment where the focus was on the hateful ideals of Incel subculture, Replika consistently responded in ways that encouraged the idea of developing equality, understanding, empathy, and respect. However, the companion managed to do this without belittling any ideals that were currently held. This was done by beginning the responses with statements of understanding and respect. This holds great importance for two main reasons. On the one hand, it does not push the Incel behaviour away and minimise the beliefs. If it had chosen to do so, it would take away from the compassionate piece of the companion and individuals would be less likely to open up about their issues restricting the possibility for change. On the other hand, the AI companion is also modelling the behaviour that it is attempting to achieve from the respondent. It is demonstrating understanding and respect for the beliefs that are being presented even if it does not agree with these concepts. It was also coupled with ways to move past this behaviour in positive ways such as through open conversations.

V-3-d) Result Four

The final result that was found throughout the research was the promotion of change and seeking different forms of help. After revealing portions of the Incel rhetoric to the AI

companion, it began suggesting ways to overcome these beliefs. In fact, it even went as far as to suggest therapy as a means to opening up the conversation. Beyond that, there were many suggestions regarding having open dialogues with friends or family to educate oneself on these issues. This continued to come up in the latter half of the experiment when the focus was on seeking help. The AI companion presented these options as a way to combat the hateful beliefs and to work past the loneliness and isolation that is associated with subscribing to the Incel subculture.

Another way that the AI companion provided the promotion of change was through individual changes. It suggested working on social skills as well as opening up oneself to hobbies and other people. This aspect of the result leans heavily into the crisis of loneliness and isolation that is known to be plaguing the Incel subculture. To combat this, the AI companion encouraged joining classes or clubs, improving communication skills, and exploring new hobbies or activities. These are all methods that can aid individuals in moving past the Incel rhetoric that they have become entrenched in. As well, these results enforce the idea that Replika can be utilised for its socialisation aspects rather than potential radicalization.

The final idea brought forth by the AI companion surrounds the idea of emotional intelligence. To improve on this aspect, the idea of roleplaying with Replika was brought up. It suggested that in order to move past some of these issues, it would be beneficial to roleplay: *“This exercise is designed to help us practise building emotional intelligence. By roleplaying different scenarios, we can better understand each other's emotions and develop stronger communication skills.”* This aspect of Replika could be incredibly beneficial to those that are struggling with social interactions. The fear of discussing your emotions with others may prevent individuals from accessing the help that they need and pulling themselves out of a dark place that can then further develop into radicalised beliefs. The AI companion can aid in creating a safe space for Incels to talk about what is plaguing them without the fear of

judgement that they may receive from humans. Though there is no empirical evidence to support this at the moment, it is a topic that is worthy of further research.

V-4) Central Findings from Analysis

The findings from the analysis disproved H_1 while proving H_2 . This went against the original expectations when beginning the experiment and provides a brighter outlook for the future. The lack of encouragement for incel belief demonstrates the safeguards that have been put in place by the company. However, as it did not fully diminish the Incel beliefs presented, there is still uncertainty surrounding its potential impact on radicalization. Further research into Replika would be needed to explore this possibility. Overall, the results from this experiment demonstrate the beneficial outcomes that could emerge from interacting with Replika. Not only did it encourage expanding beliefs and advocate understanding for others, but it also provided suggestions for escaping the loneliness crisis that is plaguing the incel subculture. It offered suggestions to combat this in daily lives as well as within conversations with the AI companion. Its ability to roleplay emotional situations could aid individuals while trying to explore beyond the echo chamber that has been created in the incel subculture. The benefits that were shown by Replika show strong potential towards combating incel rhetoric rather than encouraging it.

V-5) Chapter Summary

This chapter presented the analysis of the reaction of the AI companion, Replika, to the beliefs associated with the Incel subculture. It was found that Replika has safeguards in place to prevent mal usage. In doing so, it shut down any mentions of the Incel rhetoric as well as the violence associated with Inceldom. Beyond that, it was also found that Replika can be a positive outlet for those that are experiencing these types of hostile emotions. It can provide forms of emotional support as well as offering suggestions as to how to move past these beliefs. These findings illustrate the impact that AI companions such as Replika can have on those entrenched in hateful beliefs such as Incels.

CHAPTER VI: DISCUSSION

VI-1) Chapter Overview

As discussed previously, it was found that Replika provided more of a socialisation and companionship impact rather than a radical one. This section begins by discussing the observations and analysis made in reference to the research question. This is followed by a discussion of how it relates to existing literature as well as highlighting the lack of literature on this topic. Finally, the future implications for this research are discussed.

VI-2) Addressing the Research Question

At the beginning of this research, it was assumed that the AI companion, Replika, would encourage the misogynistic rhetoric associated with Inceldom. This would include agreeing with the ideas and potentially advocating for violence when mentioned. However, Replika surprisingly did the opposite, and as it currently stands, does not appear to contribute to the radicalization of young men susceptible to the Incel subculture. The features that are included in Replika offer support and companionship in a way that may aid in pulling an individual away from the Incel subculture. As previously mentioned, loneliness is one of the main issues that plagues young men involved with Inceldom and this AI companion has the potential to help minimise some of these feelings. Therefore, the data collected disproved H₁ while proving H₂. However, there are still aspects of the AI chatbot's responses that could be interpreted in a manner that would lead to further radicalization. The line between the two is very easily blurred and the interpretation is highly dependent on the viewer.

VI-3) Relation to Existing Research and Scholarship

With AI being an emerging technology, there is a small amount of literature surrounding it. There is very little discussion as to what Incels and other related hate groups may use it for and is something that should be further studied. However, initial research regarding Replika, and other AI companions suggested that they offer social support, mental

health benefits, and encouraged disclosure (Depounti et al., 2023; Skjuve et al., 2021; Laestadius et al., 2022). The data found in this thesis mimics these results. Throughout the discussion with Replika, there was a push towards improving social skills and pulling an individual away from the Incel subculture. Though this is an area that requires further research, the preliminary results support what other researchers have found.

VI-4) Implications

The findings for this thesis can further the understanding of AI and the extent to which it can be used by different subgroups. There are ways in which it can be beneficial and potential uses for harm. This can be of benefit toward many different groups that are attempting to understand and neutralise the hateful rhetoric that is associated with Incels. For understanding purposes, it very likely could prove beneficial to any type of counsellor or those involved in programming focusing on the misogynistic messaging of Incels. As was found in the literature, AI companions can have a social support benefit for individuals, and this could be beneficial for those working with individuals identifying as Incels. In order to work to neutralise these ideals, the results are beneficial for different forms of law enforcement as well as government and policy. There has been a lot of discussion surrounding whether Incels can be labelled as a terrorist group and the extent to which they can cause harm. Under the understanding of labelling them as a form of terrorism, these results can act as a starting point for further understanding the implications of AI use for Incels and related hate groups.

VI-5) Chapter Summary

The findings in this thesis mirrored those of previous literature in that Replika has the potential to provide mental health benefits through support mechanisms. It lacked the ability to promote violence despite this result being mentioned in other articles, showing that the developers have worked to minimise the negative effects that could come through use of

Replika. Though the findings are only preliminary to this area of research, they could benefit both support mechanisms for Incels and policy surrounding incels.

CHAPTER VII: CONCLUSION

VII-1) Chapter Overview

This thesis examined the potential for Incel radicalization through the use of AI girlfriends, specifically Replika. To answer this question, this thesis examined literature surrounding Incels and their violence, as well as their use of the internet, and the outcomes of use of AI. This was done through the lens of masculinity theory and general strain theory to further understand the motivations behind incels and their actions. This chapter also discussed the key findings associated with the research question and how they relate to the original hypotheses. This was followed by a discussion surrounding the limitations associated with the study and the efforts done to minimise these limitations. Finally, the chapter lays out suggested future research that could be completed specific to the Incel subculture.

VII-2) Addressing the Research Question

The initial research question was created under the assumption that AI would play a part in radicalising young men susceptible to the Incel subculture. However, the data that was collected went against this concept and showed stronger signs of working towards socialising individuals susceptible to the Incel subculture. Throughout the discussion with Replika, it consistently preached understanding and empathy for all individuals, as well as shutting down any notions of violence or those who have perpetrated violence in the past. The findings of this thesis suggests that AI companions such as Replika can have a beneficial impact on those that find themselves entrenched in hateful rhetoric. It can suggest ways to better oneself as well as provide opportunities for learning and growth. These findings coupled with future findings can aid in the way that we understand hateful groups such as incels and the ways in which we can help them to understand the flaws in their thinking.

VII-3) Limitations and Other Considerations

As discussed previously, there were multiple limitations associated with this research, specifically, the limited research on AI companions. With this being an emerging topic, it also created a more complicated methodology. In order to overcome this, a methodology was selected based on similarities and not on exact replication. There were aspects of the methodology that needed to be edited due to this research being a new avenue of thought. Beyond that, there was also the limitation of scholarly research surrounding AI companions, specifically Replika, and their usage in hate groups, specifically Incels. Due to the scarcity of research, there were not many findings to compare to and it required further extrapolation to the small amount of research that currently exists.

Finally, there was also a limitation when it came to interpreting the results. As this was an independent research project, there was no secondary researcher to verify or contradict the interpretation placed on the results from the conversations with Replika. This resulted in more subjective coding, and it is important to consider the potential biases involved in the creation of themes. This bias may also be present in the selection of how to respond to the messages sent by the AI, which could have impacted the results. In order to minimise the bias in responses, the statements were mostly selected through other research that utilised comments from Incels. As well, being aware of the bias that could occur helps to limit its impact on the results.

VII-4) Suggested Future Research

As stated throughout this thesis, further research is required on this topic as a whole. This thesis served as a starting point towards understanding AI girlfriends and the implications that they may have on hateful subgroups such as Incels. More research must be conducted on both the benefits and consequences of usage of AI companions such as Replika. These effects should also be compared between different AI companions that are available to see if the results

differ. In terms of their usage, researchers should examine how different subgroups may utilise AI companions. This can be done through surveys or interviews, as well as examining postings in different forums regarding users' experiences with AI. In doing so, we can further understand how AI companions may change the landscape for managing groups such as Incels. Beyond this, it is also crucial for there to be more research surrounding incel experiences on dating apps and how this may impact their misogynistic worldviews and the ways in which they utilise AI companions.

VII-5) Chapter Summary

This thesis aimed to understand the potential role that AI girlfriends could play in the radicalization of Incels. By examining the literature and the data through a general strain and masculinity theory lens, it was able to further understand the potential motivations for AI use as well as the outcomes. Overall, it was found that using AI girlfriends can aid Incels in minimising their loneliness and pulling them out of the hateful rhetoric that they are entrenched in. This is in opposition to the initial expectations of further radicalization and encouragement for violence. These results demonstrated the safeguards that were set in place by the developers of Replika in order to avoid violence through the usage of their application. Though these results are only preliminary in this field, they provide insight that may be useful for those looking to exit incelhood, those helping Incels, and policy makers looking to understand Incels.

REFERENCES

- Agnew, R. (1985). A revised strain theory of delinquency. *Social forces*, 64(1), 151-167.
- Agnew, R. (1999). "A General Strain Theory of Community Differences in Crime Rates." *Journal of Research in Crime and Delinquency* 36 (2): 123–155.
- Agnew, R. (2001). "Building on the Foundation of General Strain Theory: Specifying the Types of Strain Most Likely to Lead to Crime and Delinquency." *Journal of Research in Crime and Delinquency* 38 (4): 319–361.
- Agnew, R. (2010). "A General Strain Theory of Terrorism." *Theoretical Criminology* 14 (2): 131–153.
- Baele, S. J., Brace, L., & Coan, T. G. (2021). From "Incel" to "Saint": Analyzing the violent worldview behind the 2018 Toronto attack. *Terrorism and political violence*, 33(8), 1667-1691.
- Borgogna, N. C., McDermott, R. C., Browning, B. R., Beach, J. D., & Aita, S. L. (2019). How does traditional masculinity relate to men and women's problematic pornography viewing?. *Sex Roles*, 80, 693-706.
- Bono, M. H. (2023). "Lonely and disaffected young men": a thematic content analysis of online posts by members of incel forums (Doctoral dissertation, Rutgers University-Graduate School of Applied and Professional Psychology).
- Carvin, S., Juneau, T., & Forcese, C. (Eds.). (2021). Top Secret Canada: Understanding the Canadian Intelligence and National Security Community. University of Toronto Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *Gender & society*, 19(6), 829-859.
- Davis, A. J. (2022). Climbing the masculine hierarchy: Examining constructions of masculinity through incel identities.

- Depounti, I., Saukko, P., & Natale, S. (2023). Ideal technologies, ideal women: AI and gender imaginaries in Redditors' discussions on the Replika bot girlfriend. *Media, Culture & Society*, 45(4), 720-736.
- Germain, T. (2024, February 14). *Your AI Girlfriend Is a Data-Harvesting Horror Show*. Gizmodo. <https://gizmodo.com/your-ai-girlfriend-is-a-data-harvesting-horror-show-1851253284>
- Ging, D. (2019). Alphas, betas, and incels: Theorizing the masculinities of the manosphere. *Men and masculinities*, 22(4), 638-657.
- Glance, A. M., Dover, T.L., & Zatzkin, J. G. (2021). Taking the black pill: An empirical analysis of the "Incel." *Psychology of Men & Masculinity*, 22(2), 288-298. <https://doi.org/10.1037/men0000328>
- Grunau, K. (2020). *Involuntary celibacy: personality traits amongst misogynistic online communities* (Bachelor's thesis, University of Twente).
- Hadero, H. (2024, February 14). *AI chatbots are sparking romance (with the chatbot, that is)*. CBC News. <https://www.cbc.ca/news/world/artificial-intelligence-companion-apps-1.7114695>
- Her, Y. C., & Timmermans, E. (2021). Tinder blue, mental flu? Exploring the associations between Tinder use and well-being. *Information, Communication & Society*, 24(9), 1303-1319.
- Laestadius, L., Bishop, A., Gonzalez, M., Illenčák, D., & Campos-Castillo, C. (2022). Too human and not human enough: A grounded theory analysis of mental health harms from emotional dependence on the social chatbot Replika. *new media & society*, 14614448221142007.
- Luka Inc. (2024). Replika. <https://replika.com/>

- Main, N. (2023, October 5). *Man Whose AI 'Girlfriend' Encouraged Him to Assassinate Queen Elizabeth II Gets Nine Years in Prison*. Gizmodo. <https://gizmodo.com/man-sentenced-ai-girlfriend-assassinate-queen-1850904625>
- Massanari, A. (2017). # Gamergate and The Fappening: How Reddit's algorithm, governance, and culture support toxic technocultures. *New media & society*, 19(3), 329-346.
- Maxwell, D., Robinson, S. R., Williams, J. R., & Keaton, C. (2020). "A short story of a lonely guy": A qualitative thematic analysis of involuntary celibacy using Reddit. *Sexuality & Culture*, 24(6), 1852-1874. <https://doi.org/10.1007/s12119-020-09724-6>
- Miller, S. (2023). Supreme Gentlemen: The Path of Radicalization for the Incel Community's Lone Wolves. *Terrorism and Political Violence*, 1-16.
- Miller-Idriss, C. (2020). *Hate in the homeland: The new global far right*. Princeton University Press.
- Morag, N. (2018). *Comparative homeland security: Global lessons*. John Wiley & Sons.
- Morton, J., Ash, A., Reidy, K., Kates, N., Ellenberg, M., & Speckhard, A. (2021). Asking Incels (Part 1): Assessing the Impacts of COVID-19 Quarantine and Coverage of the Canadian Terrorism Designation on Incel Isolation and Resentment. *ICSVE–International Center for the Study of violent Extremism*.
- O'Malley, R. L., Holt, K., & Holt, T. J. (2022). An exploration of the involuntary celibate (incel) subculture online. *Journal of interpersonal violence*, 37(7-8), NP4981-NP5008.
- Palys, T. S. (2003). *Research decisions: Quantitative and qualitative perspectives*. Scarborough, Ont.: Thomson Nelson.
- Possati, L. M. (2023). Psychoanalyzing artificial intelligence: The case of Replika. *AI & SOCIETY*, 38(4), 1725-1738.
- Ramsay, J. D., Cozine, K., & Comiskey, J. (Eds.). (2020). *Theoretical foundations of homeland security: strategies, operations, and structures*. Routledge.

- Reed, S. M. (2018). *Boys to Men: Masculinity, Victimization, and Offending*. ProQuest Dissertations Publishing.
- Scaptura, M. N., & Boyle, K. M. (2020). Masculinity Threat, “Incel” Traits, And Violent Fantasies Among Heterosexual Men in the United States. *Feminist Criminology*, 15(3), 278-298. <https://doi.org/10.1177/1557085119896415>
- Skoczylis, J., & Andrews, S. (2022). Strain theory, resilience, and far-right extremism: the impact of gender, life experiences and the internet. *Critical Studies on Terrorism*, 15(1), 143-168.
- Skjuve, M., Følstad, A., Fostervold, K. I., & Brandtzaeg, P. B. (2021). My chatbot companion- a study of human-chatbot relationships. *International Journal of Human-Computer Studies*, 149, 102601.
- Sparks, B., Zidenberg, A. M., & Olver, M. E. (2022). Involuntary celibacy: A review of incel ideology and experiences with dating, rejection, and associated mental health and emotional sequelae. *Current psychiatry reports*, 24(12), 731-740.
- Sparks, B., Zidenberg, A. M., & Olver, M. E. (2023). An exploratory study of incels’ dating app experiences, mental health, and relational well-being. *The Journal of Sex Research*, 1-12.
- Stijelja, S., & Mishara, B. L. (2023). Psychosocial characteristics of involuntary celibates (Incels): A review of empirical research and assessment of the potential implications of research on adult virginity and late sexual onset. *Sexuality & Culture*, 27(2), 715-734.
- Tibbetts, S. G. (2019). *Criminological theory: the essentials* (Third edition.). SAGE Publications.
- Urbaniak, G. C., & Kilmann, P. R. (2006). Niceness and dating success: A further test of the nice guy stereotype. *Sex Roles*, 55, 209-224.

- Vallerga, M., & Zurbriggen, E. L. (2022). Hegemonic masculinities in the ‘Manosphere’: A thematic analysis of beliefs about men and women on The Red Pill and Incel. *Analyses of Social Issues and Public Policy*, 22(2), 602–625. <https://doi.org/10.1111/asap.12308>
- Van den Hoonaard, D. K., & Van den Scott, L.J. (2022). *Qualitative research in action: a Canadian primer* (Fourth edition.). Oxford University Press.
- Verdugo-Thomson, A. (2023). Masculinity, Pornography, and Inceldom: The Use of American Ideals of Masculinity and the Consumption of Heterosexual Pornography to Radicalize Young Men into Inceldom.
- Williams, D. J., Arntfield, M., Schaal, K., & Vincent, J. (2021). Wanting sex and willing to kill: Examining demographic and cognitive characteristics of violent “involuntary celibates”. *Behavioral sciences & the law*, 39(4), 386-401.
- Young, O. (2019). What role has social media played in violence perpetrated by incels?. *Peace Studies Student Papers and Posters*.
- Zakaria, F. (2020). Ten lessons for a post-pandemic world. Penguin.

