

Understanding the Collective Identity of the Radical Right Online: A Mixed-Methods Approach

by

Ryan Scrivens

M.A., University of Ontario Institute of Technology, 2011
B.A. (Hons.), University of Ontario Institute of Technology, 2009

Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Philosophy

in the
School of Criminology
Faculty of Arts and Social Sciences

© Ryan Scrivens 2017

SIMON FRASER UNIVERSITY

Fall 2017

All rights reserved.

However, in accordance with the *Copyright Act of Canada*, this work may be reproduced, without authorization, under the conditions for Fair Dealing. Therefore, limited reproduction of this work for the purposes of private study, research, education, satire, parody, criticism, review and news reporting is likely to be in accordance with the law, particularly if cited appropriately.

Approval

Name: Ryan Scrivens
Degree: Doctor of Philosophy (Criminology)
Title: *“Understanding the Collective Identity of the Radical Right Online: A Mixed-Methods Approach”*
Examining Committee: **Chair:** Martin Andresen
Professor

Richard Frank
Senior Supervisor
Assistant Professor

Garth Davies
Supervisor
Associate Professor

Martin Bouchard
Supervisor
Professor

Andre Gerolymatos
Internal Examiner
Professor
Hellenic Studies, SFU

Peter Simi
External Examiner
Associate Professor
Department of Sociology
Chapman University

Date Defended/Approved: September 7, 2017

Ethics Statement



The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

- a. human research ethics approval from the Simon Fraser University Office of Research Ethics,

or

- b. advance approval of the animal care protocol from the University Animal Care Committee of Simon Fraser University;

or has conducted the research

- c. as a co-investigator, collaborator or research assistant in a research project approved in advance,

or

- d. as a member of a course approved in advance for minimal risk human research, by the Office of Research Ethics.

A copy of the approval letter has been filed at the Theses Office of the University Library at the time of submission of this thesis or project.

The original application for approval and letter of approval are filed with the relevant offices. Inquiries may be directed to those authorities.

Simon Fraser University Library
Burnaby, British Columbia, Canada

update Spring 2010

Abstract

Criminologists have generally agreed that the Internet is not only a tool or resource for right-wing extremists to disseminate ideas and products, but also a site of important identity work, accomplished interactively through the exchange of radical ideas. Online discussion forums, amongst other interactive corners of the Web, have become an essential conduit for the radical right to air their grievances and bond around their “common enemy.” Yet overlooked in this discussion has been a macro-level understanding of the radical discussions that contribute to the broader collective identity of the extreme right online, as well as what constitutes “radical posting behaviour” within this context. Drawing from criminal career measures to facilitate this type of analysis, data was extracted from a sub-forum of the most notorious white supremacy forum online, *Stormfront*, which included 141,763 posts made by 7,014 authors over approximately 15 years. In study one of this dissertation, Sentiment-based Identification of Radical Authors (SIRA), a sentiment analysis-based algorithm that draws from traditional criminal career measures to evaluate authors’ opinions, was used to identify and, by extension, assess forum authors’ radical posting behaviours using a mixed-methods approach. Study two extended on study one by using SIRA to quantify authors’ group-level sentiment about their common enemies: Jews, Blacks, and LGBTQs. Study three further extended on studies one and two by analyzing authors’ radical posting trajectories with semi-parametric group-based modeling. Results highlighted the applicability of criminal career measures to study radical discussions online. Not only did this mixed-methods approach provide theoretical insight into what constitutes radical posting behaviour in a white supremacy forum, it also shed light on the communication patterns that contribute to the broader collective identity of the extreme right online.

Keywords: right-wing extremism; collective identity; social movement theory; sentiment analysis; trajectories; discussion forums.

Acknowledgements

I first want to thank my parents for never giving up on me. Mom and Dad, we can laugh about it now, but there was a time when we thought that I wouldn't survive high school, let alone graduate school. Yet through thick and thin, you were there, cheering me on – I can't thank you enough for that. I also want to thank my sisters, Amy and Alex. I couldn't ask for more down-to-earth, caring, funny, and intelligent women in my life.

A very special thank you to my partner in crime and life partner, Miss Tiana Gaudette. You are, by far, my better half. You put up with my antics and escapades, on a daily basis, and you accept me for me, supportive every step of the way. Must be exhausting!

To my friends. I feel like the luckiest person to have been surrounded by such amazing people. Back at home, I want to thank Ty, Billy, Brad, the Perin's, Caleb, and Chris (R.I.P.). At SFU, I want to thank Mitch, Bry, Ky, Logey, Jeff, Evan (big and small), Phil, Farzana, Tarah, Monica, Kylie, Julie, Sarah, Sadaf, Marie, Jess B., and Edi. I must also thank my friends at the VOX-Pol Network of Excellence for their continuous support: Prof. Maura Conway, Lisa McInerney, Moign Khawaja, Dr. Paul Gill, Dr. Lorraine Bowman-Grieve, and the folks at University College Dublin.

To my incredible committee: Senior Supervisor Dr. Richard Frank, you've given me so many research opportunities, and you always gave me your time, day or night. Over the years, you've become my friend, and I cherish our friendship. To my Supervisors Dr. Garth Davies and Dr. Martin Bouchard (in no particular order – I don't want Martin to get mad at me, again). Throughout my academic journey, you've stood tall in my corner, and I look up to each of you, both as academics and more importantly, as people. Dr. Pete Simi, thank you for serving as my External Examiner at the PhD defence. It was an honour having you on my committee. It was an experience that I'll never forget – you are, after all, “the guy” who studies right-wing extremism in the U.S. I also want to thank my Internal Examiner, Dr. Andre Gerolymatos, for providing such insightful suggestions on how to proceed with my research.

Last but not least, to my mentor, long-time colleague and close friend, Dr. Barbara Perry. You gave me my first shot at academia, and you always believed in me (even when I took that summer off!). I hope that I've made you proud.

Table of Contents

Approval	ii
Ethics Statement	iii
Abstract	iv
Acknowledgements	v
Table of Contents	vi
List of Tables	viii
List of Figures	ix
List of Acronyms	x

Chapter 1	1
1.1. Right-Wing Extremism: A Criminological Perspective	4
1.2. Collective Identity of the Radical Right: Community Building Online	6
1.3. Stormfront.org: The Online Hub of the Radical Right	8
1.4. Contributing to the Collective Identity of the Radical Right: Influential Authors Online	10
1.5. Research Contributions	12
1.5.1. Study 1. What’s “Radical”? Exploring Chronic Authors in a Right- Wing Extremist Forum	12
1.5.2. Study 2. Separating “Us” from “Them”: Measuring Levels of “Othering” on a Right-Wing Extremist Forum	13
1.5.3. Study 3. “Othering” across Time: Posting Trajectories of the Radical Right Online	14
1.6. Operationalizing Radical Posting Behaviour	15

Chapter 2	17
2.1. Introduction	17
2.2. Radical Behaviour Online: Risk Assessment Approaches	19
2.3. Influential Radical Communications Online	22
2.4. Current Study	24
2.5. Data and Methods	26
2.5.1. Web-Crawler	26
2.5.2. Forum Data	27
2.5.3. Keywords	27
2.5.4. Sentiment Analysis	29
2.5.5. Sentiment-based Identification of Radical Authors	31
2.5.5.1. SIRA 1.0 Measures	31
2.5.5.2. SIRA Measures Re-Calibrated	35
2.6. Results	38
2.6.1. Descriptive Information of the Sample	38
2.6.2. Radical Posting Behaviour: A Macro-Level Perspective	39
2.6.3. Radical Posting Behaviour: A Micro-Level Perspective	43
2.6.3.1. High-Intensity Chronic and Radical Posting Behaviour	44
2.6.3.2. High-Frequency Chronic and Radical Posting Behaviour	53
2.6.3.3. High-Duration Chronic and Radical Posting Behaviour	61
2.7. Discussion and Conclusion	67

Chapter 3.....	71
3.1. Introduction	71
3.2. Building by “Othering”: Community Development of the Radical Right Online	72
3.3. Current Study	77
3.4. Data and Methods.....	78
3.4.1. Web-Crawler and Forum Data	78
3.4.2. Keywords	79
3.4.3. Sentiment Analysis	79
3.4.4. Sentiment-based Identification of Radical Authors 1.1	80
3.4.4.1. SIRA 1.1 Measures	80
3.4.5. Descriptive Statistics	81
3.5. Results	82
3.6. Discussion and Conclusion.....	88
Chapter 4.....	91
4.1. Introduction	91
4.2. Developments in the Criminology of Terrorism: A Criminal Career Paradigm	91
4.3. Current Study	94
4.4. Data and Methods.....	95
4.4.1. Web-Crawler and Forum Data	95
4.4.2. Keywords and Sentiment Analysis.....	95
4.4.3. Sentiment-based Identification of Radical Authors 1.1	96
4.4.3.1. Analytic Strategy.....	96
4.5. Results	98
4.5.1. Descriptive Information of the Sample.....	98
4.5.2. Anti-Semitic Posting Trajectories	99
4.5.3. Anti-Black Posting Trajectories	102
4.5.4. Anti-LGBTQ Posting Trajectories.....	105
4.5.5. Comparison of Radical Trajectories	107
4.6. Discussion and Conclusion.....	110
Chapter 5.....	112
5.1. Understanding Radical Posting Behaviour in a Right-Wing Extremist Forum.....	112
5.2. Limitation and Future Research	116
5.3. Policy Implications	119
References.....	122
Appendix A.....	141
Appendix B.....	143

List of Tables

Table 2.1.	SIRA re-calibrated to identify high-intensity chronic radical authors
Table 2.2.	SIRA re-calibrated to identify high-frequency chronic radical authors
Table 2.3.	SIRA re-calibrated to identify high-duration chronic radical authors
Table 2.4.	Descriptive information of the sample
Table 2.5.	Descriptive comparisons of chronic radical posting groups
Table 2.6.	High-intensity chronic radical authors
Table 2.7.	High-frequency chronic radical authors
Table 2.8.	High-duration chronic radical authors
Table 3.1.	Descriptive information of the sample
Table 3.2.	Descriptive information of the sample with outliers included and removed
Table 4.1.	Descriptive information of the sample
Table 4.2.	BIC values for trajectory analysis of anti-Semitic posting behaviour
Table 4.3.	Censored normal model with two trajectory groups for anti-Semitic posting behaviour
Table 4.4.	BIC values for trajectory analysis of anti-Black posting behaviour
Table 4.5.	Censored normal model with two trajectory groups for anti-Black posting behaviour
Table 4.6.	BIC Values for trajectory analysis of anti-LGBTQ posting behaviour
Table 4.7.	Censored normal model with two trajectory groups for anti-LGBTQ posting behaviour
Table 4.8.	Average number of authors per radical trajectory at set time points

List of Figures

- Figure 2.1.** Data collection, process of text analysis, and the creation of the overall radical score
- Figure 3.1.** Data collection, process of text analysis, and the creation of the overall radical score
- Figure 4.1.** Data collection, process of text analysis, and the creation of the overall radical score
- Figure 4.2.** Anti-Semitic posting trajectories for the two-group model
- Figure 4.3.** Anti-Black posting trajectories for the two-group model
- Figure 4.4.** Anti-LGBTQ posting trajectories for the two-group model

List of Acronyms

AvePP	Average Posterior Probabilities
BIC	Bayesian Information Criterion
EOFC	Explosive-Onset Fluctuating Chronic
EOMD	Explosive-Onset Moderate Desister
FRC	Fast Rising Chronic
GBTM	Group-Based Trajectory Analysis
HDCR	High-Duration Chronic Radical
HFCR	High-Frequency Chronic Radical
HICR	High-Intensity Chronic Radical
HOMD	High-Onset Moderate Desister
LCGA	Latent Class Growth Analysis
LGBTQ	Lesbian, Gay, Bisexual, Trans, and Queer
MRC	Moderate Rising Chronic
OCC	Odds of Correct Classification
SD	Standard Deviation
SE	Standard Error
SIRA	Sentiment-based Identification of Radical Authors
SPGM	Semi-Parametric Group-based Modeling
SRC	Slow Rising Chronic
TENE	Terrorism and Extremism Network Extractor
ZOG	Zionist Occupied Government

Chapter 1.

Introduction

It is widely acknowledged that people around the world are increasingly using computer technologies and computer-mediated communications to connect with each other. The Internet's seamless accessibility and user-friendly platform have revolutionized the sharing of information and communications, facilitating an international web of virtual communities. Violent extremists and those who subscribe to radical beliefs have embraced this changing digital landscape, and their presence in online discussion forums – amongst other virtual platforms – has grown rapidly (Neumann, 2013; Sageman, 2008; Seib & Janbek, 2011; Weimann, 2006), especially in radical right-wing¹ forums such as the infamous *Stormfront.org* (Bowman-Grieve, 2009; Conway, 2016; Futrell & Simi, 2017). Here scholars have argued that radical forums of this type have facilitated the 'leaderless resistance' movement, a decentralized and diffused tactic that has made it increasingly difficult for law enforcement officials to detect potentially violent extremists (Brynielsson, Horndahl, Johansson, Kaati, Martenson, & Svenson, 2013; Cohen, Johansson, Kaati, & Mork, 2014; Johansson, Kaati, & Sahlgren, 2016; Sageman, 2008). It should come as little surprise, then, that the current focus of government-funded research is on the development of advanced information technologies and risk assessment tools to identify and counter the threat of violent extremism online, and on a large scale (Sageman, 2014). However, what has been largely overlooked during these Big Data and risk assessment discussions has been an in-depth look at what constitutes radical posting behaviour in an already radical setting, as well as what posting behaviours may shape the broader identity of a virtual community. These important questions can be leveraged with advanced information technologies, but only if they are guided by theory.

Previous research has shown that online discussion forums are ideal venues in which supporters and sympathizers of different movements, including radical right-wing

¹ Terms such as 'radical right', 'extreme right', 'far-right extremists', 'radical right-wing' and other similar terms will be used interchangeably in this dissertation. Each are referring to 'white supremacy', or as members of the radical right-wing community would call it 'white nationalism.' These terms are a mere reflection of broader white power ideology.

supporters, can interact with one another, free from the geographic barriers that once made it difficult to communicate (Back, 2002; Burris, Smith, & Strahm, 2000; Caiani & Parenti, 2013; De Koster & Houtman, 2008). Within this setting, criminologists have argued that the Internet is not only a tool or resource for individuals to disseminate ideas and products, but also a site of important identity work, accomplished interactively through the exchange of radical ideas (Futrell & Simi, 2004; Perry & Scrivens, 2016a). Online discussion forums, also conceptualized as ‘virtual communities’, have become an essential conduit for the extreme right to air their grievances, bond and form a collective identity around their “common enemies”: Jews, Blacks, and Lesbians, Gays, Bisexuals, Trans, and Queers (LGBTQ), as key examples (Bowman-Grieve, 2009; Daniels, 2009; Meddaugh & Kay, 2009).

Stormfront is one of many examples of a virtual community of the radical right, but it is arguably the most notorious hate site online (Burris et al., 2000; Hale, 2002; Levin, 2002; Stern, 2001; Schafer, 2002).² It is the largest and most active extreme right forum in the world (Southern Poverty Law Center, 2015), and it has hosted some of the most notorious and deadly right-wing extremists since its inception in 1995. The Southern Poverty Law Centre (2014), for example, has described *Stormfront* as “a magnet and breeding ground for the deadly and the deranged”, claiming that its members have been responsible for approximately 100 murders since the site came online. The most notable of these, the Norwegian far-right terrorist who killed 77 people in July of 2011, Anders Behring, was a registered member of *Stormfront* during the time of his attack, posting such messages as: “Feminism, corrupt treacherous politicians, a corrupt treacherous media, pro-immigration Jewry and a corrupt academia is the hole in the ‘dike” (Southern Poverty Law Centre, 2014, p. 2). Criminologists Simi and Futrell (2015) have also referred to *Stormfront* as an “echo chamber for hate”, and Wojcieszak (2010) has described it as a “hornet’s nest” for extremists to become more extreme.

It is no wonder that academics have paid particular attention to how individuals communicate on radical right-wing forums in general (e.g., Abbasi & Chen, 2007; Anahita, 2006; Back, 2002; Burris et al., 2000; Daniels, 2009; Duffy, 2003; Whine, 1999) and

² In the weeks following a white supremacy rally in Charlottesville, Virginia, *Stormfront* was suspended by its domain registrar, Network Solution, for violating ‘Acceptable Use Policy.’ Currently, the site is not accessible to the public, on the surface web at least (see Sheffield, 2017), but I suspect that it will return in the coming months.

Stormfront in particular in recent times (e.g., Bowman-Grieve, 2009; Castle & Chevalier, 2001; De Koster & Houtman, 2008; Hale, 2002; Figea, Kaati, & Scrivens, 2016; Meddaugh & Kay, 2009; Thompson, 2001; Wong, Frank & Allsup, 2015; Wojcieszak, 2010).³ Yet in light of these important contributions to how those with radical views connect and communicate online, little is known about their communication patterns from a macro-level. A major barrier in addressing this concern is the sheer volume of information that researchers must sift through online, thus making it a technical challenge for social scientists (Brynielsson et al., 2013; Cohen et al., 2014; William & Burnap, 2016).

To address these important oversights, this dissertation will provide an empirical look at what constitutes radical posting behaviour in a white supremacy forum, as well as uncover influential posting behaviours that may contribute to the broader collective identity of the radical right using computational-based tools and a mixed-methods approach. This dissertation includes three studies that adapt traditional criminal career measures (frequency, seriousness, and duration of activity) that were developed by criminologists Blumstein, Cohen, Roth, and Visher (1986) to disaggregate offending patterns. These parameters will be used to identify, measure, and describe the radical and influential posting activity of the most chronic members of a radical right-wing community. All three studies will draw from one large sample of messages found on *Stormfront*, and all studies will use a sentiment analysis-based algorithm to draw attention to individual- and group-level posting patterns in the data.

In the remainder of this chapter, I will describe criminologists' contribution to our understanding of radical right-wing identity, followed by a detailed look at criminologists'

³ There has also been a surge in the number of studies on radical uses of the Internet since the tragic events of 9/11. For example, in effort to better understand how those with extremist beliefs use the Web, scholars have provided descriptive accounts of the content featured on Jihadi-based websites (e.g., Amble, 2012; Brown & Korff, 2009; Conway, 2006; Neumann & Rogers, 2007; Thomas, 2003; Tsfati & Weimann, 2002; Weimann, 2004; Whine, 1999), as well as measured the hyperlinks posted within and between the sites (e.g., Reid & Chen, 2007; Reid et al., 2005; Sageman, 2008). Yet a more recent trend in the scholarship has been a shift from studying specific content on websites to understanding how virtual communities are developed and maintained on Web 2.0, such as how Jihadists use *Twitter* (e.g., Berger, 2016; Berger & Morgan, 2015; Berger & Perez, 2016; Burnap et al., 2014; Klausen, 2015), *YouTube* (e.g., Bermingham, Conway, McInerney, O'Hare, & Smeaton, 2009; Conway & McInerney, 2008; Klausen, Barbieri, Reichlin-Melnick, & Zelin, 2012; Weisburd, 2009), the online videos at the *al-Hayat Media Center* (e.g., Macnair & Frank, 2017), and online forums (e.g., Campana & Ducol, 2014; Ducol, 2012; Torres-Soriano, 2013).

interest in studying the collective identity of the radical right online through a social movement lens. Here the collective identity of the radical right will be described in detail, followed by a discussion on how radical right-wing forums – *Stormfront* in particular – have served as a central hub for the far-right movement. Next I will turn to online posting behaviours that may contribute to the collective identity of the radical right and how these influential posting behaviours may be measured. Lastly, I will operationalize the term ‘radical posting behaviour’ and highlight the research contributions of this dissertation.

1.1. Right-Wing Extremism: A Criminological Perspective

The 9/11 terrorist attacks marked an era in which the field of terrorism studies, particularly the study of the violent Jihadi, became the “hot-button” topic within many academic circles (LaFree & Freilich, 2017). Yet fifteen years later, the shocking electoral victory of U.S. President Donald Trump served as a stark reminder that white supremacy, a violent movement that was pushed to the fringes of public attention (Johnson, 2012; Simi, 2010), remains alive and well. Trump’s 2016 “Make America Great Again” campaign, grounded in far-right sentiment, has energized the radical right movement in North America (Barkun, 2017; Futrell & Simi, 2017).⁴ The aftermath of Trump’s electoral victory (known as the “Trump Effect”) has echoed in several ways: North America has seen an increase in hate speech and hate crimes, increased visibility of ‘alt-right’ commentators, and an increase in discussions on white supremacy chat forums such as *Stormfront* (Futrell & Simi, 2017; Southern Poverty Law Centre, 2017). As Perry (forthcoming) noted, “there can be no better time to take stock of how, we, as academics [in criminology], account for the discourses and actions associated with right-wing extremism” (p. 1).

The study of crime in general and the field of criminology in particular is multi/inter-disciplinary, drawing from diverse areas of study, including but not limited to sociology, psychology, political science, communications, history, and law. It is the hybrid nature of this discipline that strengthens its core, as criminologists can borrow best practice techniques (theoretical and methodological) from other areas to study crime (LaFree &

⁴ Trump’s sentiment includes, but is not limited to, the elimination of the flood of illegal immigration and the war against what he defined as ‘radical Islamic terrorists.’ Sadly, this divisive sentiment resonated with many Americans.

Freilich, 2017). To some extent, criminologists have shown interest in the growing field of terrorism and extremism studies. In 2015, for example, criminologists Freilich and LaFree (2015) introduced a special edition in the journal of *Terrorism and Political Violence*, which was devoted to the criminology of terrorism.⁵ Surprisingly, however, the authors correctly pointed out that until recently, terrorism and extremism research had failed to capture the attention of criminologists. Instead much of the research was drawn from other disciplines, such as political science, psychology, and security studies (Freilich & LaFree, 2015; see also LaFree & Freilich, 2017). This is in spite of the fact that terrorism and political violence clearly falls within the realm of criminology, a discipline that was aptly defined by Chermak and Greunewald (2015) as:

the study and origins of the law, prevalence and incidence of crime patterns, the comparative nature of criminal offending, the social construction of criminal deviance and social problems the various efforts and impacts of how the criminal justice system responds to crime, and the characteristics of crime victims (p. 135).

Despite this lag, a broader field in which criminologists have had a lengthier history of commitment has been on far-right extremism.

Several attempts have been made to theorize about right-wing extremism from a criminological perspective. Strain theory, for example, was popular amongst criminologists in the 1990s and the early part of the 21st century, especially to understand the social environment in which hate groups emerge (e.g., Blazak, 2001; Wooden & Blazak, 1995). Here scholars argued that hate groups spawn from two simultaneous and intersecting components: (1) a perceived loss of access to economic opportunity, and (2) the perception that minority groups are undeservingly privileged to such opportunities. In a similar vein, Hamm (1993) studied the rise of the skinhead movement specifically, and terrorism generally, by combining traditional criminological theories. To illustrate, Hamm (1993) in his seminal work on American Skinheads integrated strain/anomie theory with neo-Marxist and differential association theories to investigate how disenfranchised youth were socialized into a rebellious subculture. More recently, Hamm (2007) drew from a social learning perspective to study violent extremism, arguing that terrorists and violent right-wing extremist groups are aware of the routine activities of security and intelligence

⁵ Most recently, LaFree (2017) introduced a special edition in *Criminology and Public Policy* on terrorism and the Internet. An edited collection, 'The Handbook of the Criminology of Terrorism', by LaFree and Freilich (2017) is also an encouraging sign for the development of criminology in terrorism research.

officials and therefore learn how to exploit opportunities. Similarly, Parkin and Freilich (2015) tested routine activities theory in the context of far-right wing extremism, noting that the key predictors of violence were, amongst other predictors, opportunity and proximity to engage in violence. Indeed, a common goal in these studies was to develop a deeper understanding of radical-right wing identity and all its nuances.

An emerging – and perhaps more exciting – trend in our criminological understanding of the radical right has been supported by identity-based theories and social movement theory, which is a framework that broadly explores groups of actors who engage in political or social action on the basis of shared identities or interests (Futrell & Simi, 2004; Perry & Scrivens, 2016a). In the context of understanding the collective identity of the radical right, researchers have suggested that their shared identity is constructed and sustained in several ways: through the fierce promotion of hegemonic whiteness (Hughey, 2010; Simi, Futrell, & Bubolz, 2016), hegemonic masculinities (Ferber, 2009; Treadwell & Garland, 2011), or both (Futrell & Simi, 2004; Perry & Scrivens, 2016a). Commonly described in each of these studies is that members of the radical right are typically White men who are seeking to carve out a place in which they can exude white power and privilege to create ‘in-groups’ (Whites) and ‘out-groups’ (non-Whites) (Perry, forthcoming; see also Berger, 2017). Scholars have also drawn from social movement theory to further understand how members of the radical right communicate online to construct a radical identity (e.g., Bowman-Grieve, 2009; Burris et al., 2000; Futrell & Simi, 2004; Perry & Scrivens, 2016a).

1.2. Collective Identity of the Radical Right: Community Building Online

Prior to the introduction of the World Wide Web, members of the radical right spread their message of intolerance through traditional means (e.g., books, newsletters, pamphlets, magazines, rallies, etc.). Since then, right-wing extremists have become increasingly reliant on the Internet to facilitate movement expansion – both numerically and geographically – to publicize and promote messages of hate, as well as recruit and connect with like-minded others within and beyond domestic borders (Back, 2002; Bowman-Grieve, 2009; Burris et al., 2000; Levin, 2002; Futrell & Simi, 2004; Simi & Futrell,

2015). Criminologists, for example, have generally agreed that the Internet is a site of important identity work and is not only a “tool” or “resource” for disseminating ideas and products. In other words, white supremacists’ use of the Internet is not passive; rather, participants actively and discursively construct a collective identity (Futrell & Simi, 2004; Simi & Futrell, 2015; Perry & Scrivens, 2016a).

The concept of ‘collective identity’ has provided valuable insight into how white power identity develops online (see Bowman-Grieve, 2009; Burris et al., 2000; Futrell & Simi, 2004; Perry & Scrivens, 2016a). Social movement literature explicitly acknowledges that collective identity is actively produced (e.g., Hunt & Benford, 1994; Langman, 2005; Melucci, 1995; Poletta & Jasper, 2001; Snow, 2001); it is constructed through what Melucci (1995) identifies as “interaction, negotiation and the opposition of different orientations” (p. 43). This framework resonates strongly with theoretical understandings of the far-right hate movement (Futrell & Simi, 2004). Perry (2001), for example, emphasizes ‘doing difference’ in the context of hate crime, arguing that hate crime is a forceful illustration of what it is to engage in situated conduct. The interactions between actors provide the context in which they compete for the privilege to define difference, and in ways that either perpetuate or reconfigure hierarchies of social power. Berger (2017) has described this interaction as ‘in-group’ and ‘out-group’ dynamics.

These same processes occur within cyberspace (Back, 2002; Burris et al., 2000; Bowman-Grieve, 2009; Caiani & Parenti, 2013; De Koster & Houtman, 2008; Daniels, 2009; Futrell & Simi, 2004; Hale, 2010). Face-to-face identity work that might take place at a white power rally, for example, is supplemented by the “many-to-many” capacity of Internet communications (Crisafi, 2005). Collective identities may be produced and reproduced in what Hunt and Benford (1994) described as:

ongoing interactions between allies, oppositional forces, and audiences who can be real or imagined. While providing a sense of we-ness and collective agency, collective identities also create a sense of other via boundary identification, construction, and maintenance (p. 450).

Furthermore, collective identities are rooted in and shaped by specific discourses, fluid and relational in nature. Identities emerge from interactions with an array of different audiences, from bystanders to allies to opponents, and from news media to state authorities, for example. Such interactions, in turn, channel words and actions. They provide the grounds on which individuals can delegitimize the claims of others and

categorize themselves and others, all in the name of making sense of their social worlds and their place in those worlds (Polleta & Jasper, 2001). The social construction of movement identities is a cultural representation, a set of shared meanings that are produced and reproduced, negotiated and renegotiated, in the interactions of individuals embedded in particular sociocultural contexts. Online venues are indeed sites of important “identity work.” Ackland and O’Neil (2011), for example, emphasize the importance of participation in informal networks and direct control over the means of communication, both of which favor the pre-eminence of expressive behavior leading to the formation of collective identity.

Four key components emerge from studying the collective identity formation, each of which is enhanced through the extended use of the Internet (Snow, 2001). A collective identity: (1) provides an alternative frame for understanding and expressing grievances (Ackland & O’Neil, 2011; Anahita, 2006; Futrell & Simi, 2004); (2) it shapes the discursive “other” along with the borders that separate “us” from “them” (Hunt & Benford, 1994; Snow, 2001); (3) it affirms and reaffirms identity formation and maintenance (Back, 2002; Bowman-Grieve, 2009); and (4) it provides the basis for strategic action (Caiani & Kröll, 2014). Each of these elements contributes to our understanding of the Internet as a venue for the construction of collective identity around whiteness. White supremacy discussion forums, in particular, are amongst the most important examples of how virtual communities are built on racial hierarchies (Back, 2002; Bowman-Grieve, 2009). And amongst these radical forums is a virtual conclave that has become known as the most infamous white supremacy site in the world: *Stormfront.org*.

1.3. Stormfront.org: The Online Hub of the Radical Right

Surprising to some, *Stormfront*, a ‘White Nationalist’ discussion forum, was one of the first websites to surface when the Internet became accessible to the public in the mid-1990s. The first mention of *Stormfront* in a major media outlet (*The New York Times*) was in mid-March of 1995 (see Schneider, 1995). The site first appeared online only weeks before this mention, which was incidentally just one month prior to the Oklahoma City bombing for which Timothy McVeigh, a white supremacist, was later convicted and subsequently executed. Not surprising is that *Stormfront* prides itself on being the first

white supremacy website (Levin, 2002; Stern, 2001; Schafer, 2002). *Stormfront* has proudly described itself as “the first White Nationalist site on the Web”, a claim that is seconded by the Anti-Defamation League (ADL) that has referred to it as the “longest-lived extremist hate site on the Internet” (Oldham, 1998).

Launched in 1995 by white supremacist and ex-felon Donald Black, *Stormfront* is arguably the hate site to pave the way for white supremacists to stake their claim in cyberspace, encouraging discussions on Jewish conspiracy, Black inferiority, and moral condemnation of homosexuality, for example (Bowman-Grieve, 2009; Hale, 2010; Meddaugh & Kay, 2009). Black learned computing while serving a two-year prison sentence in the early 1980s on a Federal sedition charge for his part in the attempted invasion of the Caribbean Island of Dominica for the purposes of establishing a base for the white supremacist movement there. Up until 2013, *Stormfront* was managed by Black and his son, Derek, with the assistance of some 40 moderators, from premises in Palm Beach, Florida. In 1999, Black told a journalist that the site cost about \$1,000 per month to operate (Marriott, 1999). Today Black requests user donations of \$7,500 per month to ‘Keep Stormfront Alive and Growing!’ Black currently operates the site on his own, as his son publicly denounced white supremacy in July of 2013 and was out of the movement by August 2013 (Southern Poverty Law Center, 2016).

Early incarnations of *Stormfront* described itself as “a resource for those courageous men and women fighting to preserve their White Western Culture, ideals and freedom of speech and associations, a forum for planning strategies and forming political and social groups to ensure victory.” As early as 1996, Black claimed that “Organizations have recruited through *Stormfront*, and through their Web pages that we’ve linked to” (Kanaley, 1996). The original *Stormfront* was more akin to a traditional website than a forum, containing a ‘Quote of the Week’, ‘Texts Library’ of ‘White Nationalist’ documents, a letters page, an assortment of cartoons, and a downloadable graphics section. The ‘Hot Links’ page also featured connections to like-minded sites such as those maintained by *Aryan Nations*, William Pierce’s *National Alliance*, and *Posse Comitatus*. Within this online space, however, the overall message has remained the same since its inception over 20 years ago. Much of the sentiment revolves around a key theme: the fierce promotion of the Aryan/White race as the elite of all races, and the subsequent targeting of “racial enemies” (non-Whites generally) in a response to the so-called White “struggles” – the so-

called “white cultural genocide” (Bowman-Grieve, 2009; Daniels, 2009; Meddaugh & Kay, 2009).

Today, *Stormfront* is still one of the most visited and well-known sites of its kind, with online membership increasing each year. For example, the site gained nearly 300,000 members since its 20th anniversary in 2015, where users posted over 1,000 messages each day (Southern Poverty Law Center, 2015). Between August 2012 and February 2015, Conway (2016) recorded 5,800 new threads per month, which equated to roughly 70,000 new threads on the forum each year. Most disturbing, perhaps, is that between 2010 and 2014, nearly 100 murderers were registered to the site, according to a report by the Southern Poverty Law Centre (2014). It is no wonder, then, that *Stormfront* has garnered some scholarly attention since its inception. Academics, for example, have explored how *Stormfront* users: (1) maintain a legitimate and even justifiable image of the hate movement (e.g., Daniels, 2009; Meddaugh & Kay, 2009); (2) develop and maintain extremist ideologies that make up their collective identity (e.g., Back, 2002; Bowman-Grieve, 2009; De Koster & Houtman, 2008; Futrell & Simi, 2004; Perry & Scrivens, 2016a; Thompson, 2001); (3) recruit new members (e.g., Burris et al., 2000; Hale, 2010; Lennings, Amon, Brummert, and Lennings, 2010; Wong et al., 2015), and; (4) discuss the role(s) of women in the movement (e.g., Castle & Chevalier, 2011; Daniels, 2009). Though these categories are not mutually exclusive, the consensus is that *Stormfront* plays a vital role in the far-right extremist movement. For like-minded individuals who perceive the White race as the “victim” of cultural genocide, *Stormfront* serves as a central space in which subscribers can build a sense of unity and collective identity around their perceived grievances (Back, 2002; Bowman-Grieve, 2009; Daniels, 2009; Futrell & Simi, 2004; Perry & Scrivens, 2016a). Radical discussions are preserved, even insulated, by the forums’ countless links to community discussion boards, news stories, and other radical sites (Burris et al., 2000; Wong et al., 2015).

1.4. Contributing to the Collective Identity of the Radical Right: Influential Authors Online

Like every online community, there will be those who dominate the discussions in a radical right-wing forum, influencing how discussions and topics of discussion emerge

(Bowman-Grieve, 2009; Wojcieszak, 2010). Research has shown that these individuals are ever present in homogenous and insulated communities (e.g., Berger & Strathearn, 2013; Huffaker, 2010; Lyons & Henderson, 2005; Nash, Bouchard, & Malm, 2013), and they may also be understood as opinion leaders who influence the attitudes, beliefs, motivations, and/or behaviours of others (Valente & Pumpuang, 2007). Much of this work has drawn from communications literature, and it has shown that authors' communication skills may dictate their level of influence (Butler, 2001; Holtgraves & Lasky, 1999; Huffaker, 2010; Ng & Bradac, 1993; Weimann, 1994). To illustrate, the amount or volume with which an individual communicates with members of a particular group has an impact on their social influence (Huffaker, 2010; Yoo & Alavi, 2004). The clarity of their message and their ability to write with "vocabulary richness" may also dictate their level of influence in a particular setting (Bradac et al., 1976; Hosman, 2002). So too does their use of powerful language (direct, assertive, exerts confidence and certainty) (Burrell & Koper, 1998) and the intensity of the message (emotional and stylistic features of language) (Ng & Bradac; Hamilton & Hunter, 1998). Lastly, the time that an individual spends in an online community has an impact on their ability to gain social influence, especially when they are attempting to motivate others to participate in discussions or create a sense of identity for the group (Joyce & Kraut, 2006; Koh, Kim, Butler, & Bock, 2007). This social influence, however, requires that the individual be perceived as trustworthy in the group or setting, and this can be built through the length of time that one spends in the group or setting (Hollander, 1961).

These concepts can be applied to how we think of individual influence in a radical online setting. *Stormfront* contains these opinion leaders (Bowman-Grieve, 2009; Wojcieszak, 2010) who shape the collective identity of the broader radical group – an identity built on a shared set of fears, values, and ideologies (Adams & Rocigno, 2005; Anahita, 2006; Back, 2002; Bowman-Grieve, 2009; Daniels, 2009; De Koster & Houtman, 2008; Futrell & Simi, 2004; Perry & Scrivens, 2016a; Wojcieszak, 2010). It is likely that influential authors who post radical messages within these echo chambers have developed a level of trust in the community, actively sharing information about "White struggles" and ascribing blame to the "other" to reaffirm identity formation and maintenance. They most likely attempt to promote discussions that shape the discursive "other" by promoting "us" from "them" sentiment. Measuring this level of radical influence is indeed a challenge, but criminal career measures in the simplest form are attuned to it.

In short, Blumstein et al. (1986) introduced a set of measurable ‘parameters’ or ‘dimensions’ that could explain various sequences of offending and identify chronic offenders by measuring the frequency with which an offender was actively engaged in crime, duration of an offenders’ career, and their specific offenses committed and patterns of offenses (defined as ‘seriousness’). These parameters can be used to disaggregate between who is and who is not a chronic and radical poster, based on their identifiable posting activity, and shed light on those who may be influential in an online community.

1.5. Research Contributions

The purpose of this dissertation will be to provide insight into what constitutes radical posting behaviour in right-wing extremist forum, as well as shed light on authors’ posting behaviours and associated patterns that may contribute to authors’ broader collective identity through a Big Data analysis and a mixed methods approach. This area of inquiry, much like the literature on terrorist groups, lone-actor terrorists, and those who engage in political violence, lacks a strong empirical and methodological basis, and instead is largely conceptual (Conway, 2016; Gill, 2015; Gill et al., 2017). The following is an overview of the research contribution for each of the three studies and associated research questions.

1.5.1. Study 1. What’s “Radical”? Exploring Chronic Authors in a Right-Wing Extremist Forum

Online communications of the radical right, amongst other radical groups and individuals, has received considerable academic attention over the past 20 years (e.g., Adams & Rocigno, 2005; Anahita, 2006; Back, 2002; Borgeson & Valeri, 2005; Bostdorf, 2004; Daniels, 2009; Neo, Dillion, & Khader, 2016) with growing discussions on how online communities, namely *Stormfront*, have become a magnet for the most aggrieved White people to connect with other like-minded others (e.g., Burris et al., 2000; Bowman-Grieve, 2009; De Koster & Houtman, 2008; Wojcieszak, 2010). Much of this research, apart from the social network literature⁶, tends to fall within one of two camps: (1) advanced

⁶ See Adam & Roscigno, 2005; Burris, Smith, & Strahm, 2000; Caiani & Wagemann, 2009; Chau & Xu, 2007; Gerstenfeld, Grant, & Chiang, 2003; Tateo, 2005; Zuev, 2010.

information technologies and risk assessment tool (macro), or (2) in-depth content analyses and case studies (micro). For the second camp, researchers have provided rich description about how far-right adherents interact with one another to form a collective identity online, oftentimes by drawing from sociological frameworks such as social movement theory (e.g., Futrell & Simi, 2004; Perry & Scrivens, 2016a). For the first camp, researchers have explored similar research areas but on a larger scale using various high-level analyses. When using these high-level techniques, however, researchers have overlooked the fundamental question of what constitutes radical posting behaviour in an online setting that is radical to begin with, and instead jumped into developing risk indicator tools or algorithms to identify risky online behaviour (Brynielsson et al., 2013; Cohen et al., 2014; Johansson et al., 2016) or measure levels of radicalization (e.g., Hung, Jayasumana, & Bandara, 2016a; Hung, Jayasumana, & Bandara, 2016b), for example, with little to no theoretical guidance. Arguably, those in this first camp should take a step back and assess the broader radical posting behaviours that make up the extremist community, as doing so may cut through much of the online noise and provide us with new insight into what constitutes 'risky behaviour' in an online setting.

This study will explore this gap in the literature by bridging the micro and macro to analyze users' online sentiment found on an extreme right discussion forum (*Stormfront Canada*, a sub-forum of *Stormfront*) using a sentiment-based algorithm that incorporates traditional criminal career measures (frequency, seriousness, and duration of activity) to quantify authors' level of negativity. Informed by previous research on social movements and influential communication patterns, authors' level of negativity will be measured around their thoughts on Jews, Blacks, and LGBTQs – traditional adversary groups that members of the radical right target and build their identity around. A mixed-methods approach will then be used to address the following research question:

RQ 1: What posting behaviour is deemed “radical” in an online community of the radical right?

1.5.2. Study 2. Separating “Us” from “Them”: Measuring Levels of “Othering” on a Right-Wing Extremist Forum

To date, previous studies have shown that online discussion forums, amongst other interactive corners of the Web, have become a crucial conduit for the radical right to

promote alternative messaging, both to air their grievances and to bond around their “common enemy”: Jews, Blacks, and LGBTQs, for example. Web communities such as *Stormfront* is a medium in which individuals rally around far-right ideals, but what we have learned about this radical community largely comes from qualitative analyses (e.g., Anahita, 2006; Back, 2002; Bowman-Grieve, 2009; Castle & Chevalier, 2011; Daniels, 2009; Duffy, 2003; De Koster & Houtman, 2008; Futrell & Simi, 2004; Hale, 2010; Meddaugh & Kay, 2009; Whine, 1999; Perry & Scrivens, 2016a). Much less research has been conducted on *Stormfront* and other radical right discussion forums from a quantitative perspective (notable exceptions include Abbasi & Chen, 2007; Burriss et al., 2000; Figea et al., 2016; Wojcieszak, 2010; Wong et al., 2015). In particular, no study, to the best of my knowledge, has measured group-level discussions that may contribute to the broader collective identity of the virtual community. The purpose of this study, then, will be to provide a group-level understanding of forum users’ discussions that may contribute to the collective identity of a radical right-wing community in *Stormfront Canada*, exposing which adversary groups (Jews, Blacks, and LGBTQs) garners the most radical sentiment. This will be done with a sentiment-based algorithm that incorporates traditional criminal career measures (frequency, seriousness, and duration of activity) to measure authors’ level of radical discourse. This study will be guided by the following research question:

RQ 2: Which of the traditional adversary groups of the radical right (Jews, Blacks, or LGBTQs) are most negatively discussed in an online community of the radical right?

1.5.3. Study 3. “Othering” across Time: Posting Trajectories of the Radical Right Online

Research has shown that right-wing extremists have become increasingly reliant on the Internet to facilitate movement expansion – both numerically and geographically – to publicize and promote messages of hate, as well as recruit and connect with like-minded others within and beyond domestic borders by “othering” their adversaries (Back, 2002; Bowman-Grieve, 2009; Burriss et al., 2000; Levin, 2002; Futrell & Simi, 2004; Simi & Futrell, 2015). *Stormfront* is arguably the most notorious of these hate sites (Burriss et al., 2000; Hale, 2002; Levin, 2002; Stern, 2001; Schafer, 2002), hosting some of the deadliest right-wing extremists since its inception in 1995 (Southern Poverty Law Centre, 2014). Further,

not only is *Stormfront* the largest and most active right-wing extremist forum in the world, it is also the oldest, spanning over 20 years (Southern Poverty Law Center, 2015). For researchers, this is an ideal space in which we can better understand some of the hateful discourse that transpire over time. Surprisingly, however, is that temporal research has yet to be done on such an echo chamber. This is in spite of the fact that scholars posit that these radical spaces polarize users' opinions over time (Back, 2002; Caiani & Kröll, 2014; Futrell & Simi, 2004; Wojcieszak, 2010). The purpose of this study is to expand on our understanding of right-wing extremists' "us and them" tactics by providing a group-level understanding of forum users' discussions that may form the collective identity of a radical right-wing community across time. Study three of this dissertation will assess this important dynamic with semi-parametric group-based modeling (SPGM) and will be guided by following research question:

RQ 3: How do anti-Semitic, anti-Black, and anti-LGBTQ posting behaviours change over time in an online community of the radical right?

1.6. Operationalizing Radical Posting Behaviour

For this dissertation, radical posting behaviour will be operationalized as the "othering" of particular minority groups in an online forum of the extreme right. Target groups will include traditional adversaries of the radical right: Jews, Blacks, and LGBTQs. "Othering" will also be understood as a chronic event that transpires in an online community of the extreme right, and radical posting behaviour will be understood as posting behaviour that makes a direct and negative reference to the above adversary groups. Radical posting behaviour will involve: (1) a high rate of "othering", (2) highly-intense forms of "othering", and/or (3) "othering" over an extensive period, all within the online community that is under investigation (*Stormfront Canada*). Those who "other" the above adversary groups may also be influential in their online community.

This definition is guided by social movement literature and communications literature, and will be implemented with traditional criminal career measures (frequency, severity, and duration of activity) that are built into a sentiment analysis-based algorithm.

Levels of “othering” will be measured with sentiment analysis, which assign polarity values (positive, negative, or neutral) to a piece of text.

It is worth noting that the definition and the subsequent operationalization of ‘radical posting behaviour’ is used to establish the framework with which this dissertation is based, but the purpose of this dissertation is to uncover the nuances of these forms of “othering” that contribute the collective identity of the radical right online. A mixed-methods approach will be used to describe the radical posting behaviour. In so doing, however, it must be clarified from the onset of this dissertation that the terms ‘radical’ or ‘most radical’ does not refer to on- or offline ‘radicalization’. These studies will not measure users’ level of ‘radicalization’, nor will users’ level of ‘violent radicalization’ be measured. In no way does this research imply that authors’ online posting behaviors represent violent behavior or a propensity to engage in violence. In other words, this study will not be concerned with measuring forum users’ violent behavioral trajectories or the process of radicalization leading to violent extremism. Rather, these studies will identify and describe radical authors or authors of interest based on their distinct posting behaviors and levels of negativity in a select online forum.

Chapter 2.

What's "Radical"? Exploring Chronic Authors in a Right-Wing Extremist Forum

2.1. Introduction

Uncovering radical information online has been one of the most significant policy issues faced by law enforcement agencies and security officials worldwide (Cohen et al., 2014; Weimann, 2008), and the current focus of government-funded research has been on the development of advanced information technologies and risk assessment tools to identify and counter the threat of violent extremism on the Internet (Sageman, 2014). Here criminologists have argued that successfully identifying radical content (behaviours, patterns, or processes), especially on a large scale, is the first step in reacting to it (e.g., Bouchard, Joffres, & Frank, 2014; Davies, Bouchard, Wu, Joffres, & Frank, 2015; Frank, Bouchard, Davies, & Mei, 2015; Mei & Frank, 2015; Williams & Burnap, 2016). Yet in the last 10 years alone, it is estimated that the number of individuals with access to the Internet has increased 3-fold (Internet World Stats, 2017), from over 1 billion in 2005 to more than 3.6 billion as of 2017 (Internet Live Stats, 2017). With these new users, more information has been generated, leading to a constantly growing flood of data. As the amount of data has increased, it has become harder and harder to sift through, and manual methods of research have become increasingly less efficient. These new conditions have necessitated guided data filtering methods, those that can side step the laborious manual methods that have been classically utilized to identify information that is relevant (Brynielsson et al., 2013; Cohen et al., 2014).

It is becoming increasingly difficult – and near impossible – to manually search for violent extremists, potentially violent extremist, or even users who post radical messages online because the Internet contains an overwhelming amount of information. Yet in response to this problem, scholars have urged social scientists to collaborate with computer scientists (Conway, 2016; Scrivens, 2016), and computer scientists have embraced this collaboration, recommending that machine learning techniques, particularly semi-automated techniques that include human research decisions, be used to aid in the

process of analyzing Big Data in terrorism and extremism studies (Brynielsson et al., 2013; Cohen et al., 2014). To some extent criminologists have begun to explore this critical point of departure via a customized web-crawler, extracting large bodies of text online that feature radical material and then using text-based analysis tools to assess the content (e.g., Bouchard et al., 2014; Burnap & Williams, 2016; Davies et al., 2015; Frank et al., 2015; Mei & Frank, 2015; Scrivens & Frank, 2016; Williams & Burnap, 2015). Similarly, computational-based research has been conducted to identify radical content on discussion forums (e.g., Fu, Abbasi, & Chen, 2010; Zhang et al., 2010; Zhou, Qin, Lai, Reid, & Chen, 2005), *Twitter* accounts (e.g., Kaati, Omer, Prucha, & Shrestha, 2015), and videos on *YouTube* (e.g., Chen, 2012).

Despite what appears to be an increased interest in developing large-scale ways to identify and analyze radical content online or “search for a needle in a haystack” (a phrase that is commonly used in many academic settings), lost in these complex analyses is a broader understanding about the online spaces in which these potential extremists may reside in. In other words, much of the literature on online communications of radical groups and/or individuals, particularly from a high-level methodological perspective, quickly turns to discussions about measuring users’ level of – or propensity towards – radicalization (e.g. Hung et al., 2016a; Hung et al., 2016b), or ways to identify the next violent extremist or predict the next terrorist attack through authors’ online discourse (e.g., Brynielsson et al., 2013; Cohen et al, 2014; Johansson et al., 2016). What has been set aside in these oftentimes very intricate conversations – many of which lack a strong theoretical footing – are discussions about what constitutes radical patterns of online activity more generally. The purpose of this study is to address this important oversight.

In what follows, I will provide an overview of some of the indicator-based risk assessment literature that, to some extent, has tapped into the above discussions but, in many respects, has skirted around the broader question of what does radical posting behaviour look like online, particularly in spaces where the content is radical in general. Spring boarding from this research, I will draw upon communications literature that describe influential patterns of communication that may be treated as radical on the Web when they are gauged with criminal career measures.

2.2. Radical Behaviour Online: Risk Assessment Approaches

Criminologists Monaghan and Molnar (2016) correctly pointed out that within academic and law enforcement circles, we have seen an emphasis on indicator-based risk assessment tools to identify on- and offline behaviours that develop into violence and/or heighten the risk of violent extremism (see also Sageman, 2004). To prevent future terrorist attacks, for example, scholars have largely drawn from risk assessment tools to identify potential indicators of future attacks (e.g., Cook & Lounsbery, 2011; Dernevik, Beck, Grann, Hogue, & McGuire, 2009; Gudjonsson, 2009; Gudjonsson, West, & McKee, 2015; Herrington & Roberts, 2012; Meloy, Hoffmann, Guldemann, & James, 2012; Monahan, 2012, 2017; Roberts & Horgan, 2008), or have attempted to identify risk factors associated with an individual's pathway to violent extremism (e.g., Innes, Abbott, Lowe, & Roberts, 2007; Keibell & Porter, 2012; Pressman, 2009; Pressman & Flockton, 2012; Sawyer & Hienz, 2017; Silber & Bhaat, 2007; Silke, 2014). Much of this work tends to borrow from psychiatric assessment tools or warning behaviour literature rooted in psychology, such as red flag indicators of mass murderers (Dietz, 1986; Hempel, Meloy, & Richards, 1999; Knoll, 2010), school shooters (Meloy, Hoffmann, Roshdi, Glaz-Ocik, & Guldemann, 2014), those who engage in violent attacks against public figures (Dietz & Martell, 1989; Hoffmann, Meloy, Guldemann, & Ermer, 2011; Meloy, 2011), or all the above (Meloy, Hoffmann, Guldemann, & James, 2012; Meloy & O'Toole, 2011). Here the general consensus is that most violent attacks or attempts at violent attacks were predicated by some identifiable warning or risky behaviour and pattern.

Meloy et al. (2012), a team of researchers who study the role of warning behaviours in threat assessment, conceptualized 'warning behaviours' as:

acts which constitute evidence of increasing or accelerating risk. They are acute, dynamic, and particularly toxic changes in patterns of behavior which may aid in structuring a professional's judgement that an individual of concern now poses a threat – whether the actual target has been identified or not (p. 256).

From this definition, Meloy et al. (2012) identified eight broad warning behaviours or patterns in the context of violent risk assessment: (1) pathway warning behaviour; (2) fixation warning behaviour; (3) identification warning behaviour; (4) novel aggression behaviour; (5) energy burst warning behaviour; (6) leakage warning behaviour; (7) last resort warning behaviour, and; (8) directly communicated threat warning behaviour. Many

of these warning behaviours have been used to study individuals' level of risk to violent extremism. For instance, researchers have begun to study behavioural patterns, both on- and offline, that could be used to identify individuals' involvement – or potential involvement – in violent extremism (e.g., Brynielsson et al., 2013; Gill, 2015; Hung et al., 2016a; Hung et al., 2016b; Neo, Dillion, & Khader, 2016; Meloy & Gill, 2016; Weimann, 2012). Researchers too have been guided by Meloy et al.'s (2012) warning behaviours to explore the communicative patterns of lone-actor terrorists (e.g., Meloy et al., 2015; Meloy & Gill, 2016; Meloy, Mohandie, Knoll, & Hoffmann, 2015; Gill, 2015; Gill et al., 2017). Importantly, though, is that most of Meloy et al.'s (2012) warning behaviours are difficult to operationalize in an online space such as a radical discussion forum, and so too are most of the risk factors that have been proposed (personality characteristics, deviant lifestyle characteristics, history and clinical past, etc.) (see Pressman, 2009). In short, we have very little information about the authors who post the messages. Some computer scientists, however, have suggested that three of Meloy et al.'s (2012) warning behaviours (leakage, fixation, and identification) could be used to detect online signs of radical violence with text analysis techniques (e.g., Brynielsson et al., 2013; Cohen et al., 2014; Johansson et al., 2016; Kaati et al., 2016a; Kaati et al., 2016b). Consider the following description for each:

Leakage warning behaviour. As Meloy and O'Toole (2011) succinctly put it, patterns of leakage – in the context of threat assessment – are conceptualized as “the communication to a third party of an intent to do harm” (p. 513). Means of communication can vary by individual, but they typically include letters, diaries, online blogs, videos on the Web, email, and other social media sites. Researchers have in turn adopted this concept for the purposes of theorizing ways to detect linguistic markers for radical violence online, arguing that online actors may announce their radical views and intentions before an attack (Brynielsson et al., 2013; Cohen et al., 2014; Johansson et al., 2016). For example, an individual may post a message that clearly signals some intent to engage in violence, such as the posting of a message: “I will use a pipe bomb to kill people in the subway station in New York City.” That same user may also post another message claiming: “I'll be sure to kill all the women and children at the subway station as well.” This may signal a radical change in the users' behaviour.

Fixation warning behaviour. Any behaviour that reveals an increasingly pathological preoccupation with a person, or a cause, is defined as fixation warning behaviour. Meloy et al. (2012) noted that fixation can be measured as: (b) increasingly strident opinion; (c) increasingly negative characterization of the object of fixation; (d) impact on the family or other associates of the object of fixation, if present and aware; (e) angry emotional undertone (p. 265). An example of a fixation marker would be when a forum user posts a significantly higher volume of messages over time, targeting at a specific individual or a group of people. This may show that they are fixated on a particular individual or group.

Identification warning behaviour. This behaviour is broadly defined as an individual's desire to be a 'pseudo-commando', or a savior or hero, which includes maintaining a narcissistic, grandiose, and warrior mentality that is associated with weapons or military equipment, radical groups or role models, or radical action. Together, this behaviour represents someone who associates themselves with the advancement of a radical cause (Cohen et al., 2014). An example of this is the online behaviour of Anders Breivik (described above), whose online profile picture was of him pointing a weapon at the camera.

These warning behaviours may provide some insight into what radical posting behaviour looks like in an online space. Yet as insightful as this growing body of knowledge may be (or may be in the future), these warning behaviours alone do not provide enough of a framework in which to conceptualize radical posting behaviour online. To illustrate, many discussion forums, with *Stormfront* in particular, have moderators who discourage the blatant use of some of the leakage language expressed above. Aware of this, forum users tend to be careful about how they communicate with others, on the open-source portion of the forum at least, in fear that they will be banned from the site (Meddaugh & Kay, 2009). In effect, many of these authors will deliberately present their radical ideas in somewhat more subtle ways, framing themselves as the victims of hate rather than the perpetrators of hate, for example (Bouchard et al., 2014; Meddaugh & Kay, 2009). This makes it difficult to identify and then describe authors who post messages about wanting to bomb a subway station in New York City, for example, as it is highly likely that these messages will be removed as fast as they were posted. Along the same lines, identifying the 'pseudo-commando' type in radical spaces such as *Stormfront* may also be an

unsound approach to understanding the broader radical posting behaviour, simply because it narrows the scope with which to operationalize 'radical posting behaviour.' Fixated posting behaviour, however, may be of value for the current study, as this concept could be applied to the amount of times, for example, that an author posts negative messages about Blacks online. This concept may be beneficial if it is paired with a more intuitive technique of identifying radical posting behaviours: through authors' influential communication patterns.

2.3. Influential Radical Communications Online

Communications research provides a broader and arguably a more intuitive approach to studying online posting behaviours of the radical right. For instance, this field has shown us that three key components tend to dictate a source's influence on its recipients, each providing insight into how we can further understand radical posting behaviour online: (1) intensity; (2) volume, and; (3) duration of a source's messages (Ng & Bradac, 1993). Each of these components provide valuable insight into what may constitute radical posting behaviour in an extreme right discussion forum when traditional criminal career measures are used to quantify authors' negative discussions. In an attempt to understand radical posting behaviour online, the following is a look at what we can learn from communications literature when we fuse it with criminal career measures.

Volume. Communications research has shown us that the volume of an individuals' communications has an influence on their social influence (Huffaker, 2010; Yoo & Alavi, 2004) when the source of a messages is perceived as trustworthy in a particular group or setting (see Hollander, 1961). Butler (2001), for example, suggested that an individuals' online communication activity may produce a social structure, one which facilitates information sharing that can in turn influence social behaviour and draw in new users. Weimann (1994) similarly argued that the volume of engagement that someone expresses in a particular setting may increase their likelihood of influencing others. In other words, an individual who engages in more communication activity may increase their chance of reaching out to more individuals and extending their potential to influence others. Certainly, this general concept applies to how we may understand radical posting behaviour online, as it too provides us with a means of understanding which radical posting

behaviour may be influential in an online space. From a measurement perspective, criminal career dimensions provide a tool in which we can gauge an authors' level of radical engagement in an online setting through their posting behaviour. For example, an author could be considered radical if they post a high volume of radical material online, such as messages about why they hate every one of their Jewish neighbours, or why they feel "sick" every time they see a gay couple holding hands on the street. Importantly, this radical posting behaviour can be evaluated with a tradition criminal career measure: offending frequency (see Blumstein et al., 1986; Blumstein & Cohen, 1979). Concerned with understanding the rate in which an offender engages in offending frequency during their criminal careers, this criminal career measure can be adapted to an online space of the radical right; we can measure the volume with which an author posts negative messages on a radical discussions forum through simple counts of radical messages about Jews, for example (measure described in Chapter 2.5.5.1).

Intensity. Communications research has shown that language is power (Holtgraves & Lasky, 1999; Huffaker, 2010; Ng & Bradac, 1993). Undeniably, an individual's linguistic choices and their verbal communication skills dictate their ability to persuade others (Hosman, 2002; Bradac et al., 1976). Three areas of research have explored the effects of message content on the influence of the source (Ng & Bradac, 1993). First is the clarity of the message and an authors' ability to write with "vocabulary richness" (Bradac et al., 1976; Hosman, 2002). Poor language, on the other hand, tends to impact the credibility and influence of the source; message that are perceived as unintelligent are simply perceived as less credible (O'Keefe, 2002). Second is the powerful nature of the language. Previous research has shown that the use of powerful or powerless language influences how the source of the message is perceived (Ng & Bradac, 1993). Powerful language is direct, assertive, exerts confidence and certainty (Burrell & Koper, 1998), while powerless language includes, but is not limited to, fragmented sentences, hesitations (e.g., "um", "uh"), use of hedges (e.g., "maybe", "sort of", "kind of") and tag question (e.g., "isn't it?", "you know?") (Holtgraves & Lasky, 1999). Third is the intensity of language. Here, the consensus is that intense messages include two characteristics: (1) some stylistic feature of language, and (2) a level of emotionality (Ng & Bradac; Hamilton & Hunter, 1998). In short, these messages can be more influential because they grab the attention of the recipient (Forgas, 2006). This is particularly true for those messages that reinforce a sense of community and encourage others to participate

in the discussions (Joyce & Kraut, 2006), radical right-wing communities indeed being one of them.

These concepts can be applied to how we understand and in turn measure an individuals' level of radical discourse online, as there is a clear distinction between an author who posts somewhat vague and moderately radical messages and another who posts very direct radical messages. To illustrate, one author may describe in vague terms how they dislike a particular Black community member, while the other may – in a convincing tone – call for direct violence against every member of a Black community. Another author may simply write, in passing, that “a gay guy was checking me out” while another may directly indicate that he hates how “disgusting gay men are never keeping to themselves.” This level of intensity in an authors' message can be accounted for by borrowing from the traditional criminal career dimension, seriousness of crime (see Blumstein et al., 1998; Warr, 1989), which measures an authors' escalation into seriousness (i.e. seriousness metric) (metric described in Chapter 2.5.5.1).

Duration. The time that someone spends in an online community, according to various communication studies, has an impact on their ability to gain social influence, especially when they are attempting to motivate others to participate in discussions and create a sense of identity for the group (Koh, Kim, Butler, & Bock, 2007). Social influence, however, requires that the individual be perceived as trustworthy in the group, and this can be built through the length of time that one spends in the group (Hollander, 1961), as it shows a level of commitment to a particular group or social setting, for example. Indeed, this concept applies to how we may think of individual influence in a radical online setting, as an author who posted radical messages over an extensive period of time in a particular online space should be classified as more radical than an author who posted equally extreme messages over a shorter period of time. The traditional criminal career dimension 'duration of crime' is easily adapted to this situation (measure described in Chapter 2.5.5.1).

2.4. Current Study

The purpose of this study was to use a sentiment analysis tool and an algorithm to identify and describe radical posting behaviours found in an online community of the

extreme right. In particular, authors' posting behaviours were assessed around how they discuss specific topics that are at the heart the RWE movement and their collective identity on a selected discussion forum of the radical right: *Stormfront Canada*. To do this, data was captured using a customized web-crawler. Next, a list of keywords was generated that would serve as the basis of the analysis: keywords associated with Jews, Blacks, and LGBTQs. A total sentiment score for each forum post was then derived by summing the sentiment scores for each of the keywords contained in authors' post using sentiment analysis software. With this sentimentized data, radical authors and their subsequent posting behaviours were identified and described through the application of a novel algorithm that calculated a radical score based on a users' volume of negative posts, severity of negative posts, duration of negative posts, and the percentile score for average sentiment score (see Figure 2.1).

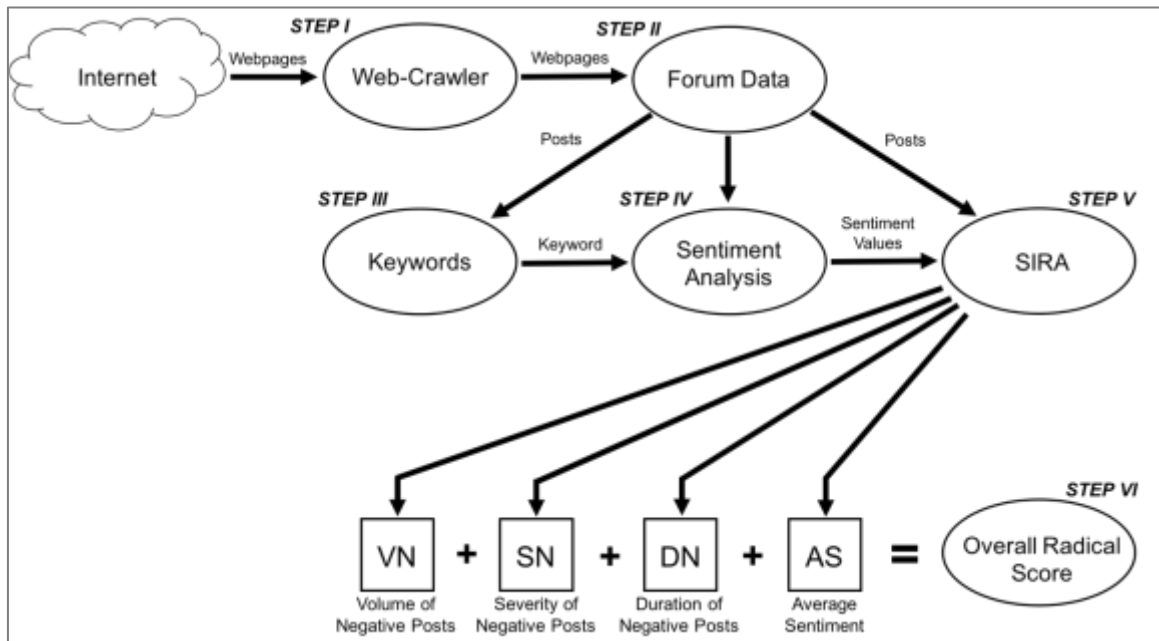


Figure 2.1. Data collection, process of text analysis, and the creation of the overall radical score

2.5. Data and Methods

2.5.1. Web-Crawler

Scholars have shown a vested interest in developing web-crawler tools to tackle the 'Big Data Challenge' (for more information, see Brynielsson et al., 2013). In the last 10 years, this interest has made its way into terrorism and extremism studies, with a focus on extracting Big Data from the Internet (e.g., Abbasi & Chen, 2005; Bouchard et al., 2014; Chen, 2012; Fu, Abbasi, & Chen, 2010; Zhang et al., 2010; Zhou, Qin, Lai, Reid, & Chen, 2005). Some have used standard web-crawler tools that are readily available online for a fee (e.g., the Python package 'Beautiful Soup'), while others have developed custom-written computer programs. Notable exceptions include the Dark Web Project, hosted at the University of Arizona Artificial Intelligence Lab (Chen, 2012), and the Terrorism and Extremism Network Extractor (TENE), which operates at Simon Fraser University's (SFU)'s International CyberCrime Research Centre (ICCRC). The latter of the two web-crawlers was used to capture the data for this dissertation.

TENE is a custom-written computer program that was designed to collect vast amounts of data online, automatically browsing and capturing all content according to user-specified rules. TENE emerged from previous work on online child exploitation networks (e.g., Frank, Westlake, & Bouchard, 2010; Joffres, Bouchard, Frank, & Westlake, 2011; Westlake, Bouchard, & Frank, 2011). Its core concept was applied to the extraction process in this dissertation: webpages were downloaded from the Internet and analyzed for website links pointing to other domains and/or pages. Link information was fed back into the database along with other statistics about the page, such as keyword count, image count and corresponding hash values, and geolocation information. Links were then recursively analyzed for further webpages, repeating the process until some user-specified termination condition applied (for more information on TENE, see Bouchard et al., 2014; see also Frank et al., 2015). This approach has demonstrated its benefit in investigating online networks and communities (see Bouchard et al., 2014; Davies et al., 2015; Frank et al., 2015; Macdonald, Frank, Mei, & Monk, 2015; Mei & Frank, 2015; Scrivens & Frank, 2016; Westlake & Bouchard, 2015; Wong et al., 2015).

2.5.2. Forum Data

Data for this study was drawn from the white supremacy discussion forum *Stormfront.org*, the highly visible forum of the right-wing extremist movement. Popular search engines such as *Google*, *Yahoo*, and *Bing* index the site, and the majority of the site's content is open source, meaning that non-registered users can freely read the content. *Stormfront* is also divided into several branches, including a specific international sub-forum for countries such as Britain, Netherlands, Ireland, and Canada. While members may network anywhere in the forum, the purpose of these sub-forums, amongst other things, is to encourage site members to network, both nationally and internationally.

For the purpose of this study, all open source data from the *Stormfront Canada* sub-forum was captured by TENE between July 13 and 26, 2015, and again on October 13, 2016 for updated content. This entire sub-forum, which included 141,763 posts made by 7,014 authors between September 12, 2001 and October 12, 2016, was analyzed for the current study.

Although *Stormfront Canada* is an important online conduit of the right-wing extremist movement in Canada (Perry & Scrivens, 2016b), this study is not an indictment of this sub-forum itself. Rather, the purpose of this study was to provide insight into what constitutes radical posting behaviour in a white supremacy forum, as well as shed light on authors' posting behaviours and their posting patterns that contribute to the broader collective identity of the radical right online. All author names were assigned with pseudonyms for the purposes of ensuring user anonymity.

2.5.3. Keywords

The first step in analyzing the data was to determine which of the various topics found on the sub-forum would be measured. In line with the purpose of this dissertation, I focused on authors' opinions about Jews, Blacks, and LGBTQs. In other words, to account for some of the discussions that underpin the collective identity of the radical right, a keyword list was developed to measure authors' opinions about their central adversaries: Jews, Blacks, and LGBTQs specifically. I do, however, acknowledge that adversary groups of the radical right are not limited to these specific groups.

Keyword selection procedure. A list of keywords was developed for the purposes of accounting for authors' opinions about Jews, Blacks, and LGBTQs in a virtual community of the radical right. This required that three separate lists be developed, one that included an equal number of keywords for each of those topics. These three lists were then merged together, which served as the finalized list of keywords for this study. The following is a step-by-step guide on how the final list was developed.

For keywords associated with Jews, a list of derogatory words – which also included words that were not considered derogatory words, (e.g., 'Jew', 'Jews') – were generated by triangulating two extensive lists of racial slurs found online; each of the two lists were aggregated into one list, and duplicate words were removed using *Microsoft Excel's* 'Remove Duplicates' function.⁷ For each of these words, plural and derivative words were included to the initial keyword lists, as the purpose was to sentimentize as many topic-relevant words as possible.⁸ This same procedure was completed for the keyword list associated with Blacks, which also included words that were not considered derogatory words (e.g., 'Blacks', 'Africans').⁹ Finally, a list of derogatory words – and a handful of words that may not be considered derogatory (e.g., 'gays', 'lesbians') – about the LGBTQ community was generated by referring to one extensive list of terms found online, as a second list that was similar to one for Jews and Blacks was not available.¹⁰ Plural and derivative words were also included in the list.

During this process, a much higher volume of words were found in the keyword lists that were associated with Blacks (1,254 words), in comparison with those associated with Jews (287 words) or LGBTQs (309 words). To generate an equal number of topic-based words in the final list, the number of words for each of the three models was standardized before each word was sentimentized. The following is a description of this procedure.

⁷ The 'Racial Slur Database' can be found at <http://www.rsdb.org>. The extensive list of racial slurs can be found by visiting https://en.wikipedia.org/wiki/List_of_ethnic_slurs.

⁸ Derivatives included different spelling for keywords. For example, for the term 'Jew bag', the term 'Jew-bag' was added to the list.

⁹ The word 'Black' was removed from this list, as the creator of *Stormfront* is Donald Black. Forum members tend to discuss Donald Black, in various contexts, and the inclusion of the term 'Black' would have most likely skewed the results of this current study and the dissertation more broadly.

¹⁰ The extensive list of slurs can be found at https://en.wikipedia.org/wiki/List_of_LGBT_slang_terms.

First, the frequency with which each of the above words were found in the dataset was captured with the help of TENE, which has a built-in program that can generate word frequencies (see Frank et al., 2015). With these word counts, a word frequency distribution graph was developed in *Microsoft Excel* for each of the three separate lists of words. This was done to assess the frequency with which authors posted messages with those words in the sub-forum. Second, the inflection point (the point in which diminishing returns become apparent in the data) was found for each of the three lists (see Figures A-C in Appendix A) and the average inflection point for each of the three lists were calculated. A random sample of words was drawn from each list, and the number of random words that were drawn from each list was dictated by the average inflection point value. To illustrate, the inflection point for the list of keywords about Jews was 30 keywords, for Blacks it was 55 keywords, and for LGBTQs it was 40 keywords. Collectively, the average inflection point value was 42 keywords, meaning that each list included 42 words that were randomly drawn from their associated list (for a list of words and their word frequencies, see Table A in Appendix B). The three lists were then merged together to create a finalized list (see the finalized list of keywords in Appendix B). Each keyword was unique to each list, and there were no overlapping words across lists.

2.5.4. Sentiment Analysis

After the keyword list was finalized, it was necessary to identify and evaluate the context surrounding the keywords. To allow for a systematic analysis of the user's discussion that could be considered 'radical', sentiment analysis was used to highlight relevant text.

Sentiment analysis, also known as 'opinion mining', is a data collection and analysis method that allows for the application of subjective labels and classifications (Feldman, 2013). It can evaluate the opinions of individuals by organizing data into distinct classes and sections, assigning an individual's sentiment with a positive, negative, or neutral polarity score (Abbasi & Chen, 2005). It also allows for a more targeted view of a dataset by allowing for the demarcation between cases that are sought after and those without any notable relevance. Sentiment analysis has been used in a wide variety of contexts, including customer review analysis for products (e.g., Feldman, 2013), an assessment of attitudes toward events or products on social media platforms (e.g.,

Ghiassi, Skinner, & Zimbra, 2013), and a comparison of different types of web-forums based on levels of negativity (e.g., Chalothorn & Ellman, 2012). As the purpose of the dissertation was not to push the boundaries of sentiment analysis algorithm, an established software, *SentiStrength*, was employed (Thelwall & Buckley, 2013).

SentiStrength allows for a keyword-focused method of determining sentiment near a specified keyword, which is a central feature of the software. In short, *SentiStrength* searches through a piece of text for keywords of interest (user-specified) that correspond to its dictionary and database (Harvard's general inquirer database) by using a stemming method. Next it evaluates the piece of text by assigning polarity values of either positive, negative, or neutral to the keywords, based on sentiment values that are found in its dictionary (Thelwall & Buckley, 2013). For example, the phrase "I hate the British and love Germans" can be analyzed for the sentiment around "British" (yielding a negative value) as well as "Germans" (yielding a positive value). After a specific range of words has been set to be analyzed (e.g., ten words before and after "Germans"), the software references its dictionary for sentiment values. Values are then applied to the specified range of words before/after the keyword (stemming process), and a sentiment score is assigned to the given text (Thelwall & Buckley, 2013). This method returns overall positive, negative, or neutral scores for the sentence. Values are also augmented by characters that can influence the values assigned to the text, such as active language, booster words, negative words, repeated letters, repeated negative terms, antagonistic words, punctuation, and other distinctive characters suited for studying an online context (see Thelwall & Buckley, 2013). Such a tool, however, has not yet been used to study radical posting patterns online, taking into account authors' volume, severity, and duration of negative messages on a discussion forum. This was done as follows. First, each post was scored for each of the 126 keywords identified in the previous step, resulting in a 141,763 thousand-by-126 keywords matrix. If a keyword did not exist in a post, the post was not scored for that keyword. The keyword scores were then averaged for each post, and the average value was assigned to the post as the final sentiment score. These final sentiment scores were then incorporated into the Sentiment-based Identification of Radical Authors (SIRA) algorithm.

2.5.5. Sentiment-based Identification of Radical Authors

There are various definitions that can be used to describe someone as a ‘radical’ based on their online posting activity in discussion forums. To illustrate, an author could be a long-time member of a discussion forum and post moderately negative material over that time, which may suggest a long-time dedication to a radical ideology. However, another author could participate in a discussion forum for a shorter amount of time, but during that time espouse very radical views in their postings. There too may be an author who posts a high volume of negative messages over a moderate period time. These examples raise a critical question: what constitutes radical posting behaviour in an online setting?

Determining which aspect of an author’s online activity should be considered when classifying them as radical depends on the definition used, or the goals of the identification exercise. Scrivens, Davies, and Frank (2017) developed an algorithm (heretofore referred to as SIRA 1.0) that could account for – and be adjusted to measure – specific aspects of a forum authors’ posting activity that may be as deemed ‘radical’, including the posting activities listed above. In so doing, an overall ‘radical score’ was created and was based on the following components of an author’s online activity, most of which drew from – and were inspired by – traditional criminal career measures that too were guided by communications literature (linguistics, communicator attributes, and social influence): volume of negative posts, severity of negative posts, duration of negative posts, and average sentiment score percentile. Spring boarding from these key parameters, the following is a brief look at the theoretical and mechanical underpinnings of each of SIRA 1.0’s four measures. Following this will be a discussion on how the SIRA algorithm was re-calibrated for the purposes of shedding light on authors’ posting behaviours that may be deemed radical in an online space of the extreme right.

2.5.5.1. SIRA 1.0 Measures

Volume of negative posts (VN). The volume of an individuals’ communications has an influence on their social influence (Huffaker, 2010; Yoo & Alavi, 2004). Certainly, an individual who engages in more communication activity may increase their chances of reaching out to more individuals, thus extending their potential to influence others (Weimann, 1994). This general concept applies to how radical posting behaviour may be

understood, and it too provides us with framework in which to explore how radical posting behaviour may be influential in an online space. From a measurement perspective, criminal career dimensions provide a reference point in which to gauge an authors' level of radical engagement in an online setting: offending frequency (see Blumstein et al., 1986; Blumstein & Cohen, 1979).

To measure this dimension, the volume of negative post was developed in two parts for the current study: (1) the number of negative posts for a given member, and (2) the proportion of posts for a given member that was negative. To calculate the number of negative posts for a given member, the number of negative posts for a given member was counted and then converted into percentiles scores. Percentile scores were then divided by 20 to obtain a score out of 5 points. To calculate the proportion of posts for a given member that was negative, the counts from the previous section were divided by the total number of posts to get the proportion. These scores were converted into percentiles scores, and the percentile scores were divided by 20 to obtain a score out of 5 points. Finally, the score of the number of negative posts for a given member and the score of the proportion of posts for a given member that was negative were tallied, thus creating a composite measure of negative volume (out of 10).

Severity of negative posts (SN). An individuals' linguistic choices and their verbal communication skills dictate their ability to persuade others (Hosman, 2002; Bradac et al., 1976); an authors' ability to write with "vocabulary richness" and clarity (Hosman, 2002; Bradac et al., 1976), paired with powerful language (Ng & Bradac, 1993) and intensity (Hamilton & Hunter, 1998) can be very influential in a particular setting. Such messages grab the attention of the recipient (Forgas, 2006), which is particularly true for those messages that reinforce a sense of community and encourage others to participate in the discussions (Joyce & Kraut, 2006). These concepts, too, can be applied to how we understand and in turn measure an individuals' level of radical discourse online, as there is a clear distinction between an author who posts somewhat vague and moderately radical messages and another who posts very direct radical messages. To illustrate, one author may describe in vague terms how they dislike a particular Jewish community, while the other may in a convincing tone call for direct violence against a Jewish community. Consequently, a measure was needed to discern authors' level of radical discourse.

To do this, a metric for the severity of negative posts was developed for the current study, borrowing from the traditional criminal career dimension 'seriousness of crime' (see Blumstein et al., 1998; Warr, 1989) that measured an author's escalation into seriousness (i.e. seriousness metric). This metric consisted of two parts: (1) the number of very negative posts for a given member (a value that sentiment analysis assigns based on the tone of the messages, level of emotion, booster words, antagonistic words, etc.) and (2) the proportion of posts for a given member that was very negative. 'Very negative' was calculated by standardizing the count variable; all posts with a standardized value greater than three standard deviations from the mean were considered to be 'very' negative. After the standardization process, the severity calculation was developed in the same manner as the volume calculation above. To calculate the number of very negative posts for a given member, the number of very negative posts for a given member was counted and then these scores were converted into percentile scores. Percentile scores were then divided by 20 to obtain a score out of 5 points. To calculate the proportion of posts for a given member that was very negative, the counts from the previous section were divided by the total number of posts to obtain the proportion. These scores were converted into percentile scores, and the percentile scores were divided by 20 to obtain a score out of 5 points. Finally, the score of the number of very negative posts for a given member and the score of the proportion of posts for a given member that was very negative were tallied, thus creating a composite measure of severity (out of 10).

Duration of negative posts (DN). The time that one spends in an online community has an impact on their ability to gain social influence, especially when they are attempting to motivate others to participate in discussions and create a sense of identity for the group (Koh et al. 2007). Social influence requires that the individual be perceived as trustworthy in the group, and this can be built through the length of time that one spends in the group (Hollander, 1961). This concept applies to how we may think of individual influence in a radical online setting. As an example, an author who posted radical messages over an extensive period of time in a particular online space should be classified as more radical than an author who posted equally radical messages over a shorter period of time. SIRA 1.0 was created to account for this important component.

The duration of negative posting was developed by calculating the first and last dates on which individual members posted negative messages in a discussion forum. The

difference between these dates were counted and these values were converted into percentiles scores. Percentile scores were then divided by 10 to obtain a score out of 10 points. While the general concept behind this measure was borrowed from the traditional criminal career dimension 'duration of crime', the measure for the current study was an aggregated measure, unlike the majority of the criminal career literature that measures the temporal changes in offending (e.g., Blumstein et al., 1986; Tremblay et al., 1994). In light of this difference, the duration of negative posting messages component, in concert with SIRA 1.0's other components, served as a useful starting place in understanding the broad-scale posting behaviours of authors in discussion forums.

Average sentiment score percentile (AS). It is important to be able to distinguish between an author who, on average, posted negative messages on a forum in comparison with another author who sporadically posted negative messages mixed in with positive messages, but on average the messages were not negative. It is also important to be able to differentiate between two authors who on average posted negative messages, but one posted negative messages that on average were more negative than the other author, especially when both parties posted similar volumes of negative content over similar amounts of time on a forum. To measure how radical an author was, with respect to the forum average, the average sentiment score percentile was created. Note that this measure did not borrow from a particular criminal career dimension, yet it served as more of logistic and complimentary function of the algorithm, especially when authors showed similar posting patterns as the one just described. This component was calculated by accounting for the average sentiment score for all posts in the forum. The scores for each individual were converted into percentiles scores, and percentile scores were divided by 10 to obtain a score out of 10 points.

Radical score. Together, the volume of negative posts, severity of negative posts, duration of negative posts, and the percentile score for average sentiment score were tallied to produce an overall score out of 40 points. This 'radical score' quantified four unique dimensions of 'seriousness' to identify radical individuals within an online discussion forum, whereby the higher a user's radical score was, the more likely their posting behaviour was considered 'radical' (see Scrivens et al., 2017).¹¹

¹¹ The four percentile components, in combination, were strong indicators of radical users in Islamic-based discussion forums. In addition, across the full sample of respondents, the Cronbach's

2.5.5.2. SIRA Measures Re-Calibrated

Much can be learned from the research on influential communication patterns when studying radical language and behaviours online, especially when criminal career measures are used in concert with sentiment analysis software to gauge, on a large scale, the various dimensions of online communication that may be deemed radical. Spring boarding from SIRA 1.0, the current study extends on this work by re-calibrating SIRA to identify and, by extension, describe various forms of chronic and radical posting behaviours, both from a quantitative and a qualitative perspective.¹² Two key components were required for this undertaking: (1) keywords that were sentimentized and then incorporated into the algorithm ought to be words that identify radical conversations, and (2) SIRA 1.0's components must be re-weighted/re-calibrated. For the former, the list of keywords that served as the basis of the analysis were those that were radical in nature: anti-Semitic, anti-Black, and anti-LGBTQ sentiment. The focus of this current section is on the latter, wherein SIRA 1.0 was calibrated to identify the following posting patterns: (1) high-intensity chronic radical behaviour; (2) high-frequency chronic radical behaviour, and; (3) high-duration chronic radical behaviour. The following is a detailed look at how each was weighted.

High-intensity chronic radical behaviour. To identify authors in the sample who posted a high volume of very negative messages and then explain the radical posting behaviours of this potentially influential group of users, SIRA was calibrated so that the emphasis – and measure for ‘most radical’ – was on those who posted very negative messages on the sub-forum (heretofore referred to as SIRA-i 1.0).¹³ For illustrative purposes, the following is comparison of the SIRA 1.0 algorithm values with the SIRA-i 1.0 algorithm values:

alpha for the components comprising the radical score was .742, indicating an acceptable level of internal consistency.

¹² The terms ‘chronic radical posting behaviour’, ‘chronic posting behaviour’, and ‘radical posting behaviour’ will be used interchangeably throughout this study. They refer to radical posting behaviour that is chronic, which is in line with how ‘radical posting behaviour’ was operationalized in Chapter 1.

¹³ During the inception of the SIRA project, SIRA 1.0's components were manually created in *Microsoft Excel*. For this dissertation, however, Dr. Richard Frank so kindly developed a program that allowed us to semi-automate this process via a user-friendly interface.

Table 2.1. SIRA re-calibrated to identify high-intensity chronic radical authors

Measures	SIRA 1.0 values (%)	SIRA-i 1.0 values (%)
Volume of negative posts	10 (25)	0
Severity of negative posts	10 (25)	40 (100)
Duration of negative posts	10 (25)	0
Average sentiment score	10 (25)	0
<i>Sum</i>	<i>40 (100)</i>	<i>40 (100)</i>

Note: SIRA-I 1.0 = SIRA high-intensity calibration.

All the weighting in the SIRA-i 1.0 algorithm was assigned to the *severity of negative posts* component, as is indicated in Table 2.1. However, an additional part of this component was altered. For SIRA 1.0., the *severity of negative posts* component included two sub-components: (1) the number of very negative posts for a given member and (2) the proportion of posts for a given member that was very negative. Drawing from this same metric resulted in unsound results for the current study; the majority of the most radical users, according to SIRA-i 1.0, were those who posted a mere one very negative message in the entire sub-forum.¹⁴ This type of posting behaviour does not constitute radical posting behaviour, and as such SIRA-i 1.0 did not account for proportion of authors' very negative messages.¹⁵

High-frequency chronic radical behaviour. SIRA was re-calibrated to identify the top high-frequency and radical posters in the data (heretofore referred to as SIRA-f 1.0). The following is comparison of the SIRA 1.0 values with the SIRA-f 1.0 values:

¹⁴ If, for example, an author posted one negative message on the sub-forum, the algorithm would identify them as the most radical in the sample, simply because 100 percent of their messages were negative (1/1 = 100 percent).

¹⁵ SIRA 1.0 was first tested on approximately 1 million messages posted by over 26 thousand authors across four Islamic-based discussion forums. This dataset was much larger than the dataset used in the current study (141,763 messages), and the 'proportion' sub-component of the *severity of negative posts* components was intuitive to the Big Data in the original study.

Table 2.2. SIRA re-calibrated to identify high-frequency chronic radical authors

Measures	SIRA 1.0 values (%)	SIRA-f 1.0 values (%)
Volume of negative posts	10 (25)	40 (100)
Severity of negative posts	10 (25)	0
Duration of negative posts	10 (25)	0
Average sentiment score	10 (25)	0
<i>Sum</i>	<i>40 (100)</i>	<i>40 (100)</i>

Note: SIRA-f 1.0 = SIRA high-frequency calibration.

The weighting in the SIRA-f 1.0 algorithm, as is indicated in Table 2.2, was assigned to the *volume of negative posts* component. A sub-component of this hybrid measure, 'proportion' of negative messages, was removed from the algorithm for reasons that were previously explained for SIRA-i 1.0.

High-duration chronic radical behaviour. SIRA 1.0 was re-calibrated to identify and describe the posting activity of long-term forum authors who posted negative messages over an extensive period on the sub-forum (heretofore referred to as SIRA-d 1.0). The following is a comparison of the SIRA 1.0 algorithm values with the SIRA-d 1.0 algorithm values:

Table 2.3. SIRA re-calibrated to identify high-duration chronic radical authors

Measures	SIRA 1.0 values (%)	SIRA-d 1.0 values (%)
Volume of negative posts	10 (25)	0
Severity of negative posts	10 (25)	0
Duration of negative posts	10 (25)	40 (100)
Average sentiment score	10 (25)	0
<i>Sum</i>	<i>40 (100)</i>	<i>40 (100)</i>

Note: SIRA-d 1.0 = SIRA high-duration calibration.

The weighting in the SIRA-d 1.0 algorithm was assigned to the *duration of negative posts* component, as is indicated in Table 2.3. Unlike the previously described components, this component is not a hybrid component.

2.6. Results

Results were divided into three sections. First, descriptive information was provided for the authors who directly posted messages about Jews, Blacks, and/or LGBTQs in the sample. Doing so provided a baseline with which associated radical posting groups were assessed and compared: (1) high-intensity chronic radical behaviour; (2) high-frequency chronic radical behaviour, and; (3) high-duration chronic radical behaviour. Second, the posting behaviour of the top 100 radical authors in each of the three posting groups were compared. Third, a thematic content analysis was conducted on the ten most radical authors and ten least radical authors found in each posting groups for comparative purposes.

2.6.1. Descriptive Information of the Sample

To illustrate key features in the data, as well as summarize the basic features about the sample and measures, descriptive statistics were provided for sub-forum authors who directly discussed Jews, Blacks, and LGBTQs. These authors were those who posted messages in the sub-forum that included the 126 keywords about the above adversary groups. Second, descriptive information was provided on the top 100 radical authors within each of the three chronic radical posting groups ($n = 300$). Descriptive information included three components of authors' posting activity: (1) mean number of posts (all posts, negative posts, and very negative posts); (2) mean posting score (all posts, negative posts, and very negative posts), and; (3) mean posting duration (all posts, negative posts, and very negative posts). These values were compared across radical posting groups.¹⁶

Of the 7,014 authors who posted messages in the sample, a total of 2,629 authors (37.48 percent) made a direct reference to Jews, Blacks, and/or LGBTQs in their online discussions. Collectively, these authors posted a total of 8,644 negative messages about the above adversary groups, with an average sentiment score of -3.98 ($SD = 3.15$). These negative messages were posted for an average of 155.27 days ($SD = 495.44$) for each author in the sample. Also worth noting was that of 141,763 messages that were posted in the sample, a total of 8,644 messages (6.1 percent) were scored as negative by the

¹⁶ Statistics were generated with *IBM SPSS Statistics 24*.

sentiment analysis software, and 238 of the messages (0.17 percent) were scored as very negative (see Table 2.4).

Table 2.4. Descriptive information of the sample (n = 2,629)

	Count	Mean (SD)
Negative posts	8,644	3.29 (18.03)
Very negative posts	238	0.09 (1.13)
Negative posting duration (days)	-	155.27 (495.44)
Sentiment score for negative posts	-	-3.98 (3.15)

In addition, authors posted an average of 3.29 negative messages (SD = 18.03) and 0.09 very negative messages (SD = 1.13) about the above adversary groups during their measurable posting careers. This posting behaviour, in combination with the above posting behaviours, suggested that most authors in this sample posted a small proportion of negative and very negative messages about Jews, Blacks, and LGBTQs. Instead, a small group of authors posted a high volume of these negative messages in the sample.

The spread of scores in the distribution further lent support for this finding, as the standard deviation for the number of negative posts (SD = 18.03) and negative posting duration (SD = 495.45) indicated that small groups of outliers posted an extensive number of messages in the sample, many being negative and over an extensive period. The following is a macro-level look at the posting behaviour of radical authors within each posting group.

2.6.2. Radical Posting Behaviour: A Macro-Level Perspective

When the posting activities of the top 100 radical authors were compared across three radical posting groups, a number of broad-scale patterns emerged. First, an assessment of the ‘high-intensity’ radical posting group (heretofore referred to as the ‘intense poster’ or ‘intense authors’) revealed that, on average, these authors posted the highest volume of very negative messages in the sample (2.27 negative posts), relative to the authors in the ‘high-frequency’ radical posting group (heretofore referred to as the ‘prolific poster’ or ‘prolific authors’) and authors in the ‘high-duration’ radical posting group (heretofore referred to as the ‘long-term poster’ or ‘long-term authors’). Further, both the

average posting score (sentiment score = -2.26) and their negative messages (sentiment score = -4.49) for this high-intensity group was higher than those in the prolific poster and long-term poster groups. Additionally, the average posting duration (1,402.46 days), negative posting duration (936.80 days), and very negative posting duration (154.79 days) for these intense posters was much lower than the posting durations for the authors in the high-frequency and high-duration radical posting group, as indicated in Table 2.5. On average, these intense authors were also amongst a group of those who posted the lowest volume of messages (348.70 posts per author) and negative posts (39.69 posts per author) in the sample, relative to the group of prolific and long-term posters (see Table 2.5).

Table 2.5. Descriptive comparisons of chronic radical posting groups (n = 300)

	Radical posting groups		
	HICR	HFCR	HDCR
n (%)	100 (33.33)	100 (33.33)	100 (33.33)
<u>Mean number of posts</u>			
All posts	348.70	512.84	347.51
Negative posts	39.69	51.03	30.71
Very negative posts	2.27	1.71	1.14
<u>Mean posting score</u>			
All posts	-2.26	-1.97	-1.85
Negative posts	-4.49	-4.09	-4.21
Very negative posts	-16.33	-16.35	-17.13
<u>Mean posting duration</u>			
All posts	1,402.46	1,836.00	2,864.68
Negative posts	936.80	1,331.41	2,261.13
Very negative posts	154.79	170.80	156.64

Note: HICR = high-intensity chronic radical, HFCR = high-frequency chronic radical, HDCR = high-duration chronic radical.

Second, authors in the high-frequency radical group were those who posted a much higher volume of messages (512.84 posts per author) and negative messages (51.03 negative posts per author) than those in the intense posting group and long-term posting group. Radical authors who fell within the high-frequency posting group posted messages and negative messages (1,836.00 days and 1,331.41 days per author, respectively) over a longer period than the intense posters but over a much shorter period

than the high-duration posters. Similarly, authors in this high-frequency group were those who posted the lowest volume of very negative messages (1.71 posts per author) than the high-intensity group in the sample. Prolific posters did, however, post a higher volume of very negative messages than the long-term posters. Authors in the high-frequency group were also those who, on average, posted messages and negative messages (sentiment scores = -1.97 and -4.09, respectively) that were scored as less negative than the messages and negative message from the high-intensity radical posting group. 'Very negative messages' that were posted by the high-frequency group received comparable sentiment scores as the high-intensity group (sentiment scores = -16.35 and -16.33 per author, respectively). Still, this prolific group were those who posted very negative messages over the longest period (170.80 days per author) in the sample, compared with authors in the high-intensity and high-duration posting group (154.79 days and 156.64 days, respectively).

Lastly were those who posted negative messages over the longest duration in the sample: authors who fell within the high-duration posting group. These authors, relative to those in the abovementioned posting groups, posted messages and negative messages over an extensive amount of time (2,864.68 days and 2,261.13 days per author, respectively). They too posted very negative messages (156.64 days per author) over a comparable amount of time as the high-intensity group (154.79 days per author). Authors in the high-duration groups also posted the least number of messages (347.51 posts), negatives messages (30.71 posts), and very negative messages (1.14 posts) on average in the sample, and on average their messages received the least negative sentiment scores (sentiment score = -1.85), compared with the high-intensity group and high-frequency group (sentiment scores = -2.26 and -1.97, respectively). On the other hand, the long-time authors' sentiment score for negative messages (sentiment score = -4.21 per author) was less negative than the high-intensity group (sentiment score = -4.29) and more negative than the high-frequency group (sentiment score = -4.09), but their sentiment score for very negative messages (sentiment score = -17.13 per author) was more negative than the high-frequency group and high-frequency groups (sentiment score = -16.33 and -16.35, respectively).

To summarize, an assessment of the top 100 radical authors across each of the posting groups revealed three relatively distinct radical posting patterns on a white

supremacy sub-forum, each with some noteworthy nuances. High-intensity chronic radical authors, for example, tended to post the highest volume of very negative messages but, on average, they posted messages, negative messages, and very negative messages over the shortest amount of time in the sample, compared with the high-frequency and high-duration groups. Authors in the intense group were also those who posted the least volume of messages, negative messages, and very negative messages in the sample, relative to the other groups, yet the average posting score for their messages and their negative messages was much more negative than the posting scores for those in the two other groups. In other words, this intense forum behaviour represented the posting activity of an individual who: (1) posted few messages over a short period of time, and (2) posted a high volume of negative and very negative messages – that too received very negative postings scores – over a relatively short period, in comparison with the two other chronic radical groups in the sample.

On the other hand, high-frequency chronic radical authors were those who posted the highest volume of messages and negative messages than authors in the other two posting groups, but the majority of their posting behaviour was moderate compared to the two chronic groups in the sample. In particular, the average sentiment score for the messages and very negative messages of these prolific posters was more negative than those in the high-duration group but less negative than those in the high-intensity group, and they posted messages and negative messages for a longer period than the high-intensity group but shorter than the high-duration group. Surprisingly, however, was that authors in the high-frequency group posted very negative messages over a longer period than the other two chronic groups in the sample. This prolific posting behaviour represented an individual who posted a high volume of messages and negative messages – that were moderately negative – over a moderate amount of time, and although they tended to post few very negative posts in the sample, the time in which they did so spanned over a very long period of time.

Lastly, authors in the high-duration chronic and radical posting group were those who posted messages and negative messages over a considerably longer period of time than the high-frequency radical group and the high-intensity radical group. These long-termers posted the lowest volume of messages in the sample (all posts, negative posts, and very negative posts). While they were still fairly active on the sub-forum, their posts

were generally less negative than the negative messages posted by authors in the two other radical posting groups. Yet on average their very negative messages were noticeably more negative than the very negative messages posted by authors in the other chronic groups. The long-term radical posting group, relative to the two other chronic groups, represented the following posting activity: (1) a low volume negative poster who did so over an extensive period of time in the sample; (2) messages were generally not very negative, and; (3) of the small number of very negative messages that these authors posted, on average the messages were the most negative in the sample.

2.6.3. Radical Posting Behaviour: A Micro-Level Perspective

A thematic content analysis was conducted on the posting activity of the ten most radical authors within each of the three radical posting groups ($n = 30$), paired with a content analysis of the posting activities of the ten least radical authors in each posting group for comparative purposes ($n = 30$). The purpose of this in-depth analysis was to gain insight into the content found in authors' messages and topics of discussions, as well as the language and tone of the messages. A thematic coding scheme, which was grounded by theory (social movement theory), guided this analysis. Data was coded as follows: a four-column table was created for each of the top radical authors and least radical authors in each radical posting group. Column one included the initial theme of the message (e.g., "Jews control the media"); column two included language used in each message (e.g., words, such as 'bomb', 'kill', 'weapon', etc.); column three included the tone of the message (passive, active, or unclear); and column four included a direct quote from forum authors. These tables were compared within and across radical posting groups. The purpose of this strategy was to authenticate the coding and to maximizing the robustness of the results.

Note that an additional technique was used to authenticate the coding and reliability of the qualitative analysis. In short, there was a high volume of negative messages found in the data about Jews, Blacks, and LGBTQs (described below) and in response, a text analyzer program, free of charge from Online-Utility.org,¹⁷ was used to generate both word frequencies and phrase counts for the most radical and least radical authors in each

¹⁷ The text analyze tool can be found at: <https://www.online-utility.org/text/analyzer.jsp>

radical posting group. Not only did this tool provide a macro-level understanding of the authors' topics of discussions, but it too provided some of the key phrases that were associated with the most frequency discussed topics. These frequencies were then triangulated with the qualitative coding results.

The following is a fine-grain analysis of the top ten radical posters in each of the above chronic posting groups, paired with analysis of ten of the least radical authors per posting group. Key patterns and themes were summarized at the end of each section.

2.6.3.1. High-Intensity Chronic and Radical Posting Behaviour

At the most radical end of the spectrum was *Axis* (radical score = 40/40 points), an author who essentially set the tone for what constituted intense posting behaviour in the sample. Dominant in his¹⁸ radical discussions were anti-gay, anti-Black and, to an even greater extent, anti-Semitic sentiment, as is expressed in but one of *Axis's* many very negative messages:

Zionist agents and fanatics freely and criminally accuse their targets of being Nazis while they themselves utilize the very same techniques of the master Nazi propagandists to condemn, defame, personally attack, and stereotype all those they fear may oppose or question their tactics. Perhaps the most heart-breaking, evil side of Zionism is how it hides behind - and unmercifully uses - the great religion of Judaism...as if it were a some kind of blunt instrument used to deceive, threaten and then to beat those who differ with Zionism into submission. Zionism has also cleverly hidden behind duped and deceived Christian fundamentalists...who are, just now, beginning to wake up to that fact.¹⁹

Very active in the online discussions, *Axis* posted a total of 2,163 messages in the sample, 509 of which were negative and 53 very negative. A key indicator of his radical posting behaviour was the volume of very negative messages that he posted in the sample; his very negative messages accounted for a staggering 22.27 percent of all very negative messages found in the sample. Of these very negative messages, the average posting score was the highest amongst all members in this intense radical group (sentiment score = -18.27). In addition, both the posting score for all of *Axis's* messages and all his negative

¹⁸ It was assumed that authors in this sub-forum were male, based on their usernames and their profile avatars.

¹⁹ All online posts were quoted verbatim, as the purpose this study, amongst others, was to explore authors' linguistic patterns, their communication skills and their communicator attributes.

messages were amongst the most negative in the intense radical posting group (sentiment score = -3.96 and -5.50, respectively). This user also posted messages and negative messages over the longest period in the radical posting group (4,600.41 days and 4,600.41 days, respectively), as well as posted very negative messages over the longest period in the posting group (4,145.32 days)

An in-depth look *Axis's* very negative messages revealed three key topics of his discussion: (1) Zionist government conspiracies; (2) violent crimes committed by Black men, and; (3) homosexuality as an illness. The author appeared to be convinced, according to the content of his very negative messages, that all non-Whites and homosexuals were a main threat to Aryan heritage in general and White Canadian culture in particular. The brunt of *Axis's* very messages were also long-winded attempts to rally supporters and sympathizers for the "Aryan cause." This was done by targeting who he defined as "non-believers", oftentimes by promoting other readers to engage in action. To illustrate, *Axis* attempted to convince his readers – at great lengths and in explicit detail – that the White race was at war with the Zionist Occupied Government (ZOG)²⁰, or as he so confidently explained it:

Genocide is directed against the national group as an entity, and the actions involved are directed against individuals, not in their individual capacity but as members of a national group. Multiculturalism = Genocide. Masquerading as a nice and tolerant social idea, Multiculturalism is in fact an extremist anti-Western political ideology that is genocidal. It is intolerant of the continuing existence of homogeneous national groups; and wishes - via massive Third World immigration - to snuff out the existence of all White-populated countries.

What was particularly interesting about this author's online posting behaviour and the content found in his messages was a constant reference to mainstream news articles (*BBC News*, *CBC News*) and radical teachings (links to radical right-wing pages that featured "doctors'" views on race-mixing, for example) to "educate" readers about national issues. Within this context, *Axis* fiercely challenged the introduction of Canadian hate crime legislation that, what he thought, "targeted" the freedom of speech of the White Nationalist, as well as "protected" violent Black criminals from Whites "defending" themselves from Black violence. An analysis of this author's very negative messages

²⁰ ZOG is an anti-Semitic conspiracy theory, built on the idea that Jews secretly control governments in the Western world.

further revealed the intent of his online sentiment: convince readers that White must respond to the war against ZOG. As *Axis* more adequately explained it:

If we [White Nationalist] fail to choose struggle over surrender, life over death, destiny over oblivion, it will not be due to the strength of our would-be destroyers, but to our own weakness, not to their virtue but to our vice. We will have destroyed ourselves by our own self-destructive perversion of ultimate ethics, overcome by the enemy ideas implanted in our minds. We will survive only if we find the ultimate ethical wisdom, nobility, virtue and strength within us to prevail and live.

Similar discussions, assertive in tone, were expressed by *Teller*, the second most intense author in the radical posting group (radical score = 6.79/40 points), as indicated in Table 2.6. In total, *Teller* posted nine very negative messages in the sample, and while the volume of these very negative messages was substantively less than those of *Axis*, both the average posting score for all of *Teller's* messages and the content of his messages were similar: on average, his very negative messages were amongst the most negative in the intense posting group (i.e., sentiment score = -17.46), and he made forceful calls for White Nationalists to challenge non-believers, including but not limited to Jews, Liberals, Marxists, Socialists, and non-Whites in general. Many of his very negative messages, unlike the very negative message by *Axis*, were short in length, but they were powerful and assertive, and they too presented Whites as the victims of a war against ZOG. To illustrate, one of *Teller's* messages succinctly took aim at Canada's "Jew-dominated" media, posing a question to his readers following the murder of one of Canada's most infamous white supremacists, Wolfgang Droege:²¹

Did anyone else notice that not one of the ZOG [Zionist Occupation Government] media outlets actually referred to this crime against Wolfgang as a murder? Instead, ZOG reports this obvious murder with approving language like, Hate-monger shot dead and neo-nazi slain. At best, they say he was killed. However, unpersons are never murdered. Only people are murdered. Such is the subtleness of the ZOG propaganda machine.

²¹ Wolfgang Droege was the founder and leader of one of Canada's most infamous white supremacy groups, Heritage Front (see Perry & Scrivens, 2015).

Table 2.6. High-intensity chronic radical authors (n = 2,629)

	Forum authors									
	<i>Axis</i>	<i>Teller</i>	<i>Nelson</i>	<i>P-15</i>	<i>Derger</i>	<i>Risc</i>	<i>Sully</i>	<i>Ten4</i>	<i>H_rixx</i>	<i>Iris</i>
<u>Number of posts</u>										
All posts	2,163	737	2,462	2,840	440	115	573	382	1,359	1,286
Negative posts	509	144	477	176	198	42	43	43	108	144
Very negative posts	53	9	9	7	6	6	5	5	4	4
<u>Mean posting score</u>										
All posts	-3.96	-2.99	-1.45	-1.89	-2.47	-3.36	-2.45	-4.06	-1.63	-1.63
Negative posts	-5.50	-4.64	-3.48	-4.52	-4.00	-5.25	-4.63	-6.37	-3.75	-3.81
Very negative posts	-18.27	-17.46	-13.44	-17.85	-17.67	-14.42	-15.63	-16.20	-14.75	-13.75
<u>Posting duration (days)</u>										
All posts	4,600.41	3,636.52	1,072.38	2,601.80	830.98	994.25	1,232.52	3,245.04	463.75	1,005.58
Negative posts	4,600.41	3,508.39	1,071.45	2,540.72	830.65	252.01	402.09	2,905.50	449.39	966.56
Very negative posts	4,145.32	448.99	833.87	971.93	389.56	67.11	60.68	988.27	300.92	387.08
<u>Overall radical score</u>	40.00	6.79	6.79	5.28	4.53	4.53	3.77	3.77	3.02	3.02

Note: A message was counted as 'very negative' if it was scored with a sentiment value of equal to or less than a score of -12.

Note that *Teller* was not one of the most active posters in this intense posting group (737 posts and 144 negative posts), nor did he post very negative messages over a substantial period of time (448.99 days) relative to the other authors in this radical posting group, but he did however portray similarly intense patterns of posting behaviour as the other authors in this posting group. For example, *Teller* provided radical explanations about why White Nationalists, or in his terms the ‘unpersons’, have been mislabeled as “racist.” Like the sentiment expressed by *Axis*, *Teller* was convinced that “Marxist Jews” were behind these struggles, conspiring to oppress all White people, or he put it in a sarcastic but powerful message:

I know the politically correct baby boomers I had for teachers were quick to tell us that my grandparents' generation were all racists (a cultural marxist term for White devils or oppressors). We were taught that Whites had oppressed all of the poor, innocent, pious, peace-loving, at-one-with-nature black, brown, red and yellow victims of the world. Hitler was the devil incarnate. White males killed the Indians, enslaved the blacks, killed the Jews, oppressed the homosexuals. A marxist simpleton's wildly distorted view of the evil known as Western civilization was complete. What is worth preserving about our culture? Oppression, genocide, hate, and racism? We need diversity, multiculturalism, and tolerance to help us atone for the original sin of Whiteness. Oh, the guilt!

Comparable to *Teller's* radical posting behaviour, *Nelson* posted a total of nine very negative messages on the sub-forum (radical score = 6.79/40 points) that were similarly direct and assertive in tone as the messages posted by *Teller*. In short, *Nelson's* messages were clearly written, but equally as important were his forceful attempts at generating discussion about Zionist conspiracies. More precisely, *Nelson* was fixated on the White race as the elite of all races, as well as the ongoing “White struggle” by “Zionist oppression.” As he explained it in one of his postings:

I have heard Black Supremacists quite often, but the term White Supremacists is without a doubt, the Zionist propaganda / smear machine's #1 favorite. It's funny I have never, ever, even once, heard them use the term, Jewish Supremacists or even Zionist Supremacists. My interpretation of the term White Supremacists is any white person who does not praise Israel, & welcome the extinction of his/her race. This holocaust denier business, I don't even comment on that stuff anymore, it is nothing but a Zionist trap.

While the posting score for all *Nelson's* messages (sentiment score = -1.45), negative messages (sentiment score = -3.48), and very negative messages (i.e., sentiment score = -13.44) was the lowest in the intense radical posting group, he was one of the most active authors in this group, posting a total of 2,462 messages over a period of 1,072.38

days, with 477 of those messages as negative and over 1,072.38 days. This user also posted very negative messages over an extensive period (833.87 days), largely in an attempt to convince readers that Jews were trying to suppress Whites from speaking about issues related to race, as was expressed in his above message. As another example, *Nelson* provided his readers with the following insight on Richard Warman²², a Canadian human rights lawyer and activist who filed human rights complaints against some of the most outspoken right-wing extremists in Canada for anti-Semitic, anti-Black, and anti-LGBTQ messages (amongst others) they posted on right-wing extremist sites and forums such as *Stormfront Canada*. The following is but one of *Nelson's* posts about Warman:

[...] during the radio interview, Warman was describing these Hate Sites in a little detail. He made the claim that they incited violence, called for mass murder/extermination, deportings of Jews, & they excessively made all kinds kinds of vile, slanderous remarks. I believe he is deliberately giving a false impression of the situation [...] The object of Warman [...] is to shut down any free speech deemed unacceptable by the Canadian Jewish Congress, & The ADL [Anti-Defamation League].

Like the previously described authors, *P-15*, a very active author in the sample (2,840 messages), posted a total of seven very negative messages that too were fixated on anti-Semitism, but they were amongst the most negative in this intense group (average sentiment score for very negative messages = -17.85). These messages were posted over an extensive period of time (971.93 days) in the sample, and some of his most intense messages took direct aim at multiculturalism in Canada. As *P-15* noted in a very distinct and direct online post:

[...] to embrace multiculturalism, we should embrace Africans opinion on rape -- it's just a game. We'll call it: 'No' means 'Yes' Day [...] One in three of the 4,000 women questioned by CIET Africa, non-governmental organisation, said they had been raped in the past year.... Gang rape 'fun'. In a related survey conducted among 1,500 schoolchildren in the Soweto township, a quarter of all the boys interviewed said that 'jackrolling' - a South African term for recreational gang rape - was fun. More than half the interviewees insisted that when a girl says no to sex she really means yes. Many of those interviewed also expressed little knowledge about the need to use condoms and to practise safe sex.

Indeed, this message illustrated his antagonistic attempt to categorize all Africans and Blacks as rapists, blaming multiculturalism for allowing “them” to migrate to Canada. Two other radical authors in the intense posting group, *Derger* and *Risc*, each posted six very

²² For more information on Richard Warman, see Scrivens and Perry (2017; see also Daniels, 2009).

negative messages in the sample, and their vigorous and radical discourse too was largely focused on degrading Black communities and denying the Holocaust. Both of these authors were not the most active in the intensity group or those who posted messages over an extensive period of time, but each of them posted powerful messages that were branded with anti-Semitic sentiment. *Derger*, for example, contributed to thread discussions that focused on a particular court case, one which involved hate speech against Jews. During these discussions, *Derger* fiercely noting in a post that:

The only victory I see is that legal business Jews continue to earn and Media Jews continue to force feed the sheople with the holyhoax by debating whether it was insensitive to agree with a story that is really a pack of lies created by a pack of Jews. The defamation that the Germans killed 6 million Jews in gas chambers is left totally unquestioned.

Risc also posted similar content in the sample but in some respect, he elevated the discussions with more direct and assertive language that dehumanized Jewish communities around the world. As he expressed in one of his posts:

[...] grab a seat and enjoy brothers...Todays theme is: Europeans uniting to defeat the filthy satanic garbage pig Jew and the other 3rd world diseased immigrants who are enabled and encouraged by the same into denying our freedom to assemble and speak the truth. Long live the brilliant European people that can think for themselves.

Equally alarming was when *Risc* put out a call for White Nationalists to band together to defeat what he termed as the “evil Jew”, by all means necessary:

The JEW! is the great SATAN!!! [...] the Jew manipulates us all to hate!!!!!!!!!!!!!!!!...The devil has been shown..it's up to us!.,We will either die together under satan or we will kill satan and live happily ever after together in peace!!!!!!It's our choice and not satans choice.

Notions about “evil Jews”, conspiring against non-Jews, dictated the very negative discussions when *Sully*, one of the most intense authors in the sample, attempted to convince readers that Jews control the majority of the media, a similar sentiment that was expressed by *Axis*, *Teller*, and *Derger*. Here he explained that the

[...] media is largely Jewish owned and will never call itself racist despite being the very definition of it by intent. This story's victim(s) [...] is being under-reported because blacks killing White people doesn't suit their agenda; PC-Jewthought. The media is not afraid of being called racist. The media has made itself responsible for defining racism; they define it in terms as anti-White as possible. This is typical Canuck liberal cowardice; unwilling to admit that blacks are violent criminals [...] they simply do not want people to grab ahold of the fact that this was a worthless

black murdering a White female in a completely senseless act of black violence. THAT is what doesn't fit their agenda.

Sully was not the most active author on the sub-forum, or someone who posted messages – whether negative or very negative – over a long period of time, but he did however urge his readers to engage in extreme right-wing activism, particularly against Jewish communities. Comparably, intense author *Ten4* depicting Jews as manipulators of “the system” and those who had been given special legal privileges in his posting activity. In turn, *Ten4* called for White Nationalist action, typically using forceful and antagonistic discourse, as was expressed in one of his postings:

In Canada, it is quite all right to call any non-Jewish woman a “side of beef” or “slab of meat” [...] Jews repeatedly refer to non-Jews as animals, but apparently that's not “hate” [...] Do police get special training to arrest these Jewish haters, speaking Yiddish? Of course not. The hate crime laws are designed to oppress and humiliate White people, who lose their temper and say what they really think of the Third Worlders destroying their homeland.

Lastly, intense authors *H_rixx* and *Iris* each posted four very negative messages in the sample, targeting an array of non-White communities, with Jews at the forefront of their powerful online discussions. Concerned with securing the existence of the White race, *H_rixx*, for example, “explained” to his readers that “...as long as one is white and not a homo, jew, molestor, rapist or a race traitor then no other issue should stand between us agreeing on the white future for our white children.” *Iris*, in many respects, presented a similar message on the sub-forum, making emotional claims that

[...] our [White Nationalist] countries are so runned by jews [...] these stupid hate crime laws are only used againts nazis, whitepride and so on [...] to keep us down, because the jew fears us [...] they just want to destroy the white race, fear of us rising again and others learning the real truths about them. [T]he jews play dirty, no shock there, but how can you be surprised when the jews [...] warship and follow the devil! [T]he hate law was only created to destroy the aryan race and scare other aryans to keep quiet and do nothing!

These two radical authors, both of whom were rather active and posted negative and very messages over a lengthy period, challenged Canada's hate crime legislation, with *Iris* asking his readers if “[...] it [would] be a hate crime if we put a flyer out showing what the jews are doing to people over there. would it wake more canadians up” and *H_rixx* out right stating that “I have been waiting for over a decade to be charged with a hate crime but no such luck. I would love to challenge a hate law charge in court.” Similar sentiment about Canada's hate crime legislation was also expressed by *Axis* and *Ten4*, wherein

authors feared that such laws would further protect the already “violent Third Worlders”, as but one example of this radical line of reasoning.

For comparison purposes, at the bottom end of the spectrum were a very large volume of authors who did not post very negative messages (or negative message in general) about Jews, Blacks, and/or LGBTQs (877 authors). Looking at ten of the least ranked authors in the radical posting group were those who merely posted one message about Jews, Blacks and/or LGBTQs, but their messages were scored as neutral (sentiment score = 0). *Union*, for example, posted a rather vague message on the sub-forum, stating that: “I’m surprised a jew would want more non-whites in a formerly White nation...” Similarly, *Conner*, another one of the least intense authors in the sample, posted one message in the sub-forum about Jews, and it too was an unclear statement about Jews:

To tell you honestly guys, I know I should not be posting here, but this forum so so weirdly set up that I found it here to be most appropriate, since you guys are U.S. neighbors? If the argument is that U.S. iz ZOG, then I am not sure if Britain should have a place of its own due to the fact that they are also one.

Lastly, another of one of the less intense authors in the sample, *Oliver*, posted one ambiguous comment about Jews (and Hispanics), noting that:

I am pretty good at recognizing faces, I live in New York. Most of these boys are mixed Jew or hispanic types. Be more careful of who you trust, study the faces, look at the eyes. They look like regular Canadian guys to me. Maybe you’re hallucinating.

As a whole, the least radical authors in this radical posting group either posted messages that were unclear in their intent, were not well written, or included very passive language (powerless language), and thus this posting behaviour was the least radical posting behaviour in the sample.

To summarize, a number of posting patterns emerged during the thematic content analysis of the most intense and radical authors in the sample. First was the number of intense messages that promoted, whether concisely or in great depths, the overt condemnation of Jewish, Black, and/or LGBTQ communities: all Blacks were framed as rapists and as criminals; the Holocaust was merely a hoax that Jews used for their own advancement (to gain “special privileges” over non-Jews); and all gays contributed to the spreading AIDS and disease. Jews were the primary focus of these discussions, as they

were framed as those who should be blamed for violent Blacks and the spreading of AIDS, for example. Second, only a small number of very negative messages were found in the data, not only within the sample, but with the group of the most intense authors as well. Of these was one author in particular, *Axis*, who posted the majority of the very negative messages on the sub-forum, and was indeed the outlier in the sample of intense authors. Third, and perhaps most noteworthy, was that the majority of the very negative messages were, at their very seams, assertive in tone, forceful and antagonistic in nature. The bulk of the messages also included topics and keywords that could be conceived as direct and threatening behaviour. For example, topics and words that were found in these intense messages included, but were not limited to: mass homicide (keywords such as 'kill', 'murder', 'slain', 'execution', 'genocide', 'holocaust'); violence (keywords such as 'destruction', 'fight', 'attack', 'beat', 'hurt'); weapons (keywords such as 'guns', 'knives', 'bombs'); sexual abuse (keywords such as 'rape', 'rapist', 'molester'); hate (keywords such as 'hate', 'hatred', 'hate crime laws'); racism (keywords such as 'racism', 'racist'), and; words associated with the antichrist (keywords such as 'evil', 'evil Jews', 'the devil', 'Satan', 'satanic'). These messages were powerful, as well as were posted in an active tone. The context in which the above topics were discussed were almost exclusively framed around the abovementioned target groups and, to a lesser extent, non-white group such as Muslims, Asians, and Indigenous communities, a symptom of the technique in which the sample was captured (topic retrieval technique – keywords associated with Jews, Blacks, and LGBTQs). Equally important were authors' call for action – that is, the fierce promotion of white power ideals, wherein intense radical authors encouraged members of the virtual community to band together (through violent means if necessary) and overcome their perceived cultural struggle against ZOG. The Jew community was the focus of the very intense sentiment.

2.6.3.2. High-Frequency Chronic and Radical Posting Behaviour

Axis, the most intense author in the sample, was also the most prolific poster in the sample (radical score = 40/40 points). In total, he posted 2,163 messages in the sub-forum, and 509 of his 2,163 messages (23.53 percent) were scored as negative. These negative messages were posted over an overwhelming 4,600.41 days, and the average posting score for these messages was the highest amongst all others in this group of prolific posters in the sample (sentiment score = -5). Notably, the majority of *Axis*'s

negative messages, unlike his (and others') very negative messages found in the sample, were less assertive and powerful in tone. In fact, while his negative messages focused on Zionist conspiracies, Black criminals, and immoral gays, the majority of these messages were descriptive accounts of who he perceived as the threat to the White race. In two of *Axis's* negative messages, for example, he provided his radical views on Toronto's Black communities, noting that:

Jamicans constitute about half of Toronto'sN negro population and commit most of the black crime. You're right, the swinish authorities hide the ethnicity of crime to keep the victims of the immigration invasion ignorant and stupid.

[...] two of the victims were Negroes. We're not told whom the police are looking for or the description of the two shooters in the BMW. Here ae some interesting stats. In 1995, when they passed the latest antoi-gun law, there were 12 murders with handguns in Toronto. So far this year, there have been 50 -- a 416.666% increase. Most of these killings have been done by blacks, many of them Jamaicans. Most of the dead are of the same description. So, let's see -- confiscating and restricting the guns of the law-abiding hasn't worked. Duh, what about immigration control?

Also found in *Axis's* negative posting activities were vulgar descriptions of homosexual activity. Many of these messages, as but one example, painted homosexuals as a group of "sinful creatures" who were hated by all races, and not just the White race. As one of his messages clearly illustrated: "The odd thing is that many minorities are quite intolerant of homosexuals. Neither East Indians nor blacks like them."

An in-depth assessment of *Axis's* negative messages also revealed that his radical sentiment was oftentimes framed around highly-discussed social issues, such as the economy, politics, health care, human rights, freedom of speech, and crime. Messages that were associated with these subjects would target minorities of all stripe. Here non-Whites were essentially portrayed as "violent animals", waiting to engage in the next violent act. While this line of "reasoning" was found in the discourse of other prolific authors as well, the overarching theme in *Axis's* discussions – and others – were that Jews had manipulated their way into positions of power (government, banks, law firms, media, etc.), not only to limit Whites from speaking out against Jews' "deceitful actions", but to render any non-Jew (minorities included) unable to defend themselves from the evils of "Jewish domination." Comparably, prolific author *Nelson* (radical score = 37.49/40 points), who was also one of the most intense authors in the sample, posted an overwhelming volume of negative posts in the sample; 477 of his 2,462 (19.37 percent) messages were scored

by sentiment analysis software as negative, and these messages were posted over a moderately long period of time (833.87 days) compared with the other radical authors in the high-frequency chronic group. While the average posting score for *Nelson's* negative messages (sentiment score = -3.48) was less than the average posting score for *Axis's* negative posting activity (sentiment score = -5.50), the vast majority of *Nelson's* negative messages were narrower in scope; messages were riddled with anti-Semitic discourse very broadly and "Jew liberal party of Canada" more specifically. *Nelson's* messages were typically short (in the length of text per posting) but emotional, as the following two messages illustrate:

The Satanic Seedline Jews who run this country are not stupid. Their every move is very well thought out & calculated. They control the Justice system, keeping the lawyers (their cronies) happy & full of work is not something done by accident.

The Jews have the Jew-Liberal Party running everything their way, & hate laws set-up specifically to their advantage. To say ANYTHING against Jews or Israel (if you are white) is to more or less commit yourself to a life of financial turmoil, and a good % of your time incarcerated or in the court system one way or another. Canada is pretty much a police state.

The third and fourth most prolific authors in the sample, *Rose* and *Dal* (radical scores = 21.69/40 points and 18.15/40 points, respectively), posted a high volume of negative messages in the sample, as well as posted negative messages over a long period of time. For instance, prolific poster *Rose*, a high-volume author in general (3,663 messages), posted a total of 276 negative messages in the sample, with an average posting score of -3.65 and over a period of 4,005.4 days. *Dal* similarly posted 231 negative messages that received an average posting score of -4.19 over 4,926.64 days, and this author was also a prolific poster in general (2,255 posts). The message that was expressed by the two was very similar in theme: Jews want to destroy the world, a point that *Dal* referred to on several occasions, and "[the] Jew is an animal in human form", a phrased that was used by *Rose* over twenty times in the sample. Sentiment that also fell under this umbrella was the blatant discouragement of homosexuality, or as *Rose* asked her²³ readers: "Doesn't the Jewish Bible in Leviticus say homosexuals must be killed?" *Dal* too provided similar thoughts on homosexuals, describing how he met his "first one" in an online posting:

²³ *Rose* is a female user on *Stormfront*. Forum users refer to this user as "her" and "she."

Homosexual behavior is abnormal and sickening to any normal mind. One does not have to have a religion in order to get turned off by these social deviants. Nobody ever taught me a thing about homosexuals, but when I met my first one, I was so turned off [...] We can only hope that the bottled up resentment in people against this horribly vile attitude of the Government will one day explode and strangle the filth at the top [Jews].

Authors *Derger* and *P-15*, both of whom were intense authors in the previous radical posting group, were amongst the most prolific posters in this sample (radical scores = 15.56/40 points and 13.83/40 points, respectively), with the former posting 198 negative messages and the latter posting 176 negative messages in the sample (see Table 2.7). What was consistently raised by *Derger* and *P-15* were issues about human rights, more specifically, in-depth discussions about White rights being taken away by non-Whites. Within these discussions, *P-15*, a long-term author who posted a high-volume of messages in the sample (2,860 posts), targeted Blacks and Jews over the course of 2,540.72 days, with an emphasis on the “real purpose” of Canada’s Charter of Rights:

The targeted group [of hate messages] is portrayed as a powerful menace that is taking control of the major institutions and depriving others of their livelihoods, safety, freedom of speech and general well being. So now you're not allowed to say a a specific group is taking away your freedom of speech? Isn't that proof right there that they are taking away freedom of speech? When Jewish funded Richard Warman [an activist discussed above] sets a precedent that mentioning Jews are taking away your freedom of speech is a hate message, that proves that in fact they are taking away freedom of speech. We're not allowed to say the truth?

Derger, an author who posted fewer messages over a shorter period than the other prolific posters in the sample, was also concerned with what he described as “the confines of Canadian law.” Yet this radical author, like the other radical authors, was more broadly concerned about Jewish conspiracy, such as Jews and their involvement in all arms of Canada’s government or as *Derger* best summed it up:

[...] corporate bankers, media moguls, arms manufacturers, industrialists, etc. [...] is the central crux of the entire world's problems right now. Bribing Crypto-Jewish politicians to open the floodgates to 3rd Worlders is only possible because 3rd Worlders will be lured here based on the relative values of the currencies in each respective market and any opposition to the flood is quickly put down with seemingly unlimited supplies of our stolen money/wealth. As long as Zionist Jews control our money supply and financially back other Jews and Zionist Gentiles who have sold their souls for money and power, we [White Nationalists] have not got a hope in hell of succeeding.

Table 2.7. High-frequency chronic radical authors (n = 2,629)

	Forum authors									
	<i>Axis</i>	<i>Nelson</i>	<i>Rose</i>	<i>Dal</i>	<i>Derger</i>	<i>P-15</i>	<i>Teller</i>	<i>Iris</i>	<i>H_rixx</i>	<i>FRNT</i>
<u>Number of posts</u>										
All posts	2,163	2,462	3,664	2,255	440	2,840	737	1,286	1,359	289
Negative posts	509	477	276	231	198	176	144	144	108	93
Very negative posts	53	9	4	2	6	7	9	4	4	3
<u>Mean posting score</u>										
All posts	-3.96	-1.45	-1.80	-1.93	-2.47	-1.89	-2.99	-1.63	-1.62	-2.83
Negative posts	-5.50	-3.48	-3.65	-4.19	-4.00	-4.52	-4.64	-1.63	-3.75	-4.71
Very negative posts	-18.27	-13.44	-15.50	-17.25	-17.67	-17.85	-17.46	-3.81	-14.75	-14.61
<u>Posting duration (days)</u>										
All posts	4,600.41	1,072.38	4,028.58	5,106.51	2,601.80	2,601.80	3,636.52	1,005.58	463.75	763.52
Negative posts	4,600.41	1,071.45	4,005.40	4,926.64	830.65	2,540.72	3,508.39	966.56	449.39	762.86
Very negative posts	4,145.32	833.87	1,978.04	935.09	389.56	971.93	448.99	387.08	300.92	382.11
<u>Overall radical score</u>	40.00	37.49	21.69	18.15	15.56	13.83	11.32	11.32	8.49	7.31

Similar discourse was presented by prolific posters *Teller* and *Iris*, both of whom posted 144 negative messages in the sample (radical scores = 11.32/40 points and 11.32/40 points, respectively) and both of whom were intense authors as well (described above). Most of *Teller's* discussions, for example, were seemingly fixated on painting Jews as the seed of all White people's problems – the most common theme across the sample. *Teller's* messages were posted over an extensive period of time (3,508.39 days), mirroring that of his following message:

White people need to smarten up and stop paying big money to have zionist propaganda pumped into their homes 24/7 to poison their families. How can White nationalists fund enemy propaganda with cable bills of up to \$150/mo and then complain that zionists are controlling Whites with their propaganda? All serious White nationalists need to cancel their zionist cable and newspaper subscriptions and stop funding enemy propaganda.

Iris, however, used an unprofessional (linguistic) approach to convince his readers that Jews were the threat to the White race, and he did so over a moderate period of time (966.56 days), posting short and concise messages such as: "jews and homos act the same, they just dont stop complaining. give them alittle, then they want more." While *Iris* took a clear and radical stance against Jews – warning his readers about "evil Jews" and to "never trust a Jew" because of "jew trick[s]" as an example – he appeared to be equally concerned about homosexual relations and its broader implications on Canadian values. For example, in response to an authors' posting about police officers responses to hate crimes against LGBTQs, *Iris* rashly noted that he was "...pretty sure there are cops who are getting tired of this homo crap!"

Lastly, *H_rixx* and *FRNT*, the ninth and ten most prolific posters in the sample (radical scores = 8.49/40 points and 7.31/40 points, respectively), were not the most active or posted negative messages over the longest time, relative to the other prolific posters in the sample. However, like *Iris*, *H_rixx* too was an intense author who posted an abundance of negative messages that contained anti-Jewish sentiment. Here he argued, as but one example, that "we", as White Nationalists, should be "proud of our [White] race" and not be afraid to discuss how "Jews are the biggest problem this planet" when promoting the White race. Homosexuals, too, were the primary target of the *H_rixx's* distain, as one of his many posts revealed:

With the new gay marriage crap becoming law I figure why not challenge the marriage law like homos did? The laws were changed for them solely on their

sexual orientation. Well let's put on a show for all the World? Due to my (made up) sexual preference of wanting 5 wives I want to challenge the marriage laws that they discriminate against my sexual preference. Or some people trust their pets more than any human friend then that person should challenge the marriage law by asking to be married to their pet. Silly challenges that by law can't be denied. Make it so ridiculous that eventually the gov. will have no choice but to go back to pre-multicultural days where moral/respect/honor family values etc. was at a all time high.

FRNT was also fixated on Jewish conspiracy, like the other prolific and intense (radical) authors in the sample, as this radical author raised what he thought were critical discussions about the war on terror and uncertainty in the Middle East. These discussions, however, were prefaced with “the Zionist dream of endless war” or other similar sentiment, including one of his messages:

[...] let us prosecute the people working in service of the evil cult of Zionism as they occupy our governments in wars, attacking habeas corpus and freedom of opinion, hatching terror plots while misdirecting the public and who knows what other evil. When people talk of organized Jewry the prominent groups are vocally for the so-called war on terror, and the Zionist media means that politicians are in their pockets.

To provide insight into the radical posting behaviour of authors in the sample, a look at the lowest ranked authors in this posting group revealed a large cluster of authors (like the low-ranking cluster of authors in the intensity posting group) who posted but one message in the sample about Jews, Blacks, and/or LGBTQs. The language used in these messages lacked clarity and authority (powerless language); messages were vaguely written, lacking in intent, and were therefore scored as neutral (sentiment score = 0), according to sentiment analysis software. Drawing from ten of the least radical authors in this chronic group, *SafeGate*, in his single post made a muddled claim that:

I honestly don't wear much of his [Tommy Hilfiger] clothing, but in my city as I can remember, not many blacks wear his clothing. The whites do though. Not that I'm black or anything. I just enjoy Aeropostle and American Eagle more.

Similarly, *Fresk*, another user who posted one neutral message in the sample, wrote “Diveroli is a Jewish surname of Italian origin related to the Jews of Rome”, while author *YT7* noted that “Around here it's the very good looking white females who are with the blacks”, both of which received neutral sentiment scores. Authors' description about the above adversary groups was far too vague to draw conclusions about the nature of the conversations or the intent of the author's post.

In sum, a content analysis of the prolific group of chronic and radical posters revealed several patterns in posting behaviour. First, negative messages that made up this radical behaviour were comparable to the very negative messages, in the sense that the messages themselves included an array of distinct and alarming language, such as words associated with weapons ('guns', 'knives', 'bombs'), racism ('racism', 'racist', and racism against Whites in general), and the antichrist ('evil', 'evil Jews', 'the devil', 'Satan', 'satanic'). However, more commonly found in these negative messages were distinct descriptive words about minority groups, such as 'vile', 'filth', 'stupid', 'ignorant', and other similar terms. In addition, two key factors differentiated this negative posting behaviour from the very negative posting behaviour: (1) the sheer volume of the alarming words found in each message, and (2) the tone of the messages. Together, these factors revealed the intent of the messengers.

For the first factor, it was clear that the negative posts included an array of alarming and distinct language, but the very negative messages included much more of this language. A deeper look at these posting behaviours also revealed that negative messages tended to include a broad range of discussion points, all in some way associated with Jews, Blacks, and LGBTQs, but the topics of discussions were broader than the topics of discussion found in the very negative posts. Authors who posted negative messages, for example, tended to draw very broadly on a number of social issues, and then blame adversary groups for these issues, sometimes in passing and other times directly. Yet within this context were descriptive accounts of how Jews, Blacks and/or LGBTQs had wronged the White race, but not direct calls for action against these groups. For the second factor, although the language in the negative messages was vile and alarming, much of the discourse in this prolific posting group was nonsensical, jargon, a hodgepodge of confusing language, and for lack of a better way of putting it, name-calling tactics. Any calls for action, found in the negative messages, was typically done with a passive voice, using hedge words such as 'could', 'may', 'might', 'some', 'would'. Yet when the prolific radical authors did post very negative messages in the sample, such sentiment spanned over an extensive period of time.

2.6.3.3. High-Duration Chronic and Radical Posting Behaviour

For the high-duration radical posters, *Dal*, a prolific poster in the sample (described above), was also the most radical in the sample (radical score = 38.28/40 points). *Dal* posted negative messages over the longest period of time in the sample (4,926.64 days), and these messages on average were amongst the most negative in the high-duration radical posting group (sentiment score = -4.19). Noted previously, for 13.5 years, this author was fixated on exposing “Jew corruption.” To illustrate, in his very first post that he made in the sample, *Dal* in 2002 noted that: “[...] I always felt that Jews believe that if you libel them, which to them includes a denial of their version of history, then they have the right to shed your blood”. In his last post in the sample, in 2016, he continued to express his radical sentiment towards Jews, posing the following question to his readers: “Am I blind or does that crazy dike look like a hideously ugly Jew?”. While an active poster in general (2,255 posts), *Dal* was not the most prolific poster in the group of high-duration radical posters, nor did he post many very negative messages in the sample, but his long-term posting behaviour showed a high level of commitment to the White Nationalist “cause.” Over the course of 13.5 years, *Dal* was adamant on shedding light on the “true” nature of the Jews: “The jew is enemy number one” he noted in one posting. In a long-winded (very) negative post, he warns readers to:

Never forget that the jewish bankers who control the money control those whom we elect. When it comes to Jews, they wage war on humanity and use puppet governments to steal the dignity of every race of people other than jews. These days every government is a criminal enterprise working for jews. We must relentlessly expose the methodology of our oppressors. We can no longer let the churches and their preachers get away with calling these devilish murderous racist people God's Chosen. It is time to speak up and loudly challenge every lying brainwashing puppet of jews that we personally come in contact with. In order to be able to do this properly we must keep educating ourselves about wealthy jews and their underhanded methodology. The Israelis have a way of ruining the good name of many people. This is a time of crisis, if we don't keep exposing and resisting them they may well lead us into a nuclear world war and we become their victims of annihilation also, so that only a world for jews is left which is the main part of their satanic messianic world vision.

Similarly, one of the top high-duration radical authors was *Axis* (radical score = 35.75/40 points), a radical author who was also the most prolific and intense poster in the sample. The scope of *Axis*'s targets was wide-ranging, but he did manage to degrade countless minority groups over an extensive period in the sample (4,600.41 days). His negative messages were on average the most negative (sentiment score = -5.50), relative to the

other authors in the radical posting group. Oftentimes these messages included (mis)information on an array of hot-button social issues. *Axis*, for example, posted links to and commentaries of news sources and other materials related to mainstream social issues (described above), and Jews were in turn blamed for the majority of these problems. The following is one of *Axis*'s many long-winded negative rants that he posted over a 12.6-year period in the sample, with LGBTQ communities at the forefront of his anger:

Multiculturalism is mental AIDS. AIDS means the body can no longer protect itself and functions irrationally. Multiculturalism has led to this insanity. The judges and the politicians who fall into line with them quite literally don't know their ass from a hole in the ground. The argument goes that homosexuals should be allowed to marry because, denying them this, wounds their dignity. It doesn't matter to the judges that the Charter doesn't even mention sexual orientation as a category that deserves equality. Equality means equality means equality, these nine idiots say. So, those posters who predict that you'll soon be able to marry your donkey, 10 women, 6 guys, or your cat are right. Why not? By the line of reasoning of the judges, to deny you the right to consummate your love with your donkey or sheep and call it a marriage denies your dignity [...] It truly is a sick society. When those at the top are prepared to turn their backs on several thousand years of our pre-Christian and Christian tradition, on the knowledge that even non-Western religions (Hinduism, Buddhism, Islam, Judaism) have, that marriage is a commitment between a man and a woman, then that society, or, at least, let's hope that leadership cannot long prevail [...] NO SURRENDER!

The posting behaviour of *Pinto*, another one of the high-duration posters in the sample of radical authors (radical score = 33.61/40 points), differed from the above long-term radical posters: he was not one of the most prolific or intense radical posters in the sample, or both for that matter (see *Axis*'s radical posting behaviour, for example). Instead, *Pinto* was an author who posted a moderate number of negative messages (81 posts) that, on average, were moderately negative (sentiment score = -3.41). Still, he was a regular poster in the sample (1,929 posts) and when he did post negative messages, he did so over a long duration (4,325.07 days). Fascinated by "the White race", a phrase he posted a dozen times in the sample, an assessment of *Pinto*'s posting behaviour suggested that he was convinced that Jews were simply to blame for all the world's problems – a sweeping claim that was expressed by radical authors across all posting groups. This was best summed up in *Pinto*'s very first post in the sample:

I don't even think of Blacks as our enemy - subtract Jews from the equation, and Blacks are harmless animals roaming their own environment at will. But Jews are part of the equation, and Blacks are some of the bullets that Jews have fired into

the heart of our societies. The same is true of virtually every non-White group that causes problems for our race (2004).

In one of *Pinto's* last posts in the sample, he posted the following bold message to his viewers: "How easy is it really to avoid buying Israeli? Judging by the prevalence of Zionist Imperial Merchandising containers on Canadian trains, there's an awful lot of their stuff in our markets" (2015). Such anti-Semitic discourse ensued through this authors' measurable posting career.

Both *Rose* and *Gasskt*, high-duration authors four and five (radical scores = 31.12/40 points and 30.85/40 points, respectively), posted negative messages over a similar duration of time (4,005.40 days and 3,970.21 days, respectively) and the average sentiment score for their messages was moderate (sentiment scores = -3.65 and -3.50, respectively) relative to the other high-duration radical posters. *Rose*, who was also one of the most prolific posters in the sample, posted a high volume of negative messages over her time in the sample (276 messages), while *Gasskt* posted fewer negative messages over time (58 messages). Both authors, however, were prolific posters in general (3,664 messages and 1,841 messages, respectively) and both tended to post negative messages about Jews in their online discussions. As *Gasskt* put it in one of his first posts in the sample: "Jews main goal is to mix as much as they can to hide their identity. Same reason why Jews in ww2 Germany were arrested and sent to camps even though they didn't know they were Jews.lol" (2008). Comparable sentiment was expressed by this long-time author in 2014, as he noted that "Jehovah [the true name of God] created the non-Jew in human form so that the Jew would not have to be served by beasts. The non-Jew is consequently an animal in human form, and condemned to serve the Jew day and night." Similarly, *Rose* posted negative messages for 10.88 years, making Jews the focus of her negative discussion. An example, *Rose* made the emotional and alarming claim that Jews believe that "The non-Jew is an animal in human form and condemned to serve the Jew day and night (as Slaves)". Within this discussion, she also argued that the introduction of hate crime laws further oppressed the White race, sentiment that was echoed by many other radical posters in the sample. As *Rose* described this "White struggle" in one of her postings:

Canada does NOT have anti hate laws. The liberals passed an edict banning the hiring of all white men across Canada. They were not charged. And the HR complaint was ignored. We do have anti white laws. We have laws that attack one race of people, whites. [...] They attack only whites. They are a racist organization

that attacks only one race. Whites. If a cop only arrested only Jews can you imagine the whining and screaming.

Within this group of high-duration radical posters were three authors who shared similar posting characteristics. Neither of them were the most prolific and/or most intense authors in the sample, and neither were the most prolific poster – negative posting rates, or posting rates in general. Yet all three long-term authors posted negative messages over an extensive time in the sample. *ManicD* (radical score = 27.84/40 points), for example, posted negative messages over the course of 3,582.76 days, while *Stint* and *Chorus* (radical scores = 27.58/40 points and 26.45/40 points, respectively) posted negative messages over 3,582.76 days and 3,403.02 days, respectively (see Table 2.8). Each of *ManicD*, *Stint*, and *Chorus*'s messages received moderate sentiment scores on average, and the topics of discussion within each authors' postings varied. To illustrate, the postings behaviour of *ManicD* revolved around discussions on the LGBTQ and Jewish community. Online, *ManicD* posted radical messages about the development of a Canadian city, with radical claims such as: "The city's grown far too much over the past years [...] the mayors (Bronco) a queer, and the fat dykes at city hall all have strong pro-jewish attitudes." *Stint*, on the other hand, was appalled by White women dating Black men, making the radical claim that: "In my locale, many fine LOOKING, albeit not fine thinking women date coons, even really ugly, ape-like ones" while *Chorus* attempted to convince reader to "[...] deport all the JEWS who LIED on their immigration papers to get into the U.S. and Canada!" Such radical sentiment, though not expressed at a high volume, was communicated over an extensive period in the sample.

Lastly were high-duration authors *Teller* and *Venkman* (radical scores = 27.26/40 points and 25.43/40 points, respectively), both of whom were active posters in the sample in general (737 messages and 311 messages, respectively) and both of whom posted a relatively high volume of negative messages (144 messages and 46 messages, respectively) over a long period of time in the sample (3,508.39 days and 3,271.42 days, respectively).

Table 2.8. High-duration chronic radical authors (n = 2,629)²⁴

	Forum authors									
	<i>Dal</i>	<i>Axis</i>	<i>Pinto</i>	<i>Rose</i>	<i>Gasskt</i>	<i>ManicD</i>	<i>Stint</i>	<i>Teller</i>	<i>Chorus</i>	<i>Venkman</i>
<u>Number of posts</u>										
All posts	2,255	2,163	1,929	3,664	1,841	41	59	737	82	311
Negative posts	231	509	81	276	58	8	5	144	8	46
Very negative posts	2	53	1	4	0	0	0	9	0	1
<u>Mean posting score</u>										
All posts	-1.93	-3.96	-1.46	-1.80	-1.03	-1.91	-0.19	-2.99	-0.57	-1.30
Negative posts	-4.19	-5.50	-3.41	-3.65	-3.50	-2.88	-2.20	-4.64	-2.81	-3.08
Very negative posts	-17.25	-18.27	-18.00	-15.50	-	-	-	-17.46	-	-14.00
<u>posting duration (days)</u>										
All posts	5,106.51	4,600.41	4,796.37	4,028.58	4,278.78	3,798.67	3,968.28	3,636.52	3,475.03	3,478.77
Negative posts	4,926.64	4,600.41	4,325.07	4,005.40	3,970.21	3,582.76	3,549.14	3,508.39	3,403.02	3,271.42
Very negative posts	935.09	4,145.32	0 ²⁵	1,978.04	-	-	-	448.99	-	0
<u>Overall radical score</u>	38.28	35.75	33.61	31.12	30.85	27.84	27.58	27.26	26.45	25.43

²⁴ Four of the top radical authors in this posting group were removed from this list, as they posted fewer than five negative or very negative messages in the sample. For this study, chronic radical offenders were those who posted five or more negative and/or very negative messages in the sample. Although this marker is arbitrary, for decades researchers have used this value as a benchmark for what they constitute as 'chronic' or 'career offending' (see Piquero, Farrington, & Blumstein, 2007).

²⁵ Note that this author, as well as another author in this posting group, posted one very negative posting in the sample, but they also posted negative messages on the same day that they posted the very negative message. As a result, technically these authors did not post very negative messages over the span of an entire day, which was therefore treated as a '0' for very negative posting days.

Long-term author *Teller*, also one of the most prolific and intense authors in the sample, posted most of his messages about Jews, and so too did radical author *Venkman*, posting such sentiment as:

[...] jews are responsible for some 310 million white deaths in the last century, including the 40-50 million you attribute to Hitler. The Germans are the only whites in the last 100 years to effectively stand up to the jews. For this reason, Nazism has been demonized by the jews relentlessly ever since. Also never forget that the US Govt. is ALL jew or jew-controlled. Whoever helps to ruin it is directly helping whites.

Teller also posted similar sentiment over an extensive period of time in the sample, posting an array of radical claims, such as:

The world's richest ethnic group is always playing the victim as an excuse to enslave their neighbours. The world's richest ethnic group also is in control of the communist movement that is supposed to be for the rights of the poor working class people. Of course, this is just controlled opposition on behalf of the Jewish extremists. Manipulators indeed.

An assessment of lowest ranking authors in this posting group, like the lowest ranking authors in prolific posting and intense posting radical groups, revealed a large group of authors who posted one message in the sample about Jews, Blacks, and/or LGBTQs that were scored as neutral (sentiment score = 0), according to the sentiment analysis software. Lacking in clarity and intention in their postings were ten of the least radical authors in the high-duration radical group. Of them was *Dac*, one of the least radical authors in the sample who posted one message that was scored as neutral: "Folks, You can't make this stuff up. U of S [University of Saskatchewan] changes policy to protect transgender people." *MacJ*, another one of the lowest ranked authors in this group, wrote one message, which vaguely noted that: "There is still hope for Canada. Most of the rich people in Canada are white, and most of the people with any real power in Canada are white." Similarly, *Bill D* noted that: "COME TO SOUTH AFRICA. YOU WILL ENJOY IT, AND DUI IS A WAY OF LIFE, NOT A CRIME." These messages, as well as the other messages posted by the least radical authors in the sample, again did not explicitly reveal the intent of the authors who posted the neutrally scored messages, nor were they posted with powerful, assertive, or even confident language. The language that was associated with Jews, Blacks, and LGBTQs for these messages also lacked the derogatory antagonist language found in the radical messages in the sample.

In sum, what was apparent about the posting behaviour of this group of high-duration radical authors through a thematic content analysis of their messages, aside from the obvious length of time that these authors posted negative and very negative messages in the sample, were two key findings: (1) the majority of these authors did not post a substantial amount of negative messages, but more than half of them were still very active users in the sample, and (2) with the exception of two long-time radical authors, the majority of the authors in this high-duration group were not those who posted a high volume of intense messages over time, but when they did so the messages were amongst the most intense and negative in the entire sample. Instead, what this posting pattern represented was one that posted a moderate number of messages, but they did so over an extensive period of time.

2.7. Discussion and Conclusion

As the Internet continues to play a major role in connecting those who subscribe to radical beliefs (Sageman, 2008; Weimann, 2006), we still know very little about the communication patterns of radical authors who too may be influential in echo chambers of hate, particularly on a large scale. Borrowing from machine-learning tools may be necessary to detect these authors of interest, especially in online spaces that continue to grow (Brynielsson et al., 2012; Cohen et al., 2014). Equally important during this undertaking, however, is a more nuanced and in-depth understanding of the posting behaviours that may shape the collective identity of radical communities online. This is an area that has been overlooked by those who are studying radical communications in Big Data.

Drawing from authors' sentiment found in a right-wing extremist forum, the purpose of this study was to address the question of what constitutes radical posting behaviour in an online community of the extreme right. In so doing, three radical and chronic posting groups (high-intensity, high-frequency, and high-duration) were developed using a sentiment-based algorithm that incorporated traditional criminal career measures (frequency, seriousness, and duration of activity) to identify authors who discussed radical topics that contribute to extreme right identity. These radical posting behaviours and the authors who made up their posting behaviours were assessed from a micro- and macro-

perspective, with the overall goal of better understanding radical posting behaviours that may contribute to the collective identity of the extreme right online. Several noteworthy findings emerged when comparing the posting patterns within and across radical posting groups.

First, intense chronic and radical posters are those who post few messages over a relatively short period. These authors, however, post a high volume of negative and very negative messages, but again, this posting activity unfolds over a relatively short period. Worth adding is the powerful nature of these very negative messages. Communications experts would describe these radical messages as clearly articulated, vocabulary rich and stylistic – messages that may be influential to readers (Huffaker, 2010; Ng & Bradac, 1993). Messages are also assertive in tone and feature alarming and emotional language (e.g., usage of words such as ‘bomb’, ‘kill’, ‘evil’, ‘threat’), oftentimes advocating violent action against Jews and, to a much lesser extent, action against Blacks and LGBTQs. Authors who post these angry and emotional messages are fixated on revealing the “truth” about Jewish conspiracies against Whites, a posting behaviour or linguistic markers that could be recognized as fixation warning behaviour (Brynielsson et al., 2013; Cohen et al., 2014; Johansson et al., 2016; Kaati et al., 2016a; Kaati et al., 2016b; Meloy et al., 2012). In addition, many of these intense authors are actively trying to reinforce a sense of community through discussions about the White struggles against Jewish domination, which is a communication tactic that Joyce and Kraut (2006) argues is very influential, provided that the source of the messages is perceived by the recipients as credible (Hollander, 1961). These distinct linguistic patterns became even more apparent during an analysis of the least radical authors in the sample. This large group of authors posted ambiguous messages about the adversary groups, but the vagueness of their messages made it a challenge to identify the authors’ intent.

The prolific and radical posters, on the other hand, are those who post a high volume of messages and negative messages that are moderately negative and over a moderate amount of time. Although these authors tend to post few very negative posts in the online community, this discourse spans over a very long period, thus suggesting a level of dedication to the radical right community. Their negative messages, too, include alarming language with the intent of degrading Jews, Blacks, and LGBTQs, but the messages target a wider group of adversaries, not primarily just Jews. Further, the

messages tend to be descriptive accounts of their adversary groups than calls for action or use of force. Here authors' language is passive and lack powerful language. They too are generally not as well written and include an array of jargon and slang. The linguistic patterns in the negative messages also include more questions to the readers (e.g. "isn't it?", "you know?"), which is a linguistic choice that suggests a level of uncertainty in their discussions (see Ng & Bradac, 1993; O'Keefe, 2002).²⁶ In light of these nuances, prolific authors may be influential in the radical right-wing forum. The volume of engagement that they express in a particular setting may increase their potential to influence others (Weimann, 1994). The facilitation of information, at high volumes, can influence social behaviour (Butler, 2001).

Lastly are the high-duration chronic and radical posters, who post a low volume of negative and very negative messages over an extensive period of time, most of which targeted the Jewish population and raised discussions about "Jew corruption." Importantly, though, is that these authors are active on the sub-forum, and for those long-term posters who do post very negative messages, the messages are amongst the most negative in the sample. This may indicate their long-term level of commitment to "othering" Jews, Blacks, and LGBTQs, which is in line with communications research; the time in which an individual spends participating/communicating in a specific place may impact their ability to gain social influence, especially if they are communicating with emotional and vocally rich sentiment. This is particularly the case when individuals attempt to motivate others to participate in the discussions, or again, as was noted earlier, when individuals are trying to build a sense of identity for a particular group (Koh et al., 2007; see also Joyce and Kraut 2006). Longer-termers in this sample did just that: over time they posted messages in an attempt to bond with others to overcome the "evil Jews" who, according to these authors, were conspiring to overthrow the White, as a main example. Long-terms encouraged others to post their thoughts about their ongoing "White struggles" all non-Whites, which in turn contributed to the broader radical identity online.

Collectively, results suggest that radical posting behaviour online is multi-dimensional and includes an array of influential posting patterns that may contribute to the

²⁶ Other passive language described by communications experts, such as hedge terms (e.g., "kind of", "sort of") or hesitations (e.g., "um", "uh"), are rarely found in these negative messages, which is most likely the result of the online space (see Holtgraves & Lasky, 1999). Authors may take their time to post messages online, while face-to-face conversations require on-the-spot responses.

broader identity of the radical right. Yet despite these insightful patterns of posting activity, two key points must be added. First, while a number of different posting patterns have been uncovered and described in the sample, they should not be taken as an either/or – one posting patterns is not more radical than the other; all three posting behaviours, in their own right, suggest a level of commitment to the white power movement, which may subsequently shape the broader identity of those in the radical online community. Second, and perhaps most importantly, these patterns of chronic and radical posting behaviour do not operate in isolation from one another. While these posting patterns provided insight into the broader characteristics of online activity within an online forum of the radical right, posting characteristics of some of most radical authors overlapped across the radical posting groups. To illustrate, two forum authors (*Axis* and *Teller*) were amongst the most radical across all three groups of posting behaviour, and seven authors (not including *Axis* and *Teller*) were the most radical across two posting groups (*Nelson*, *P-15*, *Derger*, *H_rixx*, *Iris*, *Rose*, and *Dal*). These authors are highlighted for several reasons. First, almost every discussion forum is dominated by a small group of authors who may be referred to as opinion leaders, and arguably the most prominent authors – and perhaps even the opinion leaders – in this sample are the overlaying authors listed above. *Axis*, for example, was the most intense and prolific radical author, and he was amongst the topic long-term radical authors as well. So too was radical author *Teller*. Undeniably, these authors share an array of posting characteristics that would define them as radical contributors to the broader identity of the movement online. They post high volumes of well written and emotionally charged messages about their distain towards key target groups of the radical right, and this posting activity is conducted over an extensive period of time, thus providing them with a foundation in which to facilitate information sharing that can in turn be influential. Implications and limitations of these findings will be addressed in Chapter 5.

Chapter 3.

Separating “Us” from “Them”: Measuring Levels of “Othering” on a Right-Wing Extremist Forum

3.1. Introduction

In 2017, *Studies in Conflict and Terrorism* published a special issue on terrorist online propaganda and radicalization, and a seminal article from this instalment was titled ‘Determining the Role of the Internet in Violent Extremism and Terrorism: Six Suggestions for Progressing Research’ by Maura Conway (2016). Derived from this paper was a key suggestion: academics, media, and policymakers, to name a few, must widen their understanding of violent online political extremism, beyond what Conway (2016) identified as “the present narrow focus on violent jihadi online content and interaction” (p. 82). Conway (2016) reminded scholars that, to determine whether violent radicalization is occurring online, academics must also pay attention to a key population: the radical right (see also Gill, Corner, Conway, Thornton, Bloom, & Horgan, 2017). A similar message was also expressed by criminologists over five years prior to Conway’s (2016) call. Simi (2010), for example, correctly pointed out that terrorism studies have neglected to look beyond radical Islamic fundamentalists since 9/11, even though right-wing extremists have an extensive history of violence in the U.S. This too has been the case in Canada (see Perry & Scrivens, 2015) and in many countries around the world (see Eatwell & Mudde, 2004).

Fortunately, the study of right-wing extremists’ use of the Internet has received some academic attention since the introduction of the World Wide Web. This includes analyses of far-right content found on Web 1.0 websites (e.g., Borgeson & Valeri, 2005; Bostdorf, 2004; Perry & Olsson, 2009; Schafer, 2002; Thiesmeyer, 1999) and the extent to which these sites connect to other radical right-wing sites (e.g., Adam & Roscigno, 2005; Burris et al. 2000; Caiani & Wagemann, 2009; Gerstenfeld, Grant, & Chiang, 2003; Tateo, 2005; Zhou et al., 2005; Zuev, 2010). More recently, a growing body of literature has been dedicated to understanding users’ interactions online, including their discussions in radical right-wing chat forums (e.g., Anahita, 2006; Back, 2002; Bowman-Grieve, 2009; Burris et

al., 2000; Daniels, 2009; De Koster & Houtman, 2008; Duffy, 2003; Hale, 2010; Lennings et al., 2010; Levin, 2002; Macovei, 2013; Meddaugh & Kay, 2009; Thompson, 2001; Whine, 1999; Wojcieszak, 2010; Wong, Frank, & Allsup, 2015). We have also seen a handful of studies on how members of the radical right communicate through social media outlets, such as *Twitter* (e.g., Berger, 2016; Berger & Strathearn, 2013; Graham, 2016), blogs (e.g., Chau & Xu, 2007) online newsgroups (e.g., Campbell, 2006), and *YouTube* (e.g., Agarwal & Sureka, 2014; Ekman, 2014; O’Callaghan et al., 2014).

These studies provided us with an in-depth look at how members of the far-right have exploited the capabilities of the Internet by developing highly-networked online communities that encourage the gathering and dissemination of information, inspiration to support and gain resources, and bonding over the demonization of their enemies, for example. What bridges these studies is a need to further our understanding of adherents’ communication patterns that contribute to their radical and oftentimes violent identity. A key component of traditional white power identity, scholars and historians have argued, is based on adherents’ belief in a key conspiracy theory: Zionist Occupied Government (ZOG), where the Western states are secretly run by vast network of Jewish-controlled organizations (see Eatwell & Mudde, 2004). Yet the extent to which right-wing extremists adhere to such radical beliefs – and others – has not been subject to an extensive analysis using of large-scale quantitative approach. This study will address this matter by exploring the differences in authors’ group-level discussions about topics that are at the heart of white power identity and their beliefs: discussions about Jews, Blacks, and LGBTQs.

3.2. Building by “Othering”: Community Development of the Radical Right Online

Prior to the advent of the Internet, right-wing extremists spread their messages of hatred and intolerance through traditional means, such as books, magazines, newsletters, pamphlets, marches and rallies, and even white power concerts. Influential as they may have been, these communication techniques were largely localized and geographically bound (Levin, 2002; Schafer, 2002). It was not until the mid-1990s that the radical right – and the world more generally – were introduced to the World Wide Web, and it was this

technological affordance that gave rise to a new era of hate. As Meddaugh and Kay (2009) put it,

While pamphlets and public rallies are a traditionally mainstay of white supremacy, a new frontier, that of cyberspace, has materialized to be exploited by the radical paradigm. The technological, geographical, and economic advantages of the Internet have proved to be a boon to the white supremacist movement in terms of promotion, recruitment, and expanding their base to include younger audiences (p. 252).

Indeed, it is with these technological affordances that members of the radical right have developed online communities that are underpinned by anti-Semitic, anti-Black, and anti-LGBTQ sentiment, to name but a few of their adversaries.

While the concept of 'community' has changed considerably since the birth of the 'Information Age', communities in cyberspace can be framed in a similar manner as communities in the physical world: both are characterized by the same fractures and divisions offline, yet they are upheld by its ideological core and the vision of the common identity that it informs (Caiani & Parenti, 2013; Daniels, 2009; De Koster & Houtman, 2008; Thompson, 2001). On- and offline communities are created and sustained on the basis of common values, goals, norms, commitment, support and association, and the sense of belonging (Campana & Ducol, 2014; Ducol, 2012), or as Wellman (2001) explained it, through "networks of interpersonal ties that provide sociability, support, information, a sense of belonging, and social identity" (p. 228).

In the context of understanding how right-wing extremist communities develop online, scholars tend to place an emphasis on offline activities that influence online activities, with the general consensus that right-wing extremists have been condemned in real-world settings (De Koster & Houtman, 2008; Schafer, 2002, Thompson, 2001; Wojcieszak, 2010). In turn, adherents typically hide online, find other like-minded individuals, and form collective identities that are built on a common bond: hatred towards the perceived "threat" (Anahita, 2006; Caiani & Parenti, 2013; De Koster & Houtman, 2008; Thompson, 2001). Online web-forums, such as *Stormfront*, are known to host such users, wherein aggressive posturing around racial defence is common practice (Bowman-Grieve, 2009; Daniels, 2009; De Koster & Houtman, 2008). As an example, founder of *Stormfront*, Donald Black, refers to his site as:

a resource for those courageous men and women fighting to preserve their White Western culture, ideals and freedom of speech and association - a forum for planning strategies and forming political and social groups to ensure victory.²⁷

Web-forums of the radical right such as *Stormfront* have provided its users with a sense of cohesion and collective security, but even more importantly for isolated members of society, a collective vision of shared fears, values, and ideologies (Adams & Rocigno, 2005; Anahita, 2006; Back, 2002; Bowman-Grieve, 2009; Daniels, 2009; De Koster & Houtman, 2008; Futrell & Simi, 2004; Perry & Scrivens, 2016a). This collective vision is typically developed through the sharing of information online, and the vision tends to be upheld by the following theologies: (1) members of the White race are generally victims of oppression and persecution by non-White groups (Adams & Roscigno, 2005; Back, 2002; Bowman-Grieve, 2009; Duffy, 2003; Hale, 2010; Meddaugh & Kay, 2009); (2) Whites are targets of “White cultural genocide” (Meddaugh & Kay, 2009; Perry & Scrivens, 2016a; Thompson, 2001), and more specifically; (3) Jews are essentially the organizers behind all White oppression – they own and control the world’s structural systems (e.g., banks, government, media and news outlets, etc.) and, in turn, they are actively trying suppress the White race (Adams & Rocigno, 2005; Back, 2002; Bowman-Grieve, 2009; Duffy, 2003; Meddaugh & Kay, 2009; Thompson, 2001). In short, oftentimes the sentiment found on radical right forums is framed in such a way that Whites are the victims rather than the aggressors, and it is this brand of discourse that preserves the identity of their virtual community (Bowman-Grieve, 2009; Simi & Futrell, 2015; Meddaugh & Kay, 2009; Perry & Scrivens, 2016a). Equally important are key target groups that are central to how the radical right builds their sense of identity.

Jews. Historically, the collective identity of the radical has been upheld by: (1) Germanic myths that Aryans/Whites are the superior race, and subsequently all other races are primitive, brutish, and inferior, and; (2) conspiracy theories that promote an apocalyptic race war between Whites and non-Whites. For the latter, the emphasis is on waging war against the Zionist Occupied Government (ZOG), an expression largely used by white power groups and those who advocate white power ideology (Back, 2002; Berger, 2016; Perry, 2001; Simi & Futrell, 2015). Aryan folklores and icons, in particular, have sat at the forefront of radical right ideology and subsequent action. From the Ku Klux Klan to Neo-Nazi Skinheads to Christian Identity groups, adherents of the right-wing extremist

²⁷ See <https://www.stormfront.org/dblack/press101997.htm>

movement have promoted the (mis)conception that Aryan-style warriors must overcome the ongoing struggle between good (i.e., Whites) and evil (i.e., Jews), all in the name of securing the existence of the White race. Jews, they argue, are “the source of all evil”, the spawn of the Devil himself (Daniels, 2009; Perry, 2001; Simi & Futrell, 2015). Jews are also conspiring to extinguish the White race by breeding them out of existence. And because Jews control government, financial institutions, and media, they are ultimately in a position of power in which they can conspire to destroy the White race (Ezekiel, 1995; Hamm, 1993).

It is this “Jewish domination”, according Germanic mythology, that places the White race in a state of ignorance, and this anti-Semitic discourse bleeds into the online domain (Back, 2002; Bowman-Grieve, 2009; Hale, 2010). For example, a key reading of white supremacy movement, the *Turner Diaries* by one of the most influential white supremacist ideologues, William Pierce, provides fictional accounts of how to violently overthrow the government and systematically kill Jews and non-Whites to establish an Aryan world (Berger, 2016). This reading is widely available on every major hate site (Hale, 2010) and is linked to web-forums and cited by forum users (Bowman-Grieve, 2009). Similarly, anti-Semitic conspiracies and neo-Nazi sentiment tends to dictate much of the discussions found in online forums (Adams & Rocigno, 2005; Back, 2002; Bowman-Grieve, 2009; Burris et al., 2000; Daniels, 2009; Meddaugh & Kay, 2009; Wojcieszak, 2010; Wong et al., 2015).

Blacks, too, have been subject to extensive racial intolerance and inferiority by members of the radical right, from verbal attacks to bias-motivated violence (Blazak, 2001; Futrell & Simi, 2004; Hamm, 1993; Perry, 2001). Undeniably, Blacks have been the primary target of much of the rhetoric and violence by right-wing extremists, and this incitement of hatred can be found in the white supremacy literature on the Web. As an example, William Pierce published the “seminal” piece, ‘Equality: Man’s Most Dangerous Myth’, arguing that the creation of the Black race was the mere consequence of Whites mating with animals (Ezekiel, 1995). This sentiment is commonly found in online discussions forums, where Blacks – and other people of colour – are described as ‘mud races’, the descendants of animals created before Adam and Eve (Burris et al., 2000, p. 219), and “savages” who viciously rape white women (Futrell & Simi, 2004) and take jobs away from White communities (Meddaugh & Kay, 2009). Taken as a whole, the Black race

is described as less advanced and inferior to the White race (Futrell & Simi, 2004; Perry, 2001) or, as Meddaugh and Kay (2009) so concisely put it, Blacks are branded as “less than white, and less than human” (p. 262). It is this kind of sentiment that provides hate mongers with a sense of identity – by othering non-Whites (Berger, 2017; Burris et al., 2000; Perry & Scrivens, 2016a; Simi & Futrell, 2015).

Lesbians, Gays, Bisexuals, Trans, and Queers. Traditional gender roles and the maintenance of heterosexual relations sit at the forefront of white power identity (Blazak, 2001; Daniels, 2009; Ferber, 2009; Perry, 2001; Treadwell & Garland, 2011). The most popular slogan of the white supremacy movement is, after all, the ‘14 Words’ doctrine, one which most adherents try to live by: “We must secure the existence of our people and a future for white children” (Futrell & Simi, 2004). To secure the existence of the White race, members of the radical right believe that an exclusively White and heterosexual culture must be maintained (Daniels, 2009). It is very much conceivable, then, that right-wing extremists loath the mere concept of homosexuality (Anahita, 2006; Daniels, 2009; Meddaugh & Kay, 2009; Simi & Futrell, 2010). In fact, adherents of this male-dominated movement will actively categorize anyone who is not heterosexual as “contaminated” and “impure” (Back, 2002; Perry, 2001; Simi & Futrell, 2010). Further, not only do they maintain that the gay rights movement is the killer of the traditional White family and the cultural destruction of the White race, adherents also hold gays responsible for the AIDS endemic (Daniels, 2009; Meddaugh & Kay, 2009). Such hyper-masculine discourse is very much present online and on white supremacy forums, including *Stormfront*. As Daniels (2009) explained,

homophobia and virulent anti-queer discourse remain features of the white supremacist ideology at places like Stormfront. People who identify as LGBT[Q] are routinely referred to as “disgusting” and “freaks”, and all manner of bad behavior is attributed to gay identity (p. 78).

To summarize, these three adversary groups are widely discussed and chastised in online discussions forums of the radical right, including *Stormfront*, and it is the hateful and derogatory discussions associated with these groups – and others – that contribute to the collective identity of the movement (Bowman-Grieve, 2009; Daniels, 2009; Futrell & Simi, 2004; Meddaugh & Kay, 2009; Perry & Scrivens, 2016a; Simi & Futrell, 2015). Yet what we have learned about the collective identity of the radical right has largely relied on qualitative analyses alone. For example, the bulk of these studies provided an in-depth

qualitative perspective of users' interactions in radical right-wing settings online, including discussion forums (e.g., Anahita, 2006; Back, 2002; Bowman-Grieve, 2009; Castle & Chevalier, 2011; Daniels, 2009; De Koster & Houtman, 2008; Duffy, 2003; Hale, 2010; Meddaugh & Kay, 2009; Thompson, 2001; Whine, 1999). On the other hand, a mere handful of studies have analyzed the content found on *Stormfront* and other radical right-wing communities from a macro-level perspective. This includes web-graph analysis and cross-sectional data analysis of right-wing extremist activities (e.g., Wojcieszak, 2010), a social network analysis of the inter-organizational ties (e.g., Burriss et al., 2000) and discussion themes (e.g., Wong et al., 2015), and the detections of affects expressed in written text (e.g., Abbasi & Chen, 2007; Figea et al., 2016). These studies, however, overlooked the user-level discussions that may contribute to the broader collective identity of the virtual community. While much is known from a qualitative perspective about users' broader collective identity found on *Stormfront*, much less is known from a wide lens quantitative perspective about the discussions that may shape the collective identity of this deviant community.

3.3. Current Study

The purpose of this study was to use a sentiment analysis tool and an algorithm to measure the differences in users' group-level discussions about topics at the heart the extreme right movement and their collective identity on a selected online discussion forum of the radical right: discussions about Jews, Blacks, and LGBTQs. To do this, *Stormfront Canada*, a sub-forum of the notorious *Stormfront.org*, was captured using a customized web-crawler. With this data, three topic models were developed by generating three separate lists of keywords for each topic: one for discussions about Jews, one for discussions about Blacks, and one for discussions about LGBTQs. For each of the three topic models, a total sentiment score for each forum post was derived by summing the sentiment scores for each of the preselect keywords contained in the post using sentiment analysis software. The SIRA algorithm was then applied to the three datasets, drawing from the sentiment scores found for each of the keywords (see Figure 3.1).

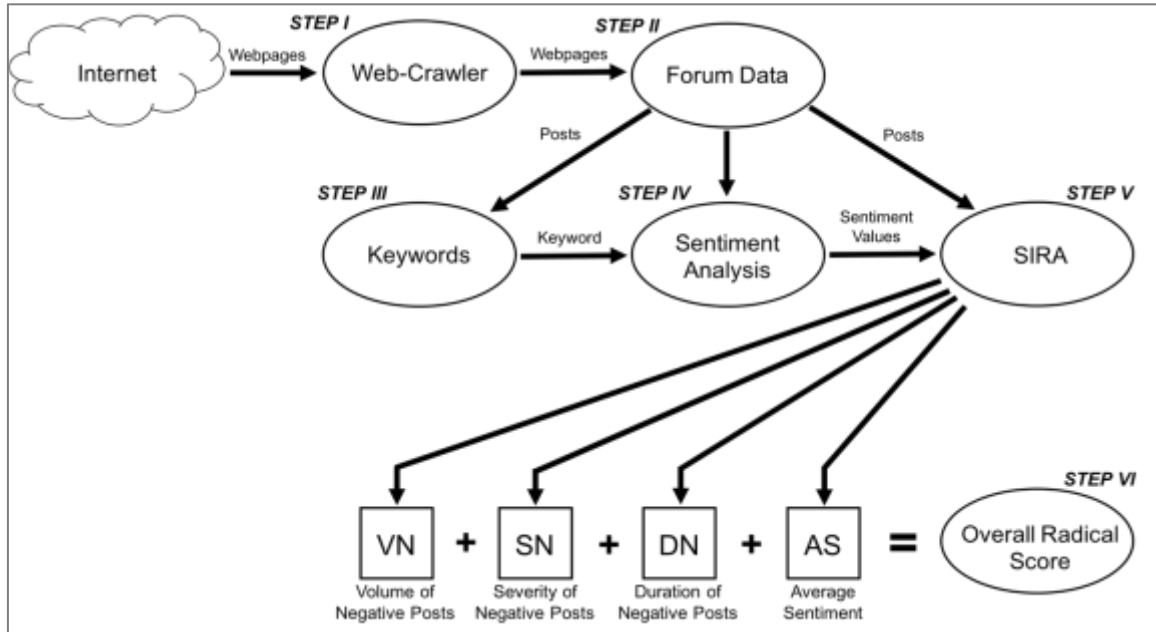


Figure 3.1. Data collection, process of text analysis, and the creation of the overall radical score

3.4. Data and Methods

3.4.1. Web-Crawler and Forum Data

The Terrorism and Extremism Network Extractor (TENE), a custom-written computer program that was designed to collect vast amounts of data online, automatically browsed and captured all open source content on *Stormfront Canada* (described in Chapter 2.5.1). This sample was captured between July 13 and 26, 2015, and again on October 13, 2016 for updated content. This entire sub-forum, which included 141,763 posts made by 7,014 authors between September 12, 2001 and October 12, 2016, was analyzed for the current study. The purpose of this research was to provide a group-level understanding of radical discussion patterns that may contribute to the broader collective identity of the extreme right online. This study is not an indictment of the sub-forum.

3.4.2. Keywords

Like study one of this dissertation, the first step in analyzing the data was to determine which of the various topics found on the sub-forum would be measured. To account for some of the discussions that underpin the collective identity of the radical right, a keyword list was developed that accounted for online discussions that were central adversaries of the radical right: Jews, Blacks, and LGBTQs specifically. In short, these adversary groups are widely discussed and demonized by authors in online discussions forums of the radical right (including *Stormfront*) and it is the hateful and derogatory discussions associated with these adversary groups (and others) that form the collective identity of the radical right-wing movement (Bowman-Grieve, 2009; Daniels, 2009; Futrell & Simi, 2004; Meddaugh & Kay, 2009; Perry & Scrivens, 2016a; Simi & Futrell, 2015). I acknowledge that adversary groups of the radical right are not limited to the groups studied in this dissertation.

Three separate lists of keywords (one for each topic) were developed for the purposes of accounting for authors' opinions about Jews, Blacks, and LGBTQs in a virtual community of the radical right. Both the lists of keywords and the keyword selection procedure for the current study were identical to keywords and the selection procedure for study one of this dissertation (see Chapter 2.5.3 for a detailed description of this procedure). Each topic included a total of 42 words and each keyword was unique to its list (see the lists of keywords for each topic in Appendix B).

3.4.3. Sentiment Analysis

After the keyword lists were developed, it was necessary to identify and evaluate the context surrounding the keywords for each of the three topics. To allow for a systematic analysis of the user's discussion that could be considered 'radical', sentiment analysis was used to highlight relevant text. *SentiStrength*, an established Java-based software that allows for a keyword-focused method of determining sentiment near a specified keyword (Thelwall & Buckley, 2013) was used for the current study (described in Chapter 2.5.4). Such a tool has not been used to measure the collective identity of the radical right by measuring authors' group-level discourse about Jews, Blacks, and LGBTQs on an extreme right web-forum. This was done by accounting for authors' volume, severity, duration of negative messages, as well as their average sentiment score for each posting

in the discussion forum. This was done as follows. First, each post was scored for each of the 42 keywords identified in the previous step, resulting in a 141,763 thousand-by-42 keywords matrix. If a keyword did not exist in a post, the post was not scored for that keyword. The keyword scores were then averaged for each post, and the average value was assigned to the post as the final sentiment score. These final sentiment scores were then incorporated into the Sentiment-based Identification of Radical Authors (SIRA) algorithm. This process was done separately for each of the three topics.

3.4.4. Sentiment-based Identification of Radical Authors 1.1

The following is an overview of the four components of SIRA 1.1. Each one of SIRA 1.1's measures will be used to quantify the extent to which authors, at a group-level, target Jews, Blacks, and LGBTQs in a radical right-wing discussion forum. The following is a brief overview of each of SIRA 1.1's measures (for a detailed description and rationale for each measure, see Chapter 2.5.5.1).

3.4.4.1. SIRA 1.1 Measures

Volume of negative posts (VN). To calculate the number of negative posts for a given forum user, each of their negative posts were counted and these scores were converted into percentiles scores. Percentile scores were then divided by 10 to obtain a score out of 10 points.

Severity of negative posts (SN). To calculate the number of very negative posts for a given user (a value that sentiment analysis assigns based on the tone of the messages, the level of emotion, booster words, antagonistic words, etc.), 'very negative' was calculated by standardizing the count variable; all posts with a standardized value greater than three standard deviations from the mean were considered to be 'very negative.' After the standardization process, the severity calculation was developed in the same manner as the volume calculation above. The number of very negative posts for a given member were counted, and these scores were converted into percentiles scores. Percentile scores were then divided by 10 to obtain a score out of 10 points.

Duration of negative posts (DN). The duration of negative posting was developed by calculating the first and last dates on which individual members posted negative

messages. The difference between these data, which is the duration of negative posting, were counted and these scores were converted into percentiles scores. Percentile scores were then divided by 10 to obtain a score out of 10 points.

Average sentiment score percentile (AS). The average sentiment score percentile was calculated by accounting for the average sentiment score for all posts in the sub-forum. Scores for each individual were converted into percentiles scores, and percentile scores were divided by 10 to obtain a score out of 10 points.

Radical score. Together, the volume of negative posts, severity of negative posts, duration of negative posts, and the percentile score for average sentiment score were tallied to produce an overall score out of 40 points. This 'radical score' quantified four unique dimensions of 'seriousness' to identify radical individuals within an online discussion forum, whereby the higher a user's radical score, the more likely they were to be discussing extremely negative content in their posts (see Scrivens et al., 2017). For each of the three topic models, the Cronbach's alpha for the components comprising the radical score was an acceptable level of internal consistency across the full sample of respondents (discussions about Jew = .729; discussions about Blacks = .744; discussions about Jew = .728).²⁸

3.4.5. Descriptive Statistics

During an author's measurable posting career, it is likely that they discussed all three topics of interest (Jews, Blacks, or LGBTQs) in the discussion forum. Yet for this study, authors' discussions were measured, at the group-level, around each of the three topics in isolation. In other words, the components that made up the SIRA algorithm (volume, severity, duration, and average sentiment score) as well as the overall 'radical score' were aggregated to the group-level for each of the three topics, as the purpose of this study was to compare group-level radical posting behaviours across each topic that contribute to the collective identity of the radical right (i.e., the othering of Jews, Blacks, and LGBTQs). Descriptive information also included the number of authors who discussed

²⁸ Alpha coefficients were generated with *IBM SPSS Statistics 24*.

the particular topic, as well as the number of words that were found in the data about the particular topic. Doing so illustrated the key features and measures in the data.²⁹

3.5. Results

Eight macro-level patterns emerged in this group-level study. First was the high proportion of authors who directly discussed Jews in the sample, in comparison with the number of authors who discussed Blacks or LGBTQs. Specifically, of the 7,014 authors who posted messages in the sample between September 12, 2001 and October 12, 2016 (15.09 years), 23.39 percent posted messages about Jews (1,641 authors), followed closely 22.58 percent of authors posted messages about Blacks (1,584 authors) and to a much lesser extent, 12.99 percent of authors posted messages about LGBTQs (911 authors). In other words, the number of authors who posted messages in the sub-forum that included keywords about Jews and Blacks were comparable, while the number of authors who posted messages about LGBTQs was much lower.

Second, a considerably higher volume of keywords were found in the sample that related to Jews (9,323 keywords) than those that related Blacks (5,624 keywords) or LGBTQs (3,541 keywords). Results also indicated that, on average, authors' messages included more keywords about Jews (5.68 keywords, SD = 25.81) than those about Blacks (3.55 keywords, SD = 11.72) or LGBTQs (3.89 keywords, SD = 13.41). Together, findings suggested that the authors discussed Jews at a higher rate than they did about the two other adversary groups in the sample.

Third, of the 141,763 messages that were posted in the sample, the highest volume of negative messages were posted about Jews. Specifically, authors posted negative messages about Jews (4,724 posts) at a much higher rate than they posted negative messages about Blacks or LGBTQs (2,490 posts and 2,217 posts, respectively). On average, each author also posted negative messages about Jews at a higher rate (2.88 posts, SD = 14.20) than they posted negative messages about Blacks or LGBTQs (1.57 posts [SD = 6.17] and 2.43 posts [SD = 9.22], respectively) (see Table 3.1).

²⁹ This was done with *IBM SPSS Statistics 24*.

Table 3.1. Descriptive information of the sample (n = 7,014)

	Sentiment about Jews (n = 1,641)		Sentiment about Blacks (n = 1,584)		Sentiment about LGBTQs (n = 911)	
	Count	Mean (SD)	Count	Mean (SD)	Count	Mean (SD)
Keywords found in data	9,323	5.68 (25.81)	5,624	3.55 (11.72)	3,541	3.89 (13.41)
Negative posts	4,724	2.88 (14.20)	2,490	1.57 (6.17)	2,217	2.43 (9.22)
Very negative posts	138	0.08 (0.93)	78	0.05 (0.48)	49	0.05 (0.63)
Negative posting duration (days)	-	128.94 (461.81)	-	114.04 (442.94)	-	168.53 (545.09)
Posting score	-	-1.50 (2.92)	-	-1.17 (2.50)	-	-1.90 (2.55)
Overall radical score	-	4.31 (3.55)	-	4.59 (3.31)	-	4.68 (3.64)

Fourth, the highest volume of very negative messages was also about Jews; that is, authors in this sample posted the highest volume of very negative messages about Jews (137 posts), compared with the volume of very negative messages about Blacks or LGBTQs (78 and 49 posts, respectively). Further, on average each author posted a higher volume of very negative messages about Jews (0.08 posts, SD = 0.93) than they posted very negative messages about Blacks or LGBTQs (0.05 posts [SD = 0.48] and 0.05 posts [SD = 0.63], respectively). Cumulatively, the highest volume of negative and very negative messages on the sub-forum were posted about the Jewish community.

Fifth, during the 15.09-year period in which authors posted messages in the sample, on average each author posted negative messages about LGBTQs (168.53 days, SD = 545.09) over a longer period than they did about Jews or Blacks (128.94 days [SD = 461.81] and 114.04 days [SD = 442.94], respectively). Sixth, comparing the group-level posting scores for each of the three topics of discussion, on average the scores for messages about LGTBQs were the most negative (sentiment score = -1.90, SD = 2.55) compared with posting scores for authors' discussions about Jews (sentiment score = -1.50, SD = 2.92) or Blacks (sentiment score = -1.17, SD = 2.50). Similarly, results also indicated that on average, authors' overall radical score was the highest when they discussed LGBTQs (radical score = 4.68, SD = 3.64), relative to their discussions about

Jews or Blacks (radicals scores = 4.31 [SD = 3.55] and 4.59 [SD = 3.31], respectively). Lastly, for the majority of the above measures, data points were spread out over a wide range of values and data was non-normally distributed. In other words, there were extreme cases in the sample that may have skewed the results. To mitigate this, absolute outliers were detected using a z-score (also known as standard scores), and all cases were removed if they were higher or lower than the normal distribution parameter (+/- 3.29). This was done for each of the above measures and for each topic of discussion.

Removing outliers for discussions about Jews: The number of *keywords found in the data* was non-normally distributed for online discussions about Jews, with skewness of 16.30 (SE = 0.06) and kurtosis of 359.57 (SE = 0.12). Consequently, all positive outliers were removed from the sample (15 authors), which improved the skewness (Sk = 5.99, SE = 0.06) and kurtosis (Ku = 44.11, SE = 0.12) of the positively skewed distribution (updated n = 1,626). Similarly, the measure for number of *negative posts* was non-normally distributed, with skewness of 15.08 (SE = 0.06) and kurtosis of 289.98 (SE = 0.12). All positive outliers were therefore removed from the sample (15 authors), and this improved skewness (Sk = 6.07, SE = 0.06) and kurtosis (Ku = 46.95, SE = 0.12) of the distribution (updated n = 1,626). The measure for *very negative posts*, too, was non-normally distributed, with skewness of 30.21 (SE = 0.06) and kurtosis of 1,072.18 (SE = 0.12). Here all positive outliers were removed from the sample (7 authors), which improved skewness (Sk = 6.92, SE = 0.06) and kurtosis (Ku = 56.73, SE = 0.12) of the positively skewed distribution (updated n = 1,634).

The measure for *negative posting duration (days)* was also non-normally distributed; skewness of the distribution was 5.62 (SE = 0.06) with kurtosis of 38.33 (SE = 0.12). Skewness (Sk = 3.99, SE = 0.06) and kurtosis (Ku = 16.86, SE = 0.12) improved when all positive outliers were removed from the sample (33 authors) (updated n = 1,608). On the other hand, the measure for *posting score* was negatively skewed, with skewness of -3.77 (SE = 0.06) and kurtosis of 36.47 (SE = 0.12). All negative outliers were therefore removed from the sample (15 authors), which improved the skewness (Sk = -0.78, SE = 0.06) and kurtosis (Ku = 1.77, SE = 0.12) of the distribution (updated n = 1,626). Lastly, the measure for *overall radical score* was non-normally distributed, with skewness of 0.94 (SE = 0.06) and kurtosis of 2.85 (SE = 0.12). All positive outliers were therefore removed

from the sample (8 authors), which improved the skewness ($Sk = 0.42$, $SE = 0.06$) and kurtosis ($Ku = -1.15$, $SE = 0.12$) of the distribution (updated $n = 1,633$).

Removing outliers for discussions about Blacks: The number of *keywords found in the data* was non-normally distributed for online discussions about Blacks, with skewness of 14.15 ($SE = 0.06$) and kurtosis of 407.14 ($SE = 0.12$). All positive outliers were removed from the sample (14 authors), which improved skewness ($Sk = 4.76$, $SE = 0.06$) and kurtosis ($Ku = 28.96$, $SE = 0.12$) of the positively skewed distribution (updated $n = 1,570$). The measure for number of *negative posts* was also non-normally distributed, with skewness of 17.44 ($SE = 0.06$) and kurtosis of 289.98 ($SE = 0.12$). Thus, all positive outliers were removed from the sample (11 authors) and this improved skewness ($Sk = 4.50$, $SE = 0.06$) and kurtosis ($Ku = 26.42$, $SE = 0.12$) of the distribution (updated $n = 1,573$). Comparably, the measure for *very negative posts* was also non-normally distributed, with skewness of 27.99 ($SE = 0.06$) and kurtosis of 957.6 ($SE = 0.12$). All positive outliers were then removed from the sample (9 authors), and doing so improved the skewness ($Sk = 4.44$, $SE = 0.06$) and kurtosis ($Ku = 31.76$, $SE = 0.12$) of the positively skewed distribution (updated $n = 1,575$).

The measure for *negative posting duration (days)* was also non-normally distributed; skewness of the positively distribution was 6.06 ($SE = 0.06$) with kurtosis of 45.12 ($SE = 0.12$). Skewness ($Sk = 3.99$, $SE = 0.06$) and kurtosis ($Ku = 21.19$, $SE = 0.12$) improved when all positive outliers were removed from the sample (34 authors) (updated $n = 1,550$). The measure for *posting score*, on the other hand, was negatively skewed, with skewness of -2.30 ($SE = 0.06$) and kurtosis of 21.71 ($SE = 0.12$). Consequently, all negative outliers were removed from the sample (14 authors), which improved skewness ($Sk = -0.45$, $SE = 0.06$) and kurtosis ($Ku = 2.31$, $SE = 0.12$) of the distribution (updated $n = 1,570$). Finally, the measure for *overall radical score* was non-normally distributed, with skewness of 1.04 ($SE = 0.06$) and kurtosis of 4.48 ($SE = 0.12$). All positive outliers were removed from the sample (5 authors), thus improving the skewness ($Sk = 0.43$, $SE = 0.06$) and kurtosis ($Ku = -1.13$, $SE = 0.12$) of the distribution (updated $n = 1,579$) (see Table 3.2).

Table 3.2. Descriptive information of the sample with outliers included and removed (n = 7,014)

	<u>Sentiment about Jews</u>				<u>Sentiment about Blacks</u>				<u>Sentiment about LGBTQs</u>			
	Outliers included		Outliers removed		Outliers included		Outliers removed		Outliers included		Outliers removed	
	Count	Mean (SD)	Count	Mean (SD)	Count	Mean (SD)	Count	Mean (SD)	Count	Mean (SD)	Count	Mean (SD)
Keywords found in data	9,323	5.68 (25.81)	6,151	3.78 (8.07)	5,624	3.55 (11.72)	4,265	2.72 (4.26)	3,541	3.89 (13.41)	2,588	2.87 (4.53)
Negative posts	4,724	2.88 (14.20)	2,983	1.83 (4.31)	2,490	1.57 (6.17)	1,869	1.19 (2.19)	2,217	2.43 (9.22)	1,619	1.79 (3.16)
Very negative posts	138	0.08 (0.93)	72	0.04 (0.25)	78	0.05 (0.48)	43	0.03 (0.16)	49	0.05 (0.63)	31	0.03 (0.21)
Negative posting duration (days)	-	128.94 (461.81)	-	75.05 (236.29)	-	114.04 (442.94)	-	59.82 (207.51)	-	168.53 (545.09)	-	95.22 (276.09)
Posting score	-	-1.50 (2.92)	-	-1.35 (2.3)	-	-1.17 (2.50)	-	-1.06 (2.16)	-	-1.90 (2.55)	-	-1.81 (2.37)
Overall radical score	-	4.31 (3.55)	-	4.24 (3.36)	-	4.59 (3.31)	-	4.53 (3.15)	-	4.68 (3.64)	-	4.60 (3.39)

Removing outliers for discussions about LBGTQs: The number of *keywords found in the data* was non-normally distributed for online discussions about LBGTQs, with skewness of 12.91 (SE = 0.08) and kurtosis of 206.16 (SE = 0.16). All positive outliers were removed from the sample (8 authors), which improved the skewness (Sk = 4.53, SE = 0.08) and kurtosis (Ku = 24.98, SE = 0.16) of the positively skewed distribution (updated n = 903). Similarly, the measure for number of *negative posts* was non-normally distributed, with skewness of 14.39 (SE = 0.08) and kurtosis of 260.69 (SE = 0.16). All positive outliers were therefore removed from the sample (7 authors), thus improving the skewness (Sk = 4.49, SE = 0.08) and kurtosis (Ku = 25.48, SE = 0.16) of the distribution (updated n = 904). The measure for *very negative posts* was also non-normally distributed, with skewness of 25.57 (SE = 0.08) and kurtosis of 721.22 (SE = 0.16). All positive outliers were removed from the sample (1 author), which improved the skewness (Sk = 6.81, SE = 0.08) and kurtosis (Ku = 50.31, SE = 0.16) of the positively skewed distribution (updated n = 910). Likewise, the measure for *negative posting duration (days)* was non-normally distributed; skewness of the distribution was 4.75 (SE = 0.08) with kurtosis of 25.89 (SE = 0.16). Skewness (Sk = 3.71, SE = 0.08) and kurtosis (Ku = 14.75, SE = 0.16) improved when all positive outliers were removed from the sample (23 authors) (updated n = 888).

On the other hand, the measure for *posting score* was negatively skewed, with skewness of -1.09 (SE = 0.08) and kurtosis of 3.31 (SE = 0.16). All negative outliers were removed from the sample (8 authors), which improved the skewness (Sk = -0.70, SE = 0.08) and kurtosis (Ku = 1.63, SE = 0.16) of the distribution (updated n = 903). Lastly, the measure for *overall radical score* was non-normally distributed, with skewness of 1.31 (SE = 0.08) and kurtosis of 6.65 (SE = 0.16). All positive outliers were removed from the sample (4 authors), which improved the skewness (Sk = 0.50, SE = 0.08) and kurtosis (Ku = -0.68, SE = 0.16) of the distribution (updated n = 907).

In sum, while several outliers accounted for a large proportion of the variation in the above measures in the sample, they did not have a substantial impact on the overall results. In fact, the removal of these outliers did not change the results in the study; most discussions were about Jews in the sample, and they were targeted by forum members at the highest volume (negative and very negative messages) than Blacks or LBGTQs. Discussions about LBGTQs, on the other hand, were much more negative and over the longest period on average in the sample.

3.6. Discussion and Conclusion

Researchers have argued that traditional white power ideology and their collective identity is largely based in a deep-seeded distain for the Jewish population, an ideology that romanticizes the unveiling of Jews who are conspiring to commit “white genocide” (Berger, 2016; Back, 2002; Daniels, 2009; Ezekiel, 1995; Simi & Futrell, 2015). Yet the brunt of this work has drawn from various qualitative analyses to provide support for this critical part of adherents’ identity. The purpose of this study, then, was to provide a macro-level understanding of online discussions that form the collective identity in a radical right-wing community, exposing which adversary groups (Jews, Blacks, and LGBTQs) garnered the most radical discourse through the use of a sentiment-based algorithm that incorporated traditional criminal career measures (frequency, seriousness, and duration of activity). Several group-level conclusions were drawn from this study, which largely confirm previous research.

First, the highest volume of keywords are posted about Jews and the highest volume of forum authors are involved in these online conversations, followed by discussions about Blacks and LGBTQ (ordered according to frequency of keywords and authors). Similarly, the highest volume of negative and very negative messages are also posted about Jews, followed by negative and very negative discussions about Blacks and LGBTQs, findings that come as little surprise. In fact, these findings largely confirm previous studies that explored how member of the radical right bond online and offline: through in-depth conversations about how the powerful Jewish families that they call ZOG, or Zionist Occupied Government, are “conspiring” to destroy the White race. This radical notion is one that stems from Aryan folklores and has a deeply rooted history in radical right-wing ideology (Ezekiel, 1995; Perry, 2001; Simi & Futrell, 2015). Jews are the primary reason for why Whites are suffering from “White cultural genocide”, members of the radical right argue (Daniels, 2009; Hamm, 1993; Perry, 2001). This notion is largely confirmed through a large-scale quantitative analysis of the online discourse associated with Jews in a radical right-wing discussion forum.

Results also suggest that Blacks are a primary targeted of the radical right online, which again is of little surprise. Interestingly, though, are the differences in the volume of negative content that was posted about Jews in comparison with negative content about Blacks. Jews appear to be the larger target of the negative discourse in this online community, a finding that aligns with previous work on radical-right wing ideology. To illustrate, scholars have aptly noted that radical right-wing ideology characterizes Jews as the cause of “Black savagery” (see Daniels,

2009). In particular, Aryan folklore maintains that “Jewish domination” and their positions of power (control government, financial institutions, and media) render Blacks unable to find meaningful employment or a safe place to live, as two main examples, and Blacks in turn have no choice but to resort to crime to survive. Blacks, radical right-wing adherents argue, would be less dangerous criminals if it were not for Jews trying to suppress them. However, the key argument in Aryan folklore is that Jews are intentionally trying to suppress Blacks so they have no choice but to engage in violent crime against Whites. This, according to adherents, is part of Jews’ master plan to destroy the White race (Ezekiel, 1995; Daniels, 2009; Perry, 2001; Simi & Futrell, 2015). With this in mind, it comes as little surprise that Jews are discussed at the highest rate, relative to the two other key adversary groups, on a radical right-wing discussions forum. All worlds’ problems are the consequence of Jews trying to dominate the world, and it is this kind of sentiment that provides hate mongers with a purpose and a sense of identity, built on trying to overcome their Jewish oppressors (Daniels, 2009; Ezekiel, 1995; Futrell & Simi, 2004).

At the other end of the spectrum, though very much in line with the above findings, was the sentiment expressed about LGBTQs in the radical right web-forum. While the lowest volume of words were found in the sub-forum that were directly about LGBTQs with the least number of authors who posted messages with those keywords, two important findings emerged. First, discussions associated with LGBTQs were more negative than the discussions about Jews or Blacks (ordered according to negative score). Second, authors who posted negative messages about LGBTQs did so on over a longer period than those who posted negative messages about Jews and Blacks. Though somewhat surprised by these findings, they resonate with key mantra of the radical right, a hyper-masculine movement of sorts. It is no secret that adherents of the extreme right despise homosexual relations (Anahita, 2006; Daniels, 2009; Meddaugh & Kay, 2009). Blamed for the AIDS endemic and the killer of the “traditional” White family, members of the LGBTQ community are framed by far-right adherents as “contaminated”, “impure”, and the cultural destruction of the White race (Back, 2002; Daniels, 2009; Meddaugh & Kay, 2009; Perry, 2001). Such sentiment is expressed, in harsh terms, on radical discussion forums such *Stormfront* (Daniels, 2009; Meddaugh & Kay, 2009), and this study lends support for this commonly found theme in the literature.

Lastly, results suggest that most authors who post negative messages about Jews, Blacks, and/or LGBTQs in the radical online community post very few messages, and instead it is a small group of authors who post a high volume of the negative content. These outliers were

controlled for, and the above results remained as is, but this finding lends support for previous studies that have indicated that radical discussions forums, or discussions forums in general, tend to be dominated by a small group of individuals (Bowman-Grieve, 2009; Wojcieszak, 2010). These outliers were compared with the most radical authors in study one, and each of them were those who were identified as radical and prominent (e.g. *Axis*, *Teller*, *Derger*, *H_rixx*, and *Dal*). Study implications and limitations will be address in Chapter 5.

Chapter 4.

“Othering” across Time: Posting Trajectories of the Radical Right Online

4.1. Introduction

Right-wing extremists have an extensive and violent history of “othering” those who they perceive as their “enemies” (Ezekiel, 1995; Hamm, 1993; Levin, 2002; Perry, 2001). Historically, Jewish, Black, and LGBTQ communities have borne the brunt of their anger (see Daniels, 2009). Yet who they target tends to be dictated by “hot button” issues within a particular town, city or country, or more recently on a global scale, thanks largely to the connectivity of the Internet (Back, 2002; Bowman-Grieve, 2009; Daniels, 2009). Qualitative research has shown us the extent to which members of the radical right disseminate hateful content about their adversaries online (Back, 2002; Daniels, 2009; De Koster & Houtman, 2008; Hale, 2010; Meddaugh & Kay, 2009; Levin, 2002; Perry & Scrivens, 2016a), but we are unaware of how this hatred transpires across time. This is an important oversight. Gauging authors’ temporal posting behaviours can provide us with information about whether they are becoming more radical or fixated on a specific adversary group, as well as how their hate campaigns change across time. Temporal posting behaviours can also provide us with insight into how adherents’ collective identity forms around their hateful discourse about their “enemies.” Indeed, a fitting perspective to study these pathways is through a criminal career paradigm (Freilich, Chermak, Belli, Gruenwald, & Parkin, 2014).

4.2. Developments in the Criminology of Terrorism: A Criminal Career Paradigm

In 1986, Blumstein, Cohen, Roth, and Visher captured the attention of criminologists, especially those who were interested in the longitudinal development of offending patterns, by looking beyond case-by-case description of offending trajectories. What we now know as the ‘criminal career paradigm’ (see Piquero, Farrington, & Blumstein, 2003), Blumstein et al.’s (1986) National Academy of Sciences report moved beyond simple methods that differentiated offending from non-offending to study of the longitudinal sequence of crimes committed by an individual

offender. Instead, they introduced a set of measurable 'parameters' or 'dimensions' that could explain various sequences of offending over time – both within offenders and between offenders. This was done by separating the aggregated rate of offending into two main components: (1) participation in crime versus those who did not participate in crime, and (2) the frequency with which an offender was actively engaged in crime (Piquero et al., 2003). Two other components that effected aggregate crime rates were: (3) duration of an offenders' career, and (4) the specific offenses committed and patterns of offenses for a particular offender, which was defined as 'seriousness.' With these components in mind, Blumstein et al. (1986) argued that an offender's criminal career could be measured by various 'parameters' in their lives, starting from the beginning (age of onset of offending), middle (change in frequency, severity, and type of crime/seriousness of crime), and end (desistance) (Le Blanc & Loeber, 1998).

This understanding of offending pathways has sparked some interest amongst those studying issues related to terrorism and violent extremism. DeLisi and Piquero (2011), for example, noted in their review of criminal career research from 2000-2011 that much more research is needed to study the longitudinal pathways of politically-motivated criminals/terrorists. The criminology of terrorism has begun to take up DeLisi and Piquero's (2011) challenge.

Despite previous critiques about the quality of quantitative research in terrorism and extremism research (e.g., Schmid & Jongman, 1998; see also Lum, Kennedy, & Sherley, 2006; Silke, 2001), considerable strides have since been made in the criminology of terrorism (Morris, 2017; Morris & LaFree, 2017). This is due, in large part, to an increase in government funding to various research centres, both to track and better understand the inner-workings of terrorism and extremism, and on a large scale.³⁰ As a result, more commonly found in terrorism studies is the application of advanced methodologies and statistical tool to document the trends in terrorism activities (e.g., LaFree, Morris, & Dugan, 2010; LaFree & Freilich, 2012; LaFree, Yang, & Crenshaw, 2009; Mullin & Young, 2012; Sander, 2014). An increasingly promising technique within this domain, Nagin and Land's (1993) innovative model of individual patterns of development over time (see Morris, 2017),³¹ is complementary to a criminal career paradigm (Piquero et al., 2003).

³⁰ A notable centre includes the National Consortium for the Study of Terrorism and Response to Terrorism (START), hosted in the Department of Criminology and Criminal Justice at the University of Maryland (LaFree & Freilich, 2012).

³¹ GBTM is also known as latent class growth analysis (LCGA) or is often referred to as semi-parametric group-based trajectory modelling (SPGM).

Nagin and Land (1993) introduced group-based trajectory modelling (GBTM) to the field of criminology with their seminal work on criminal careers and the developmental paths of individual offending. Designed to identify and construct latent classes (groups) of cases that share similar patterns of behavior over time (Bushway, Piquero, Broidy, Cauffman, & Mazerllo, 2001; Nagin, 2005), the initial purpose of this analytical technique was to describe the temporal trends of individual offending (Nagin, 1999; Nagin & Land, 1993) and anti-social behavior among youths (Nagin, Pagani, Tremblay, & Vitaro, 2003; Nagin & Tremblay, 1999; Nagin, 2005). Guided by this developmental framework, criminologists have studied violence trajectories (e.g., Brame, Mulvey, & Piquero, 2001; Brame, Bushway, Paternoster, & Thornberry, 2005; Loeber, Farrington, Stouthamer-Loeber, & White, 2008; Piquero, Brame, Mazerolle, & Haapanen, 2002; Sampson & Laub, 2003; Tzoumakis, Lussier, Le Blanc, & Davies, 2012), trajectories of crime at places (e.g., Andresen, Curman, & Linning, 2016; Braga, Hureau, & Papachristos, 2010, 2011; Curman, Andresen, & Brantingham, 2015; Groff, Weisburd, & Yang, 2010; Weisburd, Bushway, Lum, & Yang, 2004; Weisburd, Groff, & Yang, 2012; Wheeler, Worden, & McLean, 2015), and most recently, trends in terrorist activities (e.g., LaFree, Morris, Dugan, & Fahey, 2006; LaFree et al., 2009; LaFree et al., 2010; Miller, 2012; Morris & Slocum, 2012). A select number of criminologists have also incorporated a developmental life-course framework into their understanding of onset to violent extremism, both from a qualitative (e.g., Hamm, 2012, 2013; Schafer, Mullin, & Box, 2014; Simi, Sporer, & Bubolz, 2016), quantitative (e.g., Freilich et al., 2014; Kerodal, Freilich, Chermack, & Suttmoeller, 2014) and mixed-methods perspective (e.g., Levey, Bouchard, Hashimi, Monk, & Frank, 2016). Criminologists too have used this framework to study the processes of de-radicalization and disengagement (e.g., Bjorgo, 2013; Bubolz & Simi, 2015), and this life-course perspective will continue to generate interest in terrorism and extremism studies. One areas that this framework has not been applied to, though, is to the study of radical posting trajectories on the Web.

Criminal career measures, in their simplest form (frequency, seriousness, and duration of activity), are attuned to measuring how authors' radical discussions change throughout their posting careers in an extremist forum, but researchers have yet to explore this important area. This comes as a surprise, given that scholars have generally maintained that radical forums are virtual spaces in which hostile beliefs are encouraged, supported, and even reinforces by its community members rather than challenged over time (Back, 2002; Caiani & Kröll, 2014; Futrell & Simi, 2004). These online spaces have also been conceptualized as "hornet's nests" (Wojcieszak, 2010), "lone wolf incubators" (Weimann, 2012), or "echo chambers" that polarize the

opinions of its users, wherein one-sided and polarizing beliefs that are otherwise not accepted in most settings are reinforced over time by like-minded individuals who also share the set of values or beliefs (Awan, 2017; Stevens & Neumann, 2009). Despite these intriguing discussions, we have little evidence to support these claims. In other words, we have yet to fully uncover whether individuals do, in fact, become more radical over the course of time that they participate in a radical online community, as studies have not tested this “hornet’s nest” assumption across time.

4.3. Current Study

This study measured authors’ radical posting patterns over time on a right-wing extremist forum and, by extension, identified group-based posting trajectories that may shape the collective identity of the radical right. To do this, a customized web-crawler was used to capture *Stormfront Canada*. Next, three topic models were developed by generating three separate lists of keywords for each topic: (1) Jews, (2) Blacks, and (3) LGBTQs. For each of these topics, a total sentiment score for each forum post was derived by summing the sentiment scores for each of the preselect keywords contained in the post using sentiment analysis software (see Figure 4.1).

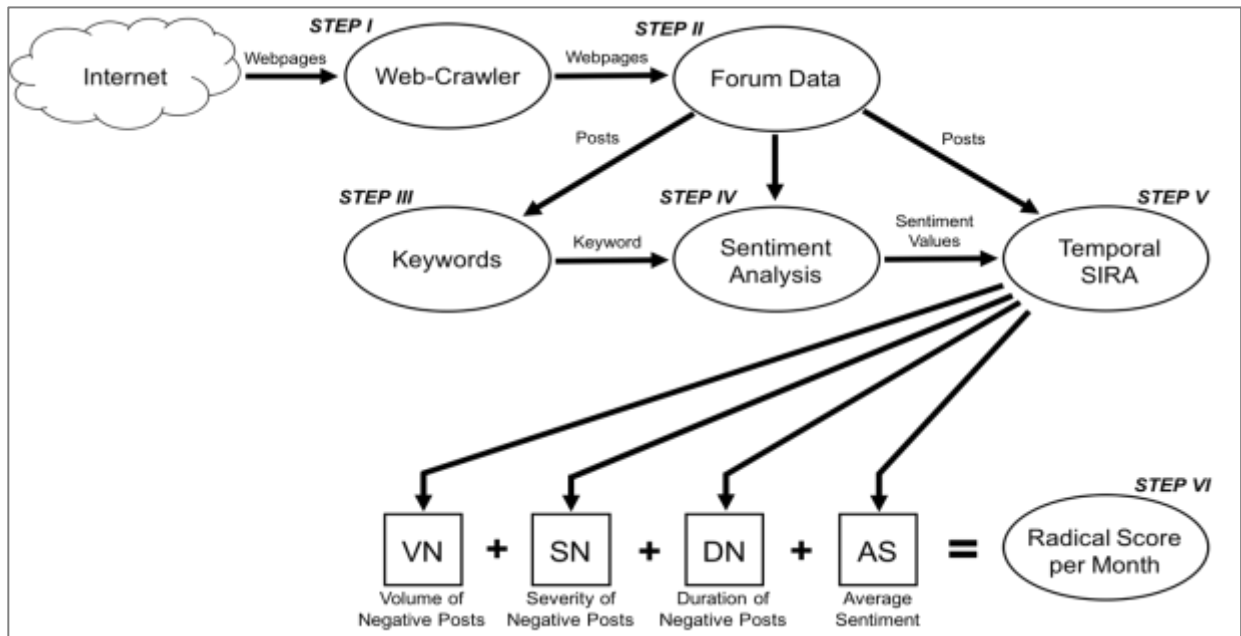


Figure 4.1. Data collection, process of text analysis, and the creation of the overall radical score

The SIRA algorithm was then applied to the three datasets, drawing from the sentiment scores found for each of the keywords. This was done at each month that an author posted messages about Jews, Blacks, or LGBTQs, which resulted in an individual 'radical score' for each author at each time point. Semi-parametric group based-modeling (SPGM) was then used to measure how authors' radical scores change on the sub-forum and to identify associated trajectory groups that developed over a substantial period.

4.4. Data and Methods

4.4.1. Web-Crawler and Forum Data

The Terrorism and Extremism Network Extractor (TENE) automatically browsed and captured all open source content on *Stormfront Canada*, which included 141,763 posts made by 7,014 authors between September 12, 2001 and October 12, 2016 (described in Chapter 2.5.1). Since the purpose of this study was to identify latent groups of authors who shared similar radical posting trajectories over time, all sub-forum content was analyzed for the current study. This study is not an indictment of the sub-forum.

4.4.2. Keywords and Sentiment Analysis

The first step in analyzing the data, like studies one and two of the dissertation, was to determine which of the various topics found on the sub-forum would be measured. To account for some of the discussions that underpin the collective identity of the radical right, a keyword list was developed around central adversaries of the radical right: Jews, Blacks, and LGBTQs specifically. Three separate lists of keywords (one for each topic) were developed for the purposes of accounting for authors' opinions about Jews, Blacks, and LGBTQs in a virtual community of the radical right (see Chapter 2.4.3. for a description of the keyword selection procedure). In total, each topic included 42 words, which were unique to each list (see the lists of keywords for each topic in Appendix B). Note that the keywords used in study three of this dissertation were the same as those used in studies one and two.

It was then necessary to identify and evaluate the context surrounding the keywords for each of the three topics. *SentiStrength* was therefore applied to the data, as it allows for a keyword-focused method of determining sentiment near a specified keyword (Thelwall &

Buckley, 2013) (described in Chapter 2.5.4). Next, to measure the collective identity of the radical right by measuring authors online discourse about Jews, Blacks, and LGBTQs over time, authors' volume, severity, duration of negative messages, as well as their average sentiment score, was evaluated for each posting in the data. While this type of analysis has not yet been conducted with sentiment analysis, it was completed as follows: First, each post was scored for each of the 42 keywords identified in the previous step, resulting in a 141,763 thousand-by-42 keywords matrix. If a keyword did not exist in a post, the post was not scored for that keyword. The keyword scores were then averaged for each post, and the average value was assigned to the post as the final sentiment score. These final sentiment scores were then incorporated into the Sentiment-based Identification of Radical Authors (SIRA) algorithm. This process was done separately for each of the three topics.

4.4.3. Sentiment-based Identification of Radical Authors 1.1

Temporal SIRA consisted of identical measurement components as those components found in SIRA 1.1 (see Chapter 3.4.4.1 for a description of SIRA 1.1). Each of these parameters (volume, severity³², duration, and average sentiment score percentile) were used to quantify the extent to which authors, as a group, posted negative messages about Jews, Blacks, and LGBTQs in a radical right-wing forum over time. For a detailed description and rationale for each measure, see Chapter 2.5.5. The following is a detailed look at the analytic strategy for the current study.

4.4.3.1. Analytic Strategy

An analytic technique that assumes the population consists of a discrete number of unobserved classes, each with its own distinct temporal pattern and polynomial growth curves (Nagin & Land, 1993), was used to determine whether there were distinct developmental trajectory groups on a radical right-wing discussion forum: semi-parametric group-based modeling (SPGM). Specifically, to determine if there were groups of chronic radical authors or desisters whose 'radicals score' increased, decreased, or simply fluctuated each month that they posted anti-Semitic, anti-Black, or anti-LGBTQ messages in an online forum of the radical right, authors' posting behaviour was aggregated into fixed time intervals (i.e., months), starting from the first date that they posted messages about Jews, Blacks, or LGBTQs, up until the last date

³² This measure, unlike the three other measures, could not be aggregated into time intervals, as the SIRA interface has not yet reached this point of calculation.

that they posted those topic-specific messages. Three separate analyses were conducted, wherein SPGM was used to identify: (1) anti-Semitic radical posting trajectories; (2) anti-Black radical posting trajectories, and; (3) anti-LGBTQ radical posting trajectories.

Given the start date in which authors' radical trajectories were first accounted for and measured, it must be clarified that this study does not explore whether authors desist entirely from their anti-Semitic, anti-Black, or anti-LGBTQ posting behaviour on the extreme right-wing forum. Each author had their own unique starting date and as such, authors may have begun to post radical messages when the sample was first collected, and/or authors may still be posting radical messages outside of the parameters of this study (i.e., after the last time in which the data was captured with the web-crawler).

To identify group-level trajectory patterns for radical discussions, authors' *radical score* (dependent variable) was calculated for each month (independent variable) that they posted anti-Semitic, anti-Black, or anti-LGBTQ messages on the sub-forum. This was done for each of the three groups. Since the dependent variable, 'radical score', was on a continuous scale ranging from 0 to 40 points, this required that the models use a censored normal (CNORM) distribution.³³ Next, the optimal number of latent groups that best fit the data (model selection) was identified through an iterative process and relied on several indicators. First, the data was modeled using different numbers of groups, starting with the least complex model and extending to the more complex model. The Bayesian Information Criterion (BIC), which is widely recognized as one of the most reliable statistics available to determine model fit (Nagin, 2005; Nagin & Tremblay, 2001), was analyzed for each model. The BIC indicates whether the model most closely matches the data, wherein the closer the BIC is to zero indicates a better model fit (Nagin, 2005).³⁴

Second, to measure the likelihood that individuals with certain posting patterns were assigned to particular groups, the average posterior probabilities (AvePP) were calculated. AvePP

³³ Each trajectory is described as a latent variable (y_{it}^*) that represents the predicted score on a given dependent variable of interest (Y) for a given trajectory (j) at a specific time (t). For example, a one-group quadratic model would be expressed in the following function:

$$(y_{it}^*) = \beta_0 + \beta_1 X_{it}^2 + \varepsilon_{it},$$

where X_{it}^2 represents the independent variable (time) in a squared term (quadratic), ε_{it} is a disturbance term with a mean of zero and a constant standard deviation, β_0 is the intercept and β_1 is the quadratic slope for a specific trajectory (j).

³⁴ The BIC is expressed in the following form:

$$\text{BIC} = \log(L) - 0.5 * \log(n) * (k),$$

where L is the value of the model's maximized likelihood, n is the sample size, and k is the number of parameters (groups).

estimates average probability of all subjects being assigned to a specific group. Nagin (2005) suggests that the optimal value of the AvePP is 1.0, but an AvePP value of equal to or greater than 0.7 is acceptable.

Third, a more conservative test for model fit, the odds of correct classification (OCC), was assessed.³⁵ This measure indicates the accuracy of group assignment, and an OCC value of equal to or greater than 5 for all groups meets the threshold and suggests high accuracy (Nagin, 2005). Finally, the 95 percent confidence interval extension developed by Jones and Nagin (2007) was used to examine whether trajectories overlapped at any of the measurement points in each sample. The purpose of this was to assess whether each trajectory was distinct and differed from one another.

SPGM was conducted with a PROC TRAJ program in *Statistical Analysis Software (SAS)* 9.4, as it allows for missing data by simply ignoring the cases and not doing listwise deletion. This was an important factor in the analysis for two key reasons: (1) sentiment scores – and by extension, overall radical scores – were not assigned to every web-forum post or time point (described in Chapter 4.4.2), and (2) there were asymmetrical time gaps between users' posting behaviour on the sub-forum, and SPGM allowed for irregular spacing of measurements.

4.5. Results

Results were divided into four sections: a trajectory analysis of authors' group-level anti-Semitic, anti-Black, and anti-LGBTQ posting behaviour, followed by a comparison of these radical trajectories in the sample. Descriptive statistics were also provided, which summarized the basic features about the sample and measures.

4.5.1. Descriptive Information of the Sample

This sample included a total of 1,641 authors (23.39 percent) who made direct reference to Jews in the sub-forum between September 12, 2001 and October 12, 2016, followed by 1,584 authors (22.58 percent) who directly discussed Blacks and 911 authors (12.99 percent) who

³⁵ The OCC is expressed in the following form:

$$OCC_g = (AvePP_g / (1 - AvePP_g)) / (n_g / (1 - n_g))$$

where n_g is the estimated size of group g .

directly discussed LGBTQs. Further, authors' radical posting trajectories extended over a period of 171 months for their discussions about Blacks (171 months) in comparison to their radical posting trajectories for their discussions about Jews (163 months) or LGBTQs (158 months). The mean 'radical score' for discussions about LGBTQs was also higher than the radical score for discussions about Jews and Blacks, as is illustrated in Table 4.1.

Table 4.1. Descriptive information of the sample (n = 7,014)

	Sentiment about Jews	Sentiment about Blacks	Sentiment about LGBTQs
n (%)	1,641 (23.39)	1,584 (22.58)	911 (12.99)
Time points (months)	163	171	158
Mean radical score	7.28	7.70	8.76

The following is a detailed look at the iterative process involved in identifying stable trajectory groups for each of the three analyses. Model selection for each analysis relied on several indicators.

4.5.2. Anti-Semitic Posting Trajectories

A linear model for Trajectory 1 and a cubic model for Trajectory 2 resulted in a BIC value of -14,253.97. This two-group model was retained because the BIC value from this model was closer to zero than all other two-group models as well as the complex one-group cubic model (BIC = -14,525.11). Despite this strong model fit, a three-group and a four-group model, both of which were similarly complex to the two-group model and received the highest BIC value in their trajectory groups (i.e., all three-group and four-group models), maintained higher BIC values than the two-group model; a cubic model for Trajectories 1 and 3 and linear model for Trajectory 2 resulted in a BIC value of -14,169.39 and a four-group linear model resulted in a BIC value of -14,154.09. Although the BIC values indicated the four-group or the three-group model as having the best fits, a post hoc analysis was conducted, which also confirmed the stability of the two-group model.

First, the classification accuracy, which is based on the AvePP of accurately assigning individuals to each modelled trajectory, was very high (97.5 percent) and each group was above 95 percent. Second, a more conservative test for model fit, the OCC, indicated that the two trajectories were well above the threshold of 5 and that individual assignment to groups was accurate (Nagin, 2005) (see Table 4.2).

Table 4.2. BIC values for trajectory analysis of anti-Semitic posting behaviour (n = 1,641)

Number of groups	Polynomial functional form	BIC	AvePP	OCC
1	3	-14,525.11	-	-
2	1 3	-14,253.97	0.99, 0.96	98.94, 21.60
3	3 1 3	-14,169.39	0.87, 0.85, 0.91	6.50, 5.66, 8.99
4	1 1 1 1	-14,154.09	0.83, 0.83, 0.88, 0.99	3.98, 4.55, 7.03, 74.25

Note: BIC = Bayesian Information Criterion, AvePP = average posterior probabilities, OCC = odds of correct classification, polynomial functional form: 1 = linear, 2 = quadratic, 3 = cubic.

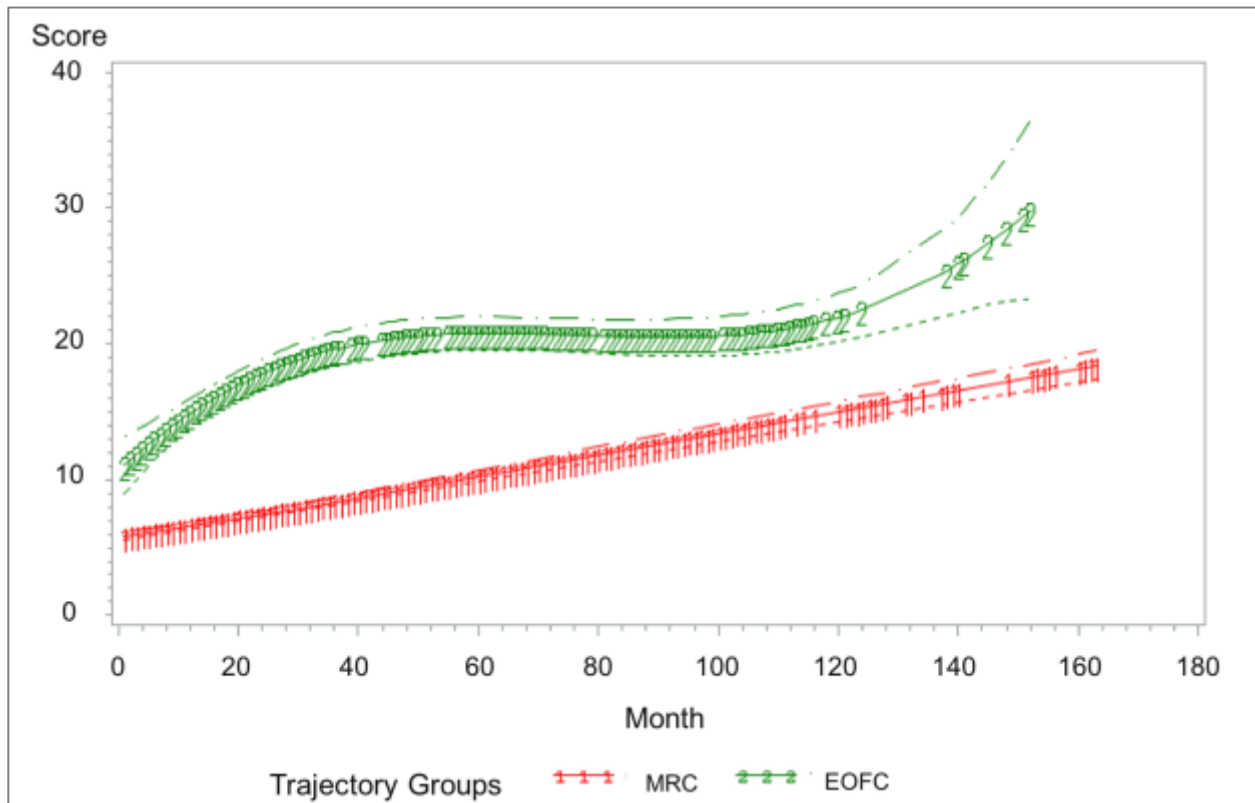
Third, the 95 percent confidence interval extension developed by Jones and Nagin (2007) revealed that the two trajectories did not overlap at any of the measurement points, and each of the trajectories were distinct and differed from one another. As a result, the linear model for Trajectory 1 and a cubic model for Trajectory 2 was retained as the final and most parsimonious model. The trajectory groups were the moderate rising chronic (MRC) (n = 1,631) and explosive-onset fluctuating chronic (EOFC) (n = 10). The characteristics of each trajectory are summarized in Table 4.3 and described below.

Table 4.3. Censored normal model with two trajectory groups for anti-Semitic posting behaviour (n = 1,641)

	Trajectories	
	MRC	EOFC
n (%)	1,631 (99.39)	10 (0.61)
<u>Estimated model parameters (SE)</u>		
Intercept	5.199 (.11)***	10.568 (.94)***
Linear	0.081 (.00)***	0.424 (.07)***
Quadratic	-	-0.006 (.00)***
Cubic	-	0.00002 (.00)***
<u>Model fit characteristics</u>		
Mean probability - MRC	0.99	0.01
Mean probability - EOFC	0.04	0.96
OCC	98.94	21.60

Note: MRC = moderate rising chronic, EOFC = explosive-onset fluctuating chronic, SE = standard error. * $p < .05$; ** $p < .01$; *** $p < .001$.
Sigma = 5.48, $p = .000$.

Moderate rising chronic. Moderate rising chronics (MRC) comprised of 99.39 percent of the sample (n = 1,631). For authors in this group, their anti-Semitic posting behaviour followed a linear trend, increasing at a moderate rate throughout the authors' entire measurable posting career; at the onset of the group's posting career, their radical scores were low ($\beta_0 = 5.199$, $p < .001$) relative to the other trajectory group in the sample, and for each month that this group posted anti-Semitic messages on the sub-forum (163 months, 13.58 years), their radical scores increased at a moderate and stable rate ($\beta_1 = 0.08$, $p < .001$) (see Figure 4.2).³⁶



Note: MRC = moderate rising chronic, EOFC = explosive-onset fluctuating chronic.

Figure 4.2. Anti-Semitic posting trajectories for the two-group model

Explosive-onset fluctuating chronic. Explosive-onset fluctuating chronics (EOFC) comprised of 0.61 percent of the sample (n = 10). For this group of authors, their anti-Semitic

³⁶ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 165.37 authors); month 20-39 (mean of 23.70 authors); month 40-59 (mean of 13.70 authors); month 60-79 (mean of 6.40 authors); month 80-99 (mean of 3.30 authors); month 100-119 (mean of 2.25 authors); month 120-139 (mean of 1.35 authors); month 140-159 (mean of 0.40 authors); month 160-163 (mean of 1.25 authors).

posting behaviour followed a cubic trajectory trend, wherein authors' posting behaviour underwent two directional changes across their measurable posting careers. At the onset of the group's posting career, their radical posting scores were high ($\beta_0 = 10.57, p < .001$) relative to the MRCs in the sample, and their radical posting scores increased at a high rate from month one until approximately month 40 (3.33 years), at which point their radical scores steadily decreased at a low rate until month 100 (8.33 years) and then increased at a high rate until month 152 (12.67 years) ($\beta_1 = 0.42, p < .001, \beta_2 = -0.006, p < .001, \beta_3 = 0.00002, p < .001$).³⁷

4.5.3. Anti-Black Posting Trajectories

A cubic model for Trajectory 1 and a quadratic model for Trajectory 2 resulted in a BIC value of -11,499.35. This two-group model was retained because the BIC value from this model was closer to zero than all other two-group models and the complex one-group cubic model (BIC = -11,614.79). However, a three-group and a four-group model, both of which were similarly complex to the two-group model and received the highest BIC values in their trajectory groups (i.e., all three-group and four-group models), maintained higher BIC values than the two-group model. Specifically, a linear model for Trajectories 1 and 3 and cubic model for Trajectory 2 resulted in a BIC value of -11,497.77, and a four-group linear model resulted in a BIC value of -11,498.53. While the BIC values indicated the three-group or a four-group model as having the best fits, post hoc analysis confirmed the stability of the two-group model (see Table 4.4).

First, the AvePP for the two-group model was very high (92 percent) and above 85 percent for both groups. Second, the OCC indicated that the two trajectories were well above the threshold of 5. Third, a calculation of the 95 percent confidence interval surrounding each trajectory in the two-group model indicated very little overlap across measurement points, which suggested that each trajectory was distinct from one another.

³⁷ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 7.53 authors); month 20-39 (mean of 3.25 authors); month 40-59 (mean of 1 author); month 60-79 (mean of 1.35 authors); month 80-99 (mean of 1.50 authors); month 100-119 (mean of 1.20 authors); month 120-139 (mean of 0.20 authors); month 140-159 (mean of 0.30 authors); month 160-163 (0 authors).

Table 4.4. BIC values for trajectory analysis of anti-Black posting behaviour (n = 1,584)

Number of groups	Polynomial functional form	BIC	AvePP	OCC
1	3	-11,614.79	-	-
2	3 2	-11,499.35	0.97, 0.87	32.31, 6.32
3	1 3 1	-11,497.77	0.85, 0.92, 0.87	5.33, 11.49, 6.27
4	1 1 1 1	-11,498.53	0.79, 0.86, 0.78, 0.74	3.54, 7.33, 2.92, 2.37

Note: BIC = Bayesian Information Criterion, AvePP = average posterior probabilities, OCC = odds of correct classification, polynomial functional form: 1 = linear, 2 = quadratic, 3 = cubic.

As a result, the cubic model for Trajectory 1 and a quadratic model for Trajectory 2 was retained as the final and most parsimonious model. Here the trajectory groups were the slow rising chronic (SRC) (n = 1,566) and high-onset moderate desister (HOMD) (n = 18). The characteristics of each trajectory are summarized in Table 4.5 and described below.

Table 4.5. Censored normal model with three trajectory groups for anti-Black posting behaviour (n = 1,584)

	Trajectories	
	SRC	HOMD
n (%)	1,566 (98.86)	18 (1.14)
<u>Estimated model parameters (SE)</u>		
Intercept	5.911 (.14)***	10.682 (.89)***
Linear	0.104 (.02)***	0.227 (.04)***
Quadratic	-0.001 (.00)**	-0.002 (.00)***
Cubic	0.00001 (.00)**	-
<u>Model fit characteristics</u>		
Mean probability - SRC	0.97	0.03
Mean probability - HOMD	0.13	0.87
OCC	32.31	6.32

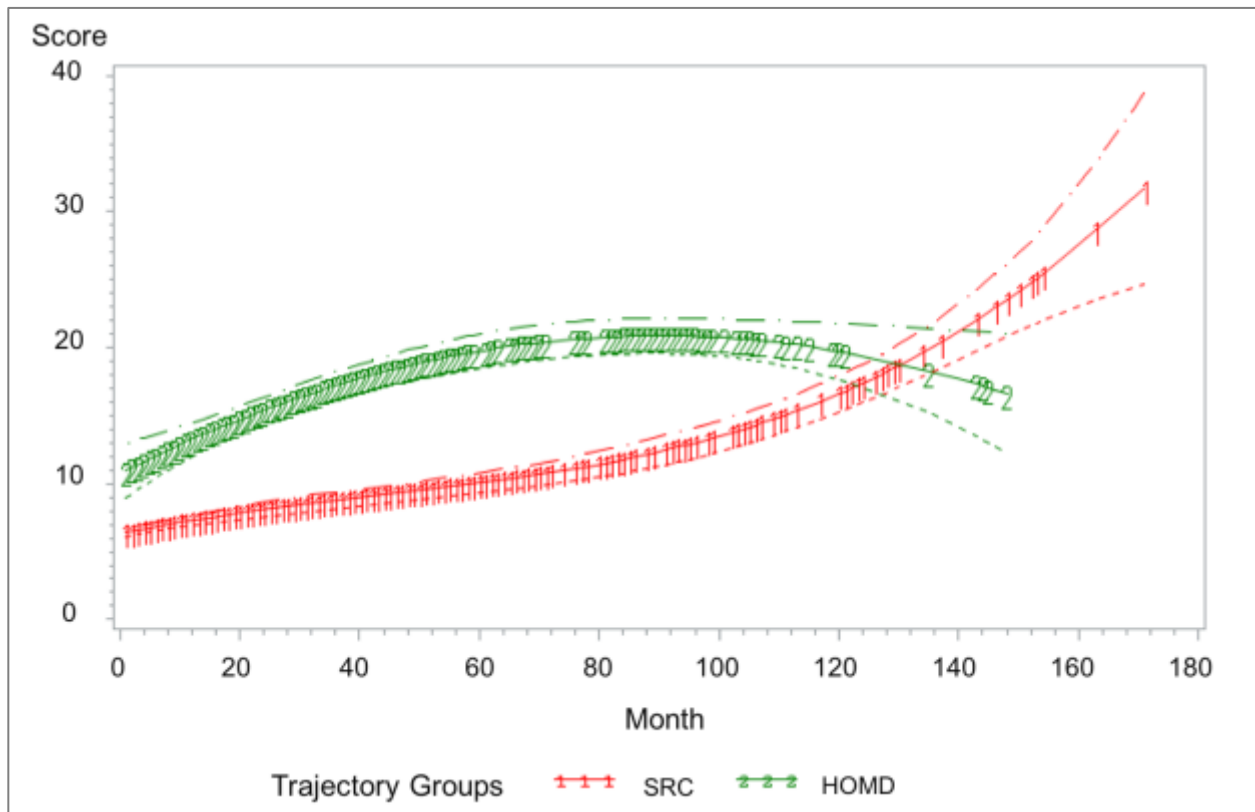
Note: SRC = slow rising chronic, HOMD = high-onset moderate desister, SE = standard error.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Sigma = 5.56, $p = .000$.

Slow rising chronic. Slow rising chronics (SRC) comprised of 98.86 percent of the sample (n = 1,566). For this group, their Anti-Black posting behaviour followed a cubic trajectory trend, whereby authors' posting behaviour underwent two directional changes across 171 months (14.25

years) in the sample (see Figure 4.3). Specifically, at the onset of the group’s posting career, their radical posting scores were low ($\beta_0 = 5.91, p < .001$) relative to the other trajectory group in the sample, but authors’ radical posting scores increased at a moderate rate until approximately month 30, at which point radical scores slowly decreased until approximately month 70 (5.83 years), then rapidly increased at a high rate for the remainder of time in the sample ($\beta_1 = 0.1, p < .001, \beta_2 = -0.001, p < .01, \beta_3 = 0.00001, p < .01$).³⁸



Note: SRC = slow rising chronic, HODM = high-onset moderate desister.

Figure 4.3. Anti-Black posting trajectories for the two-group model

High-onset moderate desister. High-onset moderate desisters (HODM) comprised of 1.14 percent of the sample (n = 18). For the authors in this group, their anti-Black posting behaviour followed a quadratic trend in which authors’ posting behaviour underwent one directional changes across 148 months (12.33 years) in the sample. Specifically, at the onset of the group’s posting

³⁸ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 139.05 authors); month 20-39 (mean of 17.25 authors); month 40-59 (mean of 9.00 authors); month 60-79 (mean of 4.70 authors); month 80-99 (mean of 2.15 authors); month 100-119 (mean of 1.15 authors); month 120-139 (mean of 0.75 authors); month 140-159 (mean of 0.35 authors); month 160-171 (mean of 0.17 authors).

career, their radical posting scores were high ($\beta_0 = 10.68$, $p < .001$) relative to the SRCs in the sample, and authors' radical posting scores increased at a high rate until approximately month 80 (6.67 years), at which point radical scores desisted at a moderate rate until approximately month 148 (12.33 years) ($\beta_1 = 0.23$, $p < .001$, $\beta_2 = -0.002$, $p < .001$).³⁹

4.5.4. Anti-LGBTQ Posting Trajectories

A linear model for Trajectory 1 and quadric model for Trajectory 2 resulted in a BIC value of -7,180.28. This model was retained because its BIC value was closer to zero when compared to: (1) the complex one-group quadratic model (BIC = -7,292.94); (2) all other two-group models, and; (3) the three-group model with the highest BIC value – i.e., a linear model for Trajectories 1 and 2 and a quadratic model for Trajectory 3 (BIC = -7,185.75). While the BIC value indicated the two-group model as having the best fit, post hoc analyses was conducted on the trajectories, which also confirmed the stability of the two groups (see Table 4.6).

Table 4.6. BIC Values for trajectory analysis of anti-LGBTQ posting behaviour (n = 1,584)

Number of groups	Polynomial functional form	BIC	AvePP	OCC
1	2	-7,292.94	-	-
2	1 2	-7,180.28	0.98, 0.86	48.95, 5.38
3	1 1 2	-7,185.75	0.67, 0.84, 0.86	1.69, 5.24, 5.38

Note: BIC = Bayesian Information Criterion, AvePP = average posterior probabilities, OCC = odds of correct classification, polynomial functional form: 1 = linear, 2 = quadratic, 3 = cubic.

First, the AvePP for the two-group model was very high (92 percent) and above 85 percent for both groups. Second, the OCC indicated that the two trajectories were well above the threshold of 5. Third, a calculation of the 95 percent confidence interval surrounding each trajectory in the two-group model indicated very little overlap across measurement points, which also suggested that each trajectory was distinct from one another. As a result, the linear model for Trajectory 1 and quadric model for Trajectory 2 was retained as the final and most parsimonious model. The trajectory groups were the fast rising chronic (FRC) (n = 903) and explosive-onset moderate

³⁹ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 7.11 authors); month 20-39 (mean of 2.10 authors); month 40-59 (mean of 1.65 authors); month 60-79 (mean of 0.90 authors); month 80-99 (mean of 1.40 authors); month 100-119 (mean of 0.70 authors); month 120-139 (mean of 0.15 authors); month 140-159 (mean of 0.20 authors); month 160-171 (0 authors).

desister (EOMD) (n = 8). The characteristics of each trajectory are summarized in Table 4.7 and described below.

Table 4.7. Censored normal model with two trajectory groups for anti-LGBTQ posting behaviour (n = 911)

	Trajectories	
	FRC	EOMD
n (%)	903 (99.12)	8 (0.88)
<u>Estimated model parameters (SE)</u>		
Intercept	6.077 (.16)***	11.456 (.98)***
Linear	0.118 (.01)***	0.347 (.04)***
Quadratic	-	-0.002 (.00)***
<u>Model fit characteristics</u>		
Mean probability - FRC	0.98	0.02
Mean probability - EOMD	0.14	0.86
OCC	48.95	5.38

Note: FRC = fast rising chronic, EOMD = explosive-onset moderate desister, SE = standard error.

* $p < .05$; ** $p < .01$; *** $p < .001$.

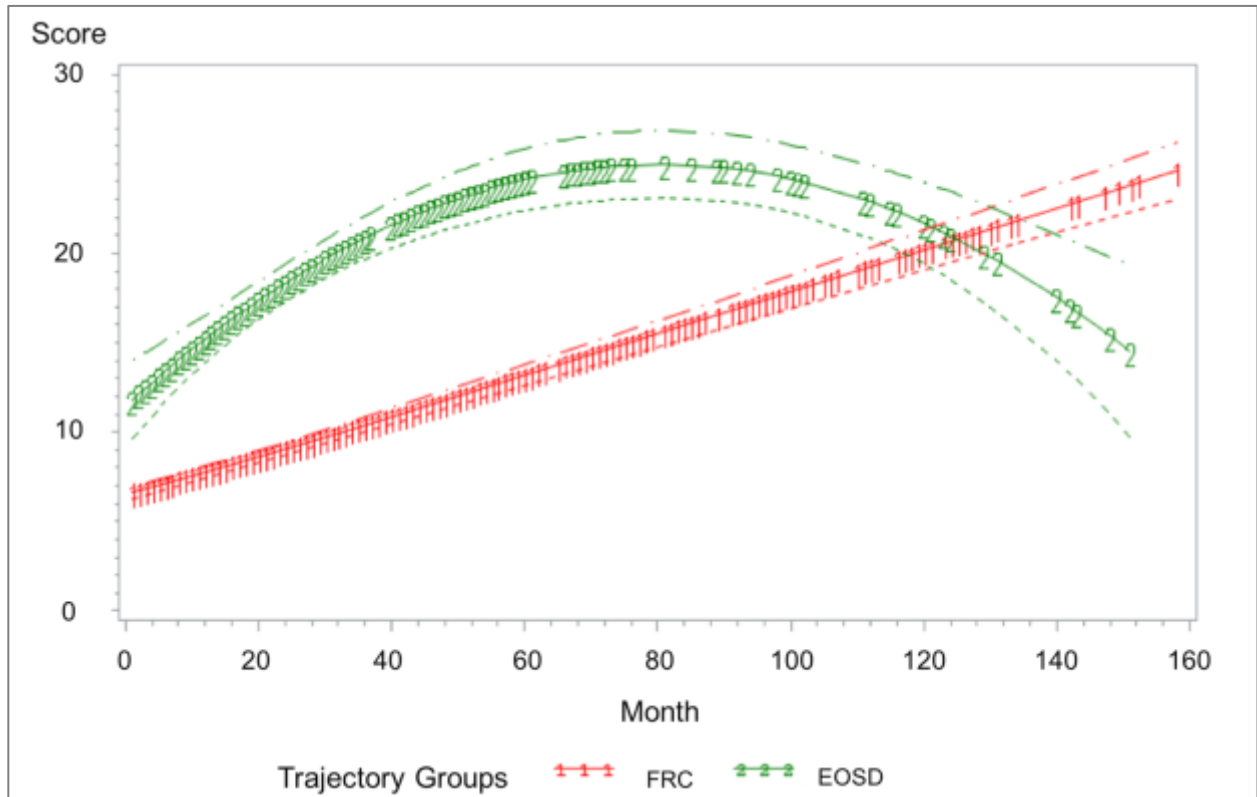
Sigma = 5.6, $p = .000$.

Fast rising chronic. Fast rising chronics (FRC) comprised of 99.12 percent of the sample (n = 903). For this group, their radical posting behaviour followed a linear trajectory that increased at a high rate, starting from the first month that they posted anti-LGBTQ messages in the sample and throughout their measureable posting careers. In particular, at the onset of the group's posting career, their radical posting scores were low ($\beta_0 = 6.07$, $p < .001$) in comparison with the other trajectory group in the sample. However, each month that FRCs posted anti-LGBTQ messages in the sample, their associated radical scores increased at a high and steady rate ($\beta_1 = 0.12$, $p < .001$) over an extensive amount of time (158 months).⁴⁰

Explosive-onset moderate desister. Explosive-onset moderate desisters (EOMD) comprised of 0.88 percent of the sample (n = 8). The posting trajectory of this group followed a quadratic trend line, one which increased at a high rate from the first month that they posted anti-LGBTQ messages in the sample until approximately half-way through their measurable posting

⁴⁰ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 82.79 authors); month 20-39 (mean of 12.60 authors); month 40-59 (mean of 3.80 authors); month 60-79 (mean of 2.85 authors); month 80-99 (mean of 2.15 authors); month 100-119 (mean of 1.35 authors); month 120-139 (mean of 1.05 authors); month 140-158 (mean of 0.37 authors).

career when their discussions began to desist at a moderate rate (see Figure 4.4). More specifically, at the onset of the group’s posting career, their radical posting scores were high ($\beta_0 = 11.46, p < .001$) relative to the FRCs in the sample, and their radical posting scores increased at a high rate from month one until approximately month 80 (6.67 years) and then moderately decreased until month 151, the last point in which the data was measured (12.58 years) ($\beta_1 = 0.35, p < .001, \beta_2 = -0.002, p < .001$).⁴¹



Note: FRC = fast rising chronic, EMD = explosive-onset moderate desister.

Figure 4.4. Anti-LGBTQ posting trajectories for the two-group model

4.5.5. Comparison of Radical Trajectories

Comparing the chronic radical authors and the radical desisters within and across the three analyses, several temporal patterns emerged in the sample. First is the most obvious: authors who posted anti-Semitic content, unlike those who posted anti-Black or anti-LGBTQ

⁴¹ The number of authors whose radical posting behaviour made up this trajectory decreased over time: month 1-19 (mean of 4.37 authors); month 20-39 (mean of 2.10 authors); month 40-59 (mean of 1 author); month 60-79 (mean of 0.62 authors); month 80-99 (mean of 0.33 authors); month 100-119 (mean of 0.33 authors); month 120-139 (mean of 0.29 authors); month 140-158 (mean of 0.25 authors).

content, did not have a desister group. Rather, authors who posted anti-Semitic messages in the sample persisted in their radical posting activity, with the moderate rising chronic (MRC) group and a group of explosive-onset fluctuating chronics (EOFC). Notwithstanding the latter chronic group, a second pattern emerged in the data: at the onset of the chronic author's posting careers, their average radical posting scores were comparably low to each other (average of 6.93 points), which were much lower than the onset radical scores in the desister groups (average of 11.07 points). However, temporal analysis revealed that the radical posting trajectories of the chronic authors increased at a steady rate and over a considerable amount of time, with an average of 161 months (13.42 years) of radical posting behaviour across each of the three radical posting discussions. On the other hand, the radical posting behaviour of the desisters tended to be less stable, wherein desisters were explosive at the onset of their posting careers, but their radical posting scores began to desist at the half-way point of their posting careers in the sample.

Third, chronic posting behaviour made up the vast majority of radical posting behaviour in the sample; an average of 99.33 percent of authors were assigned to a chronic group across the three analyses, while a mere 0.67 percent of authors were assigned to the explosive desister groups. Particularly interesting about these small groups are the authors who make up these explosive trajectories. Roughly one fourth of each of the posters in these small groups were those who were identified in study one of this dissertation as the most radical authors in the sample. These authors include *Axis*, *Teller*, *Sully*, *H_rixx*, and *Derger*, each of which were identified as the most prominent and radical posters (see Chapter 2.6).

Fourth, inter-group comparisons of the chronic authors revealed that the radical trajectories of those who posted anti-LGBTQ messages increased at the fastest rate from the onset of their posting careers, while those who posted anti-Black messages increased at the slowest rate in the sample. Also worth noting is that the radical trajectories of those chronic authors who posted anti-Black messages peaked at a radical score of 25 points and over the longest period (171 months), while the radical score of those chronic authors who posted anti-LGBTQ messages also peaked at 25 points but over the shortest period (158 months). This is a symptom of the polynomial function for each; anti-LGBTQ sentiment followed a linear trajectory while anti-Black sentiment followed a cubic trajectory, wherein the trajectory of latter changed its direction at two time points but still increased to a comparable radical score as the anti-LGBTQ discussions. For chronic authors who posted anti-Semitic messages in the sample, the moderate rising chronic (MRC) group peaked at a radical score of 27 points at month 163, while explosive-

onset fluctuating chronics (EOFC) peaked at the radical score of 27 points at month 152. Inter-group comparisons of the desister groups also revealed that authors in these anti-Black and anti-LGBTQ trajectories peaked at similarly high radical points (21 and 25 points, respectively) and they also desisted from their radical posting behaviour at similar time points (approximately 80 months, 6.67 years).

Lastly, looking at the average number of authors whose posting behaviour fell with the trajectory at specific time points (20 month intervals) across chronic and desister groups was a general decrease in the number of authors in each trajectory through time. In other words, authors tended to tail out of their radical posting behaviour after the first 19 months of anti-Semitic, anti-Black, and/or anti-LGBTQ discourse in the sample. Yet over time, a higher volume of authors followed an anti-Semitic posting trajectory than those who followed an anti-Black or anti-LGBTQ posting trajectory (see Table 4.8).

Table 4.8. Average number of authors per radical trajectory at set time points (n = 4,136)

	Anti-Semitic posting behaviour		Anti-Black posting behaviour		Anti-LGBTQ posting behaviour	
	MRC	EOFC	SRC	HOMD	FRC	EOMD
n (%)	1,631 (99.39)	10 (0.61)	1,566 (98.86)	18 (1.14)	903 (99.12)	8 (0.88)
<u>Month</u>						
1-19	165.37	7.53	139.05	7.11	82.79	4.37
20-39	23.70	3.25	17.25	2.10	12.60	2.10
40-59	13.70	1.00	9.00	1.65	3.80	1.00
60-79	6.40	1.35	4.70	0.90	2.85	0.62
80-99	3.30	1.50	2.15	1.40	2.15	0.33
100-119	2.25	1.20	1.15	0.70	1.35	0.33
120-139	1.35	0.20	0.75	0.15	1.05	0.29
140-159	0.40	0.30	0.35	0.20	0.37	0.25
160+	1.25	0	0.17	0	0	0

Note: MRC = moderate rising chronic, EOFC = explosive-onset fluctuating chronic, SRC = slow rising chronic, HOMD = high-onset moderate desister, FRC = fast rising chronic, EOMD = explosive-onset moderate desister.

4.6. Discussion and Conclusion

Members of the radical right, amongst other extremists, have been exploiting the power of the Internet since its mainstream inception in the mid 1990's, connecting with other like-minded others across the globe and insulating themselves in spaces that foster hatred (Back, 2002; Hale, 2010; Futrell & Simi, 2004). Researchers have explored – at great lengths – these radical spaces and communication patterns in which radical ideas are maintained, yet what has been overlooked in this growing body of knowledge has been a temporal analysis of authors' posting behaviors in these echo chambers of hate. The purpose of this study was to provide a group-level understanding of forum users' radical discussions that may shape the collective identity of a radical right-wing community, exposing which adversary groups (Jews, Blacks, or LGBTQs) garner the most radical sentiment over time. This was done with the use of a sentiment-based algorithm that incorporated traditional criminal career measures (frequency, seriousness, and duration of activity). Semi-parametric group based-modeling (SPGM) was then used to measure how authors' radical scores changed on the sub-forum and to identify associated trajectory groups that developed over a substantial period. Several conclusions can be drawn from this exploratory study.

First, most authors in the sample follow a low-level chronic posting trajectory, meaning that at the onset of their posting careers, they post anti-Semitic, anti-Black, and anti-LGBTQ messages that received a low radical score, but their radical posting trajectories increase at a steady rate and over a considerable amount of time. This finding largely confirms previous studies that conceptualize radical online spaces as those that polarize members' opinions over time (e.g., Bowman-Grieve, 2009; Caiani & Kröll, 2014; Futrell & Simi, 2004; Wojcieszak, 2010). In other words, increased participation in a radical right-wing discussions forum does further polarize authors' opinions. However, this may be a symptom of the forum and/or the discussions that were assessed for the current study, as it is reasonable to assume that authors who post messages about Jews, Blacks, and/or LGBTQs in a right-wing extremist forum have a vested interest in participating in radical discourse. Perhaps it is the radical topics themselves that encourage authors to engage in fanatical discussions over a long period of time. Yet a finer-grain analysis reveals that the rate at which the radical sentiment increases online is dependent on the adversary group being targeted. To illustrate, radical scores associated with anti-LGBTQ sentiment increase at the fastest rate, while anti-Black discussions increases at the slowest rate, and anti-Semitic discussions – although the most radical in general – increase at a moderate rate. Certainly, these

radical trajectories are a sign of the times. The LGBTQ movement made significant strides in their effort to claim equal rights as Canadian citizens. Same-sex marriage became legal in eight of ten Canadian provinces and one of three territories in 2003 (Rau, 2015). Two years later, Canada legalized same-sex marriage across the country with the introduction of the Civil Marriage Act in 2005 (Government of Canada, 2017). 'Sexual orientation' was included into Canada's federal hate crimes legislation in 2004, which aimed at protecting gays and lesbians from bias-motivated (Parliament of Canada, 2004). During this time, Canadians were standing up for gay rights, from employment and housing to public and private accommodation and since then, Canada has been called one of the most gay-friendly countries in the world. However, there was a lot of pushback from members of the extreme right, both in Canada (Perry & Scrivens, 2015) and around the world more generally (Daniels, 2009). This pushback is also apparent in the online discussions found on *Stormfront Canada*.

Second, most authors in the right-wing extremist forum tail out of their radical posting behaviour within their first two years of participation. This is the case across all discussions (anti-Semitic, anti-Black, and anti-LGBTQ), but authors tail out of their anti-Semitic discussions at the slowest rate. Similarly, authors who post anti-Semitic content, unlike those who post anti-Black or anti-LGBTQ content, do not have a desister group. Rather, authors who post anti-Semitic messages persist in their radical posting activity. This may be a symptom of the white power ideology itself, one which is largely based on "exposing" the Jewish population for who they are: a powerful network of individuals who are conspiring to extinguish the White race from existence (Back, 2002; Berger, 2016; Daniels, 2009; Hamm, 1993; Perry, 2001; Simi & Futrell, 2015). The sentiment about Jews does not desist in *Stormfront Canada*, which is also a common theme that has been expressed in previous studies (Back, 2002; Bowman-Grieve, 2009; Hale, 2010).

On the other hand, a very small group of authors, the radical desisters, were uncovered in *Stormfront Canada* who are explosive at the onset of their posting careers as they discuss Blacks and LGBTQs, but tend to "cool off" at the half-way point of their posting careers. As noted previously, this group makes up a very small proportion of the authors' radical posting behaviour over time, but a large percentage of these explosive authors are in fact the most radical and prominent authors uncovered in study one of this dissertation. Authors included *Axis*, *Teller*, *Sully*, *H_rixx*, and *Derger*, each of whom were high-volume, intense and long-duration posters who very active in the online community, and they too may have had an influential on the conversations over time. Implications of this study and its limitations will be addressed in Chapter 5.

Chapter 5.

Conclusion

5.1. Understanding Radical Posting Behaviour in a Right-Wing Extremist Forum

Research has highlighted the extent to which members of the radical right, amongst other members of radical communities, have exploited the Internet to connect with other like-minded others to air out their grievances about who they perceive as the threat: non-Whites in general, and minority groups in particular – Jews, Blacks, and LGBTQs at the forefront of their radical discussions (Daniels, 2009; Hale, 2010; Meddaugh & Kay, 2009). Scholarship has also shown us the extent to which these radical authors build a collective identity through “othering” their adversary groups, both on- and offline. Yet scholars have relied on qualitative analyses to draw conclusions about the “us” versus “them” discourse that unfolds in extreme right online communities (e.g., Bowman-Grieve, 2009; Futrell & Simi, 2004; Perry & Scrivens, 2016a), largely overlooking what may shape the collective identity of this radical community on a large-scale by using a mixed-methods approach. This is an important oversight, as very little is known about the “us” versus “them” dynamics that develops in radical online spaces from a macro-perspective. Much can be learned about radical right-wing identity by quantifying and qualifying the extent to which radical authors “other” their adversary groups in an echo-chamber of hate. The purpose of this dissertation was to begin to address this gap.

Drawing from traditional criminal career measures to further our understanding of radical posting behaviour online, several insightful conclusions can be taken from the three dissertation studies. Centered in this research were three core questions: (1) What is deemed ‘radical’ posting behaviour in an online community of the radical right? (2) What are the ways in which authors in an online community of the radical right “other” Jews, Blacks, and LGBTQs through their online posting behaviour? (3) How do anti-Semitic, anti-Black, and anti-LGBTQ posting behaviours change over time in an online community of the radical right? These questions were addressed by using a sentiment analysis-based algorithm that was used to measure authors’ opinions about adversary groups and their subsequent posting behaviours, followed by an in-depth analysis of radical posting behaviours from a micro- and macro-perspective. This dissertation was grounded

in social movement and communications literature and was executed with criminal career measures. To the best of my knowledge, this study is the first to investigate radical posting behaviour in a right-wing extremist forum using a large-scale and empirically-driven approach. Several broad conclusions can be drawn from this exploratory work.

Anti-Semitic “othering”. This dissertation largely confirms previous research on extreme right-wing ideology that shapes their collective identity: it is centered on anti-Semitic rhetoric. Overwhelmingly, the majority of the radical conversations across all studies were targeting the Jewish population. In brief, Jews were discussed at the highest rate in the online community; the most radical authors were fixated on anti-Semitic conspiracies; the most negative discussions were typically calls for action against Jews, and; over time anti-Semitic posting activity was the most radical. Collectively, results indicate that authors in an online community were uniting around a common grievance, which is corroborated by previous research that suggests that right-wing extremists tend to bond over a commonly perceived “White struggle” against “the conspiring Jews.” Historically, much of the white power ideology that has shaped the collective identity of the radical right is built on a simple notion that Jews are “the source of all evil”, plotting to extinguish the White race by breeding them out of existence (Daniels, 2009; Ezekiel, 1995; Simi & Futrell, 2015). Jews are also the so-called “primary oppressors” of the White race, according to Aryan folklore, and this brand of discourse tends to dictate much of the discussions online, particularly in spaces such as *Stormfront* (Bowman-Grieve, 2009; Hale, 2010; Meddaugh & Kay, 2009). This study largely confirms previous research that reported high volumes of anti-Semitic discourse in online communities of the extreme right (e.g., Adams & Roscigno, 2005; Back, 2002; Bowman-Grieve, 2009; Duffy, 2003; Hale, 2010; Meddaugh & Kay, 2009; Thompson, 2001).

Prominent radical authors. A number of radical posting behaviours were uncovered that are prominent in the online community of the extreme right: high-intensity, high-frequency, and high-duration chronic posting behaviour. Authors’ posting patterns that made up these radical posting behaviours expressed several key communication and linguistic traits that experts would characterize as influential. For instance, authors’ messages were powerful, clearly written, emotional, derogatory and antagonistic (Ng & Bradac; Hamilton & Hunter, 1998). This type of discourse, although varying in degree (i.e., level of power), were posted at a high volume, and over an extensive period, targeting who they perceived as “the threat.” Messages also promoted community building, typically by creating ‘in-groups’ (White Nationalists) and ‘out-groups’ (non-

supporters and non-Whites), a communication characteristic that exerts a high level of influence in certain settings (Joyce & Kraut, 2006; Koh et al. 2007).

Particularly noteworthy is that although these various posting patterns most likely contributed to the broader identity that formed online, it was a small group of authors who propelled the discussions. In other words, a small group authors posted a large proportion of the radical content online, many of which were overlay radical posters (i.e., high-intensity, high-frequency, and high-duration posters). Arguably, they are influential in the discussion forum, and an in-depth look at each of them lent support for this finding. *Axis*, for example, was the most intense and prolific radical author found in study one, and he was also one of the top long-term radical authors. Interestingly, *Axis* participated in online discussions with his legal name, thus revealing his identity: he is Canada's core right-wing leader and one of Canada's most well-known White Nationalist activists. Currently leader of the *Canadian Association for Free Expression* (CAFE) and *Citizens for Foreign Aid Reform* (CFAR), *Axis* is notoriously known for adding fuel to the fire, speaking at white power rallies and making guest appearances at various white power events across Canada (Barrett, 1987; Kinsella, 2001; Perry & Scrivens, 2015). He also hosts his own radio show on *Stormfront*,⁴² and he too goes by the name *Teller*, who was also one of the most radical authors found in study one. Similarly, another one of the most radical and prominent authors, *Pinto*, is also a well-known right-wing extremist in Canada. To illustrate, *Pinto* was allegedly a member of the now-defunct *Aryan Guard*, a neo-Nazi group based out of Calgary, Alberta, but he is better known for facing charges of 'wilful promotion of hatred', the result of his material posted on his website (www.exterminance.org) and similar white power sites. In 2008, *Pinto* was sentenced to four months in prison, three years of probation, and his computer was seized and destroyed by the Crown (Perry & Scrivens, 2015). Comparable to *Pinto* is *Iris*, another one of the most radical authors found in study one. He is also a well-known figure in the Canadian right-wing extremist movement. For example, he was member of *Combat 18*, a violent neo-Nazi skinhead gang (Anti-Racist Canada, 2008), and he was also a leading member of the now-defunct *Western Canada for Us*, a neo-Nazi group based in Alberta. *Iris* is best known for his involvement in a human rights complaint case, in which human right's lawyer Richard Warman filed a human rights complaint against *Pinto* for posting threatening material on *Stormfront* (Butler, 2008).

Overall, it is reasonable to assume that these authors have some influence on the discussions that transpire on *Stormfront Canada*, as it appears that they have developed a level

⁴² See: <https://www.stormfront.org/forum/t295419>

of trust with members of the extreme right-wing community, both on- and offline. These are but a small handful of examples of the most radical authors in the dissertation that are known right-wing extremists in Canada.

Offline events that shape online discourse: For all three dissertation studies, the sample data was from 2001 to 2016, a period in which the world and Canada experienced significant social, cultural, and political change. A key change in Canada – and in many parts of the world – was the rise of the LGBTQ movement. During the early 2000s and onward, Canada became known, on a global scale, for being a tolerant and multicultural nation, inclusive of all races, religions, ethnicity, gender, and sexual orientations, to name a few. This was a time in which the Canadian LGBTQ movement made significant strides, with same-sex marriage becoming legal across the country (Government of Canada, 2017), the introduction of laws and policies that would ban the discrimination of LGBTQs in employment settings, and ‘sexual orientation’ added to hate crimes legislation (Parliament of Canada, 2004). Right-wing extremists, a movement who fiercely oppose any type of non-heterosexual relations, pushed back in Canada (see Perry & Scrivens, 2015). This too was the case in their online discussions on *Stormfront Canada*. Specifically, this dissertation revealed that although LGBTQs were not discussed at the highest volume or at the highest frequency of negativity as were Jews or Blacks in the online community, the anti-LGBTQ conversation were by far the most negative and authors who engaged in such “othering” discourse did so over an extensive period. The radical discussions associated with this adversary group also increased at the fastest rate over time, and authors were bonding over a common disdain for the gay rights movement – particularly around the introduction of ‘sexual orientation’ in hate crime legislation. Certainly, these findings are a mere reflect of key events that transpired offline. Research has shown us that members of the radical right, as well as radical individuals more broadly, respond to offline events and build a sense of unity and collective identity around their perceived grievances (Caiani & Parenti, 2013; De Koster & Houtman, 2008; Schafer, 2002; Simi & Futrell, 2015; Thompson, 2001; Wojcieszak, 2010). This is largely confirmed in this dissertation, as the gay rights movement had a noticeable influence in the posting behaviour of the authors on *Stormfront Canada*. Authors built their community on a common hatred for any relationship that was not a heterosexual relationship.

5.2. Limitation and Future Research

This dissertation represents a first step in understanding the radical posting behaviours that may contribute to the collective identity of the extreme right online using a large-scale and empirically-driven approach. As a result, each study is not without limitations. The following is a detailed look of the limitations and ways to move ahead.

Sub-forum data. The sample was limited to one national sub-forum (*Stormfront Canada*) of a broader forum of the radical right (*Stormfront*). Although the sample was sizeable (141,763 posts by 7,014 authors over 15 years), an obvious concern with this single sub-forum approach – aside from the fact that the discussions were, to a great extent, uniquely Canadian – was that the activity of the authors in the sample was assessed in one part of a larger online space. As a result, I could not assess whether author' posting behaviour was unique to *Stormfront Canada* or whether they too were radical in other sub-forums within the broader forum. Future work should account for this concern by evaluating authors' posting activity across the entire forum. Doing so will provide a stronger methodological foundation with which to analyze the data.

Number of adversary groups and lists of keywords. An obvious limitation with this dissertation is the number of adversary groups that were assessed and the number of keywords that were used to do so. For the latter, while the keyword lists were developed in a systematic and meaningful way, the number of words that were used in each study was relatively small. Future research should include more intuitive ways of constructing large sets of keywords, as doing would capture a larger group of radical authors in the sample. In addition, other adversary groups should be included into the study, as this could provide more insight into how member of the radical right target certain community groups as well as a more in-depth understanding of how the radical right create an online identity.

Control group. The incorporation of a control group may offer a more nuanced understanding of what constitutes radical posting behaviour in an online community. A control group may consist of a random sample of authors who are drawn across various sub-forums of the broader *Stormfront* forum. This approach may help us understand whether the radical posting behaviour found in the *Stormfront Canada* sample is unique to the data, or whether the radical posting behaviours may be explained across the larger forum. Another control group could include those who discuss Indigenous communities, East Indians, Muslims (Sunni or Shia), or Chinese,

for example. This would provide us with more insight into whether radical posting behaviours reflect the group in which they are targeting.

Long-term and short-term radical posters. This dissertation was concerned with identifying and describing chronic posters whose posting content was radical over a relatively long period of time on right-wing extremist forum. What was intentionally overlooked during this endeavour was the posting activities of the short-term posters. These forum users do exist in the data, and future work should develop techniques to identify them. One way to do this would be to calibrate the SIRA algorithm so that the 'duration of negative posts' component would be assigned with a negative weighting rather than a positive weighting. This, in turn, would penalize authors' overall radical score if they were long-term radical posters. However, this calibration must be meaningful. We cannot arbitrarily select a negative value to assign to the duration measure. Future research should consider a systematic way to address this important oversight, perhaps with cluster analysis or factor analysis.

Social network analysis of radical posters. The inclusion of a social network perspective would provide more insight into the posting behaviours of the authors in the sample. For example, calculating the in-degree centralization of the most radical authors in the sample would provide a better understanding of the most influential authors in the sample. A social network perspective would be helpful in addressing a key concern with this dissertation: only authors who used the specific set of keywords were those who were assessed. For example, if Author A posted the message "Let's go dancing at that darkie club tonight" and the word 'darkie' was in the keyword list, then Author A's message would be scored with a sentiment value. If Author B responded to Author A's message by saying "You're an idiot. That place is full of filthy criminals!", then this message would not be included in the analysis because Author B did not post with one of the select keywords. Clearly Author B's message is worth investigating, and a social network analysis could capture this message by identifying all of Author A's incoming messages that were associated with that initial message about the 'darkie club', as an example. Future studies should pursue this avenue, perhaps including a social network metric into the sentiment-based algorithm.

Sentiment analysis. *SentiStrength*, like every sentiment analysis programs – or human-developed program for that matter – does not have a classification accuracy of 100 percent. A qualitative analysis in study one of this dissertation lent support for this concern, wherein a moderate proportion of the messages were scored as negative when in fact they were positive, or vice versa (false positives and false negatives). Furthermore, an assessment of the least

radical authors in the sample revealed that a large proportion of their messages that were scored as 'neutral' were in fact not neutral – many of these posts contained negative sentiment. Moving ahead, then, if one is to continue with this type of analysis (using similar words as those in this dissertation), the application of word frequencies or advanced programs such as Linguistic Inquiry and Word Count (LIWC) would be a more effective way of analyzing the posting patterns of authors online. The fact that individuals post messages on a radical right-wing discussion forum that include the use of derogatory words (about their adversaries) suggests that the sentiment is most likely not positive. I would argue that within this radical online space, most if not all discussions that relate to adversary groups should be treated as negative. On the other hand, if one is to continue with *SentiStrength* or other similar sentiment analysis software, a way to address the above concern is to adjust some of the values in the Harvard dictionary list of keywords that *SentiStrength* draws from when making its determination of an authors' opinion. To illustrate, a few simple adjustments could be made to the word list/dictionary, which would serve as a customized list (i.e., "the othering" list). Keywords such as 'Blacks', 'Jews', 'gays', etc. could be assigned with negative values rather than that standard positive values (e.g., -1 instead of +1). This would account for more of the context in which the authors are posting messages about their adversary groups.

Measure for very negative messages. While the construction of the 'very negative messages' metric was a rather unique way of measuring authors' level of severity or seriousness online, a qualitative analysis revealed one concern that can best be illustrated with an example: researcher A generates a keyword list and then all forum messages are scored with a sentiment value for those keywords. Researcher A calculates the 'very negative posting' cut-point, and in turn messages with a sentiment score of less than -17 are deemed 'very negative' and messages that are -16.99 or higher are deemed 'negative.' The researcher then conducts a manual analysis on the messages that have a sentiment scores of -17 (very negative) and compares them to the messages with a sentiment score of -16.99 (negative), at which point the researcher finds it challenging to a make clear distinction between the content found in each. In other words, some of the messages that sit close to the very negative cut-point (-17) verge into the grey area of what is deemed 'negative' versus what is deemed 'very negative'. Moving ahead, this measure should be re-evaluated.

Disaggregating the 'radical score' for the trajectory analysis. For study three, the overall 'radical score' (volume of negative and very negative messages, duration of negative messages,

and average sentiment score for all messages) could have been disaggregated – that is, rather than treating the ‘radical score’ as the dependent variable in the trajectory analysis, the dependent variable could have been broken down into a simpler measure. The dependent variable, for example, could have been the number of negative messages, leaving the other three variables as risk factor variables. Doing so may have provided a finer-grain understanding of authors’ radical posting behaviours across time.

Offline events that influence online posting behaviour. Future research should explore why authors’ sentiment changes throughout the posting career, identifying offline events that influence their online discussions. This is an important next step in this project, given that the results suggest that online conversations are impacted by offline events.

Unpacking the collective identity of the radical right. There are various ways that we can assess how members of the radical construct their collective identity with the use of similar research techniques that were employed in this dissertation. While I would argue that a key starting place for this is by measuring how adherents target their traditional adversary groups, future research should explore other topics of discussion that contribute to how adherents frame their identity, such as discussions about white power heroes and martyrs, white power groups, Aryan folklores, family, and music. In many respects, this study treated the collective identity of the radical right as a single entity, but there are indeed various sects of white power identity, both of which may be time specific and/or geographically bond. Future research should explore the various ideologies within the right-wing extremist movement.

5.3. Policy Implications

Uncovering the pathways of an individuals’ radicalization process, or detecting virtual indicators that may prevent future terrorist attacks, continues to sit at the top of the priority list for counter-extremist agencies worldwide (Brynielsson et al., 2013; Cohen et al., 2014; Johansson et al., 2016). In a digital environment in which law enforcement agencies are increasingly searching for ways to uncover traces of violent extremism or information regarding radicalization processes (Sageman, 2014), academics are faced with the challenge of addressing this complex problem in the growing online space (see Burnap & Williams, 2016). The results of this dissertation suggest that we need to gain a broader understanding of a virtual community before

we can develop indicators to identify those at risk of violent extremism, or even ways to counter violent extremism.

An obvious policy implication from this dissertation is that there is no simple typology or posting behaviour that best describes radical online activity. Instead, the process of identifying the most radical users within a discussion forum must encompass a variety of key elements. In other words, policy makers and practitioners need to look beyond a simple typology to define and, by extension, search for the most radical users and posting behaviours within an online community. However, a useful starting place in identifying radical users or posting behaviours is going directly to the source: topics of conversation that are indeed radical at the core. For this dissertation, topics were those about “the enemies” of the extreme right, which proved to be a useful means of identifying radical authors – the identification of *Axis* and *Iris* as but two examples of this.

Second, much can be learned – from a policy maker and practitioner perspective – about the right-wing extremist movement by studying their online posting behaviour in a radical web-forum. Indeed, web-forums of the radical right-wing are polarizing spaces, and forum data is rich with information about how members of the movement communicate, how they construct their identity, and who they are targeting – discussions, behaviours, and actions that may spill over into the offline realm, as was revealed in this dissertation. Forum data can also be used to describe and perhaps even predict trends – in behaviour and/or activity, for example – in the radical right-wing movement, before they happen in the offline world. If, for example, crime analysts identify a group-level trend in the forum, one which is becoming increasingly more radical over time, analysts may be in a better position to warn law enforcement officials and the intelligence community about the potentially risky trend in online discourse. Similarly, forum data – if gauged properly – can be used to track authors’ individual posting trajectories over time, which may again be of great value to law enforcement who are concerned that an individual is becoming radicalized. This, however, requires that we have a comprehensive understanding of the radical community before we can identify the outliers of outliers (i.e., radicals within a radical community).

Third, practitioners and policy-makers can gain valuable information about the right-wing extremist movement, and social movements more broadly, by drawing from computational tools to study their online posting activities. Results from this dissertation suggest that it is possible to identify topics, authors, or even posting behaviours of interest for future analysis through a simple keyword-based approach, especially in online spaces that contain an overwhelming amount of

information. Understanding the nuances of the radical right movement through their online discourse, particularly on a large scale, may provide practitioners with the much-needed information that they require to better understand radical ideology, which they can in turn use to develop effective counter-narrative initiatives, and/or de-radicalization and disengagement programs to counter violent extremism.

Overall, the use of machine learning tools paired with a mixed-methods approach can help us gain a more in-depth understanding of radical communities online, but only if the tools are guided by theory. Rather than making the sole focus of the discussion on identifying violent extremists and/or content online, we need to take a wider look at the posting behaviours of authors in radical online spaces, focusing on discussions that contribute to their radical identity. Doing so will offer researchers, law enforcement, and policy makers with insight into the posting behaviours of the community, filtering through much of the online noise that is found in such spaces. This may also shed light on what is commonly found in radical spaces versus what is considered risky or even violent posting behaviour. By taking these small but crucial steps, we may eventually be able to identify who is at risk of violent radicalization, identify risky behaviour online, and counter violent extremism.

References

- Abbasi, A. & Chen, H. (2005). Applying authorship analysis to extremist-group web forum messages. *Intelligent Systems, 20*(5), 67-75.
- Abbasi, A. & Chen, H. (2007). Affect intensity analysis of Dark Web forums. In *Proceedings of the 2007 IEEE International Conference on Intelligence and Security Informatics (ISI)*, New Brunswick, New Jersey, pp. 282-288.
- Ackland, R. & O'Neil, M. (2011). Online collective identity: The case of the environmental movement. *Social Networks, 33*(3), 177-190.
- Adams, J. & Roscigno, V. (2005). White supremacists, oppositional culture and the World Wide Web. *Social Forces, 84*(2), 759-778.
- Agarwal, S. & Sureka, A. (2014). A focused crawler for mining hate and extremism promoting videos on YouTube. In *Proceedings of the 2014 ACM Conference on Hypertext and Social Media*, Santiago, Chile, pp. 294-296.
- Amble, J. C. (2012). Combating terrorism in the new media environment. *Studies in Conflict and Terrorism, 35*(5), 3-10.
- Anahita, S. (2006). Blogging the borders: Virtual skinheads, hypermasculinity, and heteronormativity. *Journal of Political and Military Sociology, 32*(1), 143-164.
- Andresen, M. A., Curman, A. S., & Linning, S. J. (2016). The trajectories of crime at places: Understanding the patterns of disaggregated crime types. *Journal of Quantitative Criminology*. DOI:10.1007/s10940-016-9301-1
- Anti-Racist Canada. (2008). *Canadian Combat 18 moderators*. Retrieved from <http://anti-racistcanada.blogspot.ca/2008/03/canadian-combat18-moderators.html>
- Awan, I. (2017). Cyber-extremism: Isis and the power of social media. *Social Science and Public Policy, 54*, 138-149.
- Back, L. (2002). Aryans reading Adorno: Cyber-culture and twenty-first century racism. *Ethnic and Racial Studies, 25*(4), 628-651.
- Barkun, M. (2017). President Trump and the "Fringe". *Terrorism and Political Violence, 29*(3), 437-443.
- Berger, J.M. (2016). Nazis vs. ISIS on Twitter: A comparative study of white nationalist and ISIS online social media networks. *The George Washington University Program on Extremism*. Retrieved from https://cchs.gwu.edu/files/downloads/Nazis%2520v.%2520ISIS%2520Final_0.pdf

- Berger, J. M. (2017). Extremist construction of identity: How escalating demands for legitimacy shape and define in-group and out-group dynamics. International Centre for Counter-Terrorism – The Hague. Retrieved from <https://icct.nl/wp-content/uploads/2017/04/ICCT-Berger-Extremist-Construction-of-Identity-April-2017.pdf>
- Berger, J. M. & Morgan, J. (2015). The ISIS Twitter Census: Defining and describing the population of ISIS supporters on Twitter. *The Brookings Institution* (20). Retrieved from https://www.brookings.edu/wp-content/uploads/2016/06/isis_twitter_census_berger_morgan.pdf
- Berger, J. M. & Perez, H. (2016). The Islamic State's diminishing returns on Twitter: How suspensions are limiting the social networks of English-speaking ISIS supporters. *The George Washington University Program on Extremism*. Retrieved from https://cchs.gwu.edu/sites/cchs.gwu.edu/files/downloads/Berger_Occasional%20Paper.pdf
- Berger, J. M. & Strathearn, B. (2013). Who matters online: Measuring influence, evaluating content and countering violent extremism in online social networks. *The International Centre for the Study of Radicalisation and Political Violence*. Retrieved from http://icsr.info/wp-content/uploads/2013/03/ICSR_Berger-and-Strathearn.pdf
- Bermingham, A., Conway, M., McInerney, L., O'Hare, N., & Smeaton, A. F. (2009). Combining social network analysis and sentiment analysis to explore the potential for online radicalisation. In *Proceedings of the 2009 International Conference on Advances in Social Network Analysis Mining*, Athens, Greece, pp. 231-236.
- Bjorgo, T. (2013). *Strategies for Preventing Terrorism*. New York, NY: Palgrave.
- Blazak, R. (2001). White boys to terrorist men: Target recruitment of Nazi skinheads. *American Behavioral Scientist*, 44(6), 982-1000.
- Blumstein, A. & Cohen, J. (1979). Estimation of individual crime rates from arrest records. *Journal of Criminal Law and Criminology*, 70, 561-585.
- Blumstein, A., Cohen, J., Das, S., & Moitra, S. D. (1988). Specialization and seriousness during adult criminal careers. *Journal of Quantitative Criminology*, 4(4), 303-345.
- Blumstein, A., Cohen, J., Roth, J. A., & Visher, C. A. (1986). *Criminal Careers and 'Career Criminals'*. Washington, DC: National Academy Press.
- Borgeson, K. & Valeri, R. (2005). Identifying the face of hate. *Journal of Applied Sociology*, 22(1), 91-104.
- Bostdorf, D. M. (2004). The internet rhetoric of the Ku Klux Klan: A case study in web site community building run amok. *Communication Studies*, 55(2), 340-361.

- Bouchard, M., Joffres, K., & Frank, R. (2014). Preliminary analytical considerations in designing a terrorism and extremism online network extractor. In V. Mago & V. Dabbaghian (Eds.), *Computational Models of Complex Systems* (pp. 171-184). New York, NY: Springer.
- Bouchard, M. & Nash, R. (2015). Researching terrorism and counter-terrorism through a network lens. In M. Bouchard (Ed.), *Social Networks, Terrorism and Counter-terrorism: Radical and Connected* (pp. 48-60). New York, NY: Routledge.
- Bowman-Grieve, L. (2009). Exploring "Stormfront:" A virtual community of the radical right. *Studies in Conflict and Terrorism*, 32(11), 989-1007.
- Bradac, J. J., Kinsky, C. W., & Davies, R. A. (1976). Two studies of effects of linguistic diversity upon judgement of communicator attributes and message effectiveness. *Speech Monographs*, 43(1), 70-79.
- Braga, A., Hureau, D. M., & Papachristos, A. V. (2010). The concentration and stability of gun violence at micro places in Boston, 1980-2008. *Journal of Quantitative Criminology*, 26(1), 33-53.
- Braga, A., Hureau, D. M., & Papachristos, A. V. (2011). The relevance of micro places to citywide robbery trends: A longitudinal analysis of robbery incidents at street corners and black faces in Boston. *Journal of Research in Crime and Delinquency*, 48(1), 7-32.
- Brame, R., Bushway, S. D., Paternoster, R., & Thornberry, T. P. (2005). Temporal linkages in violent and nonviolent criminal activity. *Journal of Quantitative Criminology*, 21(2), 149-174.
- Brame, R., Mulvey, E. P., & Piquero, A. R. (2001). On the development of different kinds of criminal activity. *Sociological Methods and Research*, 29(3), 319-341.
- Brown, I. & Korff, D. (2009). Terrorism and the proportionality of internet surveillance. *European Journal of Criminology*, 6(2), 119-134.
- Brynielsson, J., Horndahl, A., Johansson, F., Kaati, L., Martenson, C., & Svenson, P. (2013). Analysis of weak signals for detecting lone wolf terrorist. *Security Informatics*, 2(11), 1-15.
- Bubolz, B. F. & Simi, P. (2015). Leaving the world of hate: Life-course transitions and self-change. *American Behavioral Scientist*, 59(2), 1588-1608.
- Burnap, P. & Williams, M. L. (2016). Us and them: Identifying cyberhate on Twitter across multiple protected characteristics. *EPJ Data Science*, 5(1). Available online at <https://link.springer.com/content/pdf/10.1140%2Fepjds%2Fs13688-016-0072-6.pdf>
- Burnap, P., Williams, M. L., Sloan, L., Rana, O., Housley, W., Edwards, A., Knight, V., Procter, R., & Voss, A. (2014). Tweeting the terror: Modelling the social media reaction to the Woolwich terrorist attack. *Social Network Analysis and Mining*, 4, 1-14.

- Burrell, N. A. & Koper, R. J. (1998). The efficacy of powerful/powerless language on attitudes and source credibility. In M. Allen & R. W. Preiss (Eds.), *Persuasion: Advances through Meta-Analysis* (pp. 203-216). Cresskill, NJ: Hampton Press.
- Burris, V., Smith, E., & Strahm, A. (2000). White supremacist networks on the Internet. *Sociological Focus*, 33(2), 215-235.
- Bushway, S. D., Piquero, A. R., Broidy, L. M., Cauffman, E., & Mazerllo, P. (2001). An empirical framework for studying desistance as a process. *Criminology*, 39(2), 491-516.
- Butler, B.S. (2001). Membership size, communication activity, and sustainability: A resource-based model of online social structures. *Information Systems Research*, 12, 346-362.
- Butler, D. (2008, June 13). Lawyer wins another battle against online hate. *Ottawa Citizen*. Retrieved from <https://www.pressreader.com/canada/ottawa-citizen/20080613/281629596022736>
- Caiani, M. & Kröll, P. (2014). The transnationalization of the extreme right and the use of the Internet. *International Journal of Comparative and Applied Criminal Justice*, 39(4), 331-351.
- Caiani, M. & Parenti, L. (2013). *European and American Extreme Right Groups and the Internet*. Farnham, UK: Ashgate.
- Campana, A. & Ducol, B. (2014). Voices of the "Caucasus Emirate": Mapping and analyzing north Caucasus insurgency websites. *Terrorism and Political Violence*, 27(4), 679-700.
- Campbell, A. (2006). The search for authenticity: An exploration of an online skinhead newsgroup. *New Media Society*, 8(2), 269-294.
- Castle, T. & Chevalier, M. (2011). The women of Stormfront: An examination of white nationalist discussion threats on the Internet. *Internet Journal of Criminology*.
- Chalothorn, T. & Ellman, J. (2012). Using SentiWordNet and sentiment analysis for detecting radical content on web forums. In *Proceedings of the 6th Conference on Software, Knowledge, Information Management and Application*, Chengdu, China, pp. 9-11.
- Chau, M. & Xu, J. (2007). Mining communities and their relationships in blogs: A study of Online Hate Groups. *International Journal of Human Computer Studies*, 65(1), 57-70.
- Chen, H. (2012). *Dark Web: Exploring and Data Mining the Dark Side of the Web*. New York, NY: Springer.
- Chermak, S. & Gruenewald, J. (2015). Laying a foundation for the criminological examination of right-wing, left-wing, and Al Qaeda-inspired extremism in the United States. *Terrorism and Political Violence*, 27(1), 133-159.

- Cohen, K., Johansson, F., Kaati, L., & Mork, J. (2014). Detecting linguistic markers for radical violence in social media. *Terrorism and Political Violence*, 26(1), 246-256.
- Conway, M. (2006). Terrorism and the internet: New media—new threat? *Parliamentary Affairs*, 59(2), 283-298.
- Conway, M. (2016). Determining the role of the Internet in violent extremism and terrorism: Six suggestions for progressing research. *Studies in Conflict and Terrorism*, 40(1), 77-98.
- Conway, M. & McInerney, L. (2008). Jihad video and auto-radicalisation: Evidence from an exploratory YouTube study. In D. Ortiz-Arroyo, H. L. Larsen, & D. Zeng (Eds.), *Intelligence and Security Informatics* (pp. 108-118). New York, NY: Springer.
- Cook, A. H. & Lounsbury, M. O. (2011). Assessing the risk posed by terrorist groups: Identifying motivating factors and threats. *Terrorism and Political Violence*, 23(5), 711-729.
- Crisafi, A. (2005). The seduction of evil: An examination of the media culture of the current white supremacist movement. In S. Ni Fhlainn & W.A. Myers (Eds.), *The Wicked Heart: Studies in the Phenomena of Evil* (pp. 29-44). Oxford, UK: Inter-Disciplinary Press.
- Curman, A. S. N., Andresen, M.A., & Brantingham, P. J. (2015). Crime and place: A longitudinal examination of street segment patterns in Vancouver, BC. *Journal of Quantitative Criminology*, 31(1), 127-147.
- Daniels, J. (2009). *Cyber Racism: White Supremacy Online and the New Attack on Civil Rights*. Lanham, MD: Rowman and Littlefield Publishers.
- Davies, G., Bouchard, M., Wu, E., Joffres, K., & Frank, R. (2015). Terrorist and extremist organizations' use of the Internet for recruitment. In M. Bouchard (Ed.), *Social Networks, Terrorism and Counter-terrorism: Radical and Connected* (pp. 105-127). New York, NY: Routledge.
- De Koster, W. & Houtman, D. (2008). 'Stormfront is like a second home to me.' *Information, Communication and Society*, 11(8), 1155-1176.
- DeLisi, M. & Piquero, A. P. (2011). New frontiers in criminal career research, 2000-2011: A state-of-the-art review. *Journal of Criminal Justice*, 39(4), 289-301.
- Dernevik, M., Beck, A., Grann, M., Hogue, T., & McGuire, J. (2009). The use of psychiatric and psychological evidence in the assessment of terrorist offenders. *Journal of Forensic Psychiatry and Psychology*, 20(4), 508-515.
- Diani, M. (1992). The concept of social movement. *Sociological Review*, 40(1), 1-25.
- Dietz, P. E. (1986). Mass, serial and sensational homicides. *Bulletin of the New York Academy of Medicine*, 82(1), 477-491.

- Dietz, P. E. & Martell, D. (1989). *Mentally disordered offenders in pursuit of celebrities and politicians*. Washington, DC: National Institute of Justice.
- Ducol, B. (2012). Uncovering the French-speaking jihadisphere: An exploratory analysis. *Media, War and Conflict*, 5(1), 51-70.
- Duffy, M. E. (2003). Web of hate: A fantasy theme analysis of the rhetorical vision of hate groups online. *Journal of Communication Inquiry*, 27(3), 291-312.
- Eatwell, R. & Mudde, C. (2004). *Western Democracies and the New Extreme Right Challenge* (Eds.). London, UK: Routledge.
- Ekman, M. (2014). The dark side of online activism: Swedish right-wing extremist video activism on YouTube. *Journal of Media and Communication Research*, 56(1), 79-99.
- Ezekiel, R. S. (1995). *The Racist Mind: Portraits of American Neo-Nazi and Klansmen*. New York, NY: Viking.
- Feldman, R. (2013). Techniques and applications for sentiment analysis. *Communications of the ACM*, 56(4), 82-89.
- Ferber, A. L. (2009). Gender, privilege and the politics of hate. In B. Perry & R. Blazak (Eds.), *Hate Crimes: Hate Crime Offenders* (pp. 69-85). Westport, CT: Praeger Publishers.
- Figea, L., Kaati, L., & Scrivens, R. (2016). Measuring online affects in a white supremacy forum. In *Proceedings of the 2016 IEEE International Conference on Intelligence and Security Informatics (ISI)*, Tucson, Arizona, pp. 85-90.
- Forgas, J. P. (2006). Affective influences on interpersonal behaviour: Towards understanding the role of affect in everyday interactions. In J. P. Forgas (Ed.), *Affect in Social Thinking and Behavior* (pp. 269-290). New York: Psychology Press.
- Frank, R., Bouchard, M., Davies, G., & Mei, J. (2015). Spreading the message digitally: A look into extremist content on the internet. In R. G. Smith, R. C.-C. Cheung, & L. Y.-C. Lau (Eds.), *Cybercrime Risks and Responses: Eastern and Western Perspectives* (pp. 130-145). London, UK: Palgrave Macmillan.
- Frank, R., Westlake, B. G., & Bouchard, M. (2010). The structure and content of online child exploitation networks. In *Proceedings of the 10th ACM SIGKDD Workshop on Intelligence and Security Informatics (ISI-KDD)*, Washington, DC, article no. 3.
- Freilich, J. D., Chermak, S. M., Belli, R., Gruenwald, J., & Parkin, W. S. (2014). Introducing the United States Extremis Crime Database (ECDB). *Terrorism and Political Violence*, 26(2), 372-384.
- Freilich, J. D. & LaFree, G. (2015). Criminological theory and terrorism: An introduction to the special issue. *Terrorism and Political Violence*, 27(1), 1-8.

- Fu, T., Abbasi, A., & Chen, H. (2010). A focused crawler for Dark Web forums. *Journal of American Society for Information Science and Technology*, 61(6), 1213-1231.
- Futrell, R. & Simi, P. (2004). Free spaces, collective identity, and the persistence of U.S. white power activism. *Social Problems*, 51(1), 16-42.
- Futrell, R. & Simi, P. (2017). The [un]surprising alt-right. *Contexts*, 16(20), 76-76.
- Gerstenfeld, P. B., Grant, D. R., & Chiang, C. P. (2003). Hate online: A content analysis of extremist Internet sites. *Analysis of Social Issues and Public Policy*, 3(1), 29-44.
- Gill, P. (2015). *Lone-actor Terrorism: A Behavioural Analysis*. London, UK: Routledge.
- Gill, P., Corner, E., Conway, M., Thornton, A., Bloom, M., & Horgan J. (2017). Terrorist use of the Internet by the numbers: Quantifying behaviors, patterns, and processes. *Criminology and Public Policy*, 16(1), 99-117.
- Gill, P., Corner, E., Thornton, A., & Conway, M. (2015). What are the roles of the Internet in Terrorism? Measuring online behaviours of convicted UK terrorists. *VOX-Pol Network of Excellence*. Retrieved from <https://www.voxpol.eu/download/report/What-are-the-Roles-of-the-Internet-in-Terrorism.pdf>
- Ghiassi, M., Skinner, J., & Zimbra, D. (2013). Twitter brand sentiment analysis: A hybrid system using n-gram analysis and dynamic artificial neural network. *Expert Systems with Applications*, 40(16), 6266-6282.
- Government of Canada. (2017). *Civil Marriage Act: S.C. 2005, c.33*. Retrieved from <http://laws-lois.justice.gc.ca/eng/acts/c-31.5/page-1.html>
- Graham, R. (2016). Inter-ideological mingling: White extremist ideology entering the mainstream on Twitter. *Sociological Spectrum*, 36(1), 24-36
- Groff, E. R., Weisburd, D., & Yang, S-M. (2010). Is it important to examine crime trends at a local "micro" level? A longitudinal analysis of street to street variability in crime trajectories. *Journal of Quantitative Criminology*, 26(1), 7-32.
- Gudjonsson, G. H. (2009). The assessment of terrorist offenders: A commentary on the Dernevik et al. article and suggestions for future direction. *Journal of Forensic Psychiatry and Psychology*, 20(4), 516-519.
- Gudjonsson, G. H., West, A., & McKee, A. (2015). Risk assessment of terrorist offenders: A challenge too far? In J. Pearse (Ed.), *Investigating Terrorism: Current Political, Legal and Psychological Issues* (pp. 123-144). Chichester, UK: Wiley Blackwell.
- Hale, C. (2010). Extremism on the World Wide Web: A research review. *Criminal Justice Studies: A Critical Journal of Crime, Law and Society*, 25(4), 343-356.

- Hamilton, M. A. & Hunter, J. E. (1998). The effect of language intensity on receiver evaluations of message, source, and topic. In M. Allen & R. W. Preiss (Eds.), *Persuasion: Advances through Meta-Analysis* (pp. 99-138). Cresskill, NJ: Hampton Press.
- Hamm, M. S. (1993). *American Skinheads: The Criminology and Control of Hate Crime*. Westport, CT: Praeger.
- Hamm, M. S. (2007). *Terrorism as Crime*. New York, NY: New York University Press.
- Hamm, M. S. (2012). Prisoner radicalization and sacred terrorism: A life-course perspective. In R. Rosenfeld, K. Quinet, & C. Garcia (Eds.), *Contemporary Issues in Criminological Theory and Research* (pp. 173-198). Belmont, CA: Wadsworth.
- Hamm, M. S. (2013). *The Spectacular Few: Prisoner Radicalization and the Evolving Terrorist Threat*. New York, NY: New York University Press.
- Hempel, A., Meloy, J.R., & Richard, T. (1999). Offender and offense characteristics of nonrandom sample of mass murders. *Journal of American Academic of Psychiatry and the Law*, 27(2), 213-225.
- Herrington, V. & Roberts, K. (2012). Risk assessment in counterterrorism. In U. Kumar & M. K. Mandal (Eds.), *Countering Terrorism: Psychosocial Strategies* (pp. 282-305). London, UK: Sage.
- Hoffmann, J., Meloy, J. R., Guldimann, A., & Ermer, A. (2011). Attacks on German public figures, 1986-2004: Warning behaviors, potentially lethal and nonlethal acts, psychiatric status, and motivation. *Behavioral Sciences and the Law*, 29(2), 155-179.
- Hollander, E. P. (1961). Emergent leadership and social influence. In L. Petrullo & B. M. Bass (Eds.), *Leadership and Interpersonal Behavior* (pp. 30-47). New York: Holt, Rinehard and Winston.
- Holtgrave, T. & Lasky, B. (1999). Linguistic power and persuasion. *Journal of Language and Social Psychology*, 18(3), 196-205.
- Hosman, L. A. (2002). Language and persuasion. In J. P. Dillard & M. Pfau (Eds.), *The Persuasion Handbook: Developments in Theory and Practice* (pp. 371-390). New York, NY: Sage.
- Hughey, M. W. (2010). The (dis) similarities of white racial identities: The conceptual framework of 'hegemonic whiteness'. *Ethnic and Racial Studies*, 33(8), 1289-1309.
- Huffaker, D. (2010). Dimensions of leadership and social influence in online communities. *Human Communication Research*, 36(4), 593-617.
- Hung, B. W. K., Jayasumana, A. P., & Bandara, V. W. (2016a). Detecting radicalization trajectories using graph pattern matching algorithms. In *Proceedings of the 2016 IEEE*

- International Conference on Intelligence and Security Informatics (ISI)*, Tucson, Arizona, pp. 313-315.
- Hung, B. W. K., Jayasumana, A. P., & Bandara, V. W. (2016b). Pattern matching trajectories for investigative graph searches. In *Proceedings of the 2016 IEEE International Conference on Data Science and Advanced Analytics (DSA)*, Montreal, Canada, pp. 71-79.
- Hunt, S. A. & Benford, R. D. (1994). Identity talk in the peace and justice movement. *Journal of Contemporary Ethnography* 22(4), 488-517.
- Innes, M., Abbott, L., Lowe, T., & Roberts, C. (2007). *Hearts and Minds and Eyes and Ears: Reducing Radicalisation Risks through Reassurance Oriented Policing*. Cardiff, Wales: Universities Police Science Institute.
- Internet Live Stats. (2017). *Total number of websites*. Retrieved from <http://www.internetlivestats.com/total-number-of-websites/>
- Internet World Stats. (2017). *Internet growth statistics*. Retrieved from <http://www.internetworldstats.com/emarketing.htm>
- Joffres, K., Bouchard, M., Frank, R., & Westlake, B. G. (2011). Strategies to disrupt online child pornography networks. In *Proceedings of the European Intelligence and Security Informatics Conference (EISIC)*, Athens, Greece, pp. 163-170.
- Johnson, D. (2012). *Right-wing Resurgence: How a Domestic Terror Threat is being Ignored*. Lanham, MD: Rowman and Littlefield.
- Jones, B. L. & Nagin, D. S. (2007). Advances in group-based trajectory modeling and a SAS procedure for estimating them. *Sociological Methods and Research*, 35(4), 542-571.
- Joyce, E. & Kraut, R. (2006). Predicting continued participation in newsgroups. *Journal of Computer-Mediated Communication*, 11(3), 723-747.
- Kaati, L., Omer, E., Prucha, N., & Shrestha, A. (2015). Detecting multiplies of Jihadism on Twitter. In *Proceedings of the 2015 IEEE International Conference on Data Mining Workshops (ICDMW)*, Atlantic City, New Jersey, pp. 954-960.
- Kaati, L., Shrestha, A., & Cohen, K. (2016). Linguistic analysis of lone offender manifestos. In *Proceedings of the 2016 IEEE International Conference on Cybercrime and Computer Forensics (ICCCF)*, Vancouver, BC, pp. 1-8.
- Kaati, L., Shrestha, A., & Sardella, T. (2016). Identifying warning behaviors of violent lone offenders in written communications. In *Proceedings of the 2016 IEEE International Conference on Data Mining Workshops (ICDMW)*, Barcelona, Spain, pp. 1053-1060.
- Kanaley, R. (1996, July 4). Hate groups tap into the Internet. *The Philadelphia Inquirer*.

- Keibell, M.R. & Porter, L. (2012). An intelligence assessment framework for identifying individuals at risk of committing acts of violent extremism against the West. *Security Journal*, 25, 212-228.
- Kennedy, J. & Weimann, G. (2011). The strength of weak terrorist ties. *Terrorism and Political Violence*, 23(2), 201-212.
- Kerodal, A. G., Freilich, J. D., Chermack, S. M., & Suttmoeller, M. J. (2014). A rest of Sprinzak's split delegitimization's theory of the life course of far-right organizational behavior. *International Journal of Comparative and Applied Criminal Justice*, 39(4), 307-329.
- Klausen, J. (2015). Tweeting the jihad: Social media networks of western foreign fighters in Syria and Iraq. *Studies in Conflict and Terrorism*, 38(1), 1-22.
- Klausen, J., Barbieri, E. T., Reichlin-Melnick, A., & Zelin, A. Y. (2012). The YouTube Jihadists: A social network analysis of Al-Muhajiroun's propaganda campaign. *Perspectives on Terrorism*, 6(1), 36-53.
- Knoll, J. (2010). The 'pseudocommando' mass murderer: Part I, the psychology of revenge and obliteration. *Journal of American Academic of Psychiatry and the Law*, 38(1), 87-94.
- Koh, J., Kim, Y.-G., Butler, B., & Bock, G.-W. (2007). Encouraging participation in virtual communities. *Communications of the ACM*, 50(2), 68-73.
- LaFree, G. (2017). Editorial introduction: Terrorism and the internet. *Criminology and Public Policy*, 17(1), 93-98.
- LaFree, G. & Freilich, J. D. (2012). Editor's introduction: Quantitative approaches to the study of terrorism. *Journal of Quantitative Criminology*, 28(1), 1-5.
- LaFree, G. & Freilich, J. D. (2017). Bringing criminology into the study of terrorism. In G. LaFree & J. D. Freilich (Eds.), *The Handbook of the Criminology of Terrorism* (pp. 3-14). West Sussex, UK: Wiley Blackwell.
- LaFree, G., Morris, N. A., & Dugan, L. (2010). Cross-national patterns of terrorism. *British Journal of Criminology*, 50, 622-649.
- LaFree, G., Morris, N. A., Dugan, L., & Fahey, S. (2006). Identifying cross-national global terrorist hot spots. In J. Victoroff (Ed.), *Tangled Roots: Social and Psychological Factors in the Genesis of Terrorism* (pp. 98-114). Washington, DC: IOS Press.
- LaFree, G., Yang, S. M., & Crenshaw, M. (2009). Trajectories of terrorism. *Criminology and Public Policy*, 8(3), 445-473.
- Langman, L. (2005). From virtual public spheres to global justice: A critical theory of internetnetworked social movements. *Sociological Theory*, 23(1), 42-74.

- Le Blanc, M., & Loeber, R. (1998). Developmental criminology updated. *Crime and Justice*, 23, 115-198.
- Lennings, C. J., Amon, K. L., Brummert, H., & Lennings, N. J. (2010). Grooming for terror: The Internet and young people. *Psychiatry, Psychology and Law*, 17(3), 424-437.
- Levey, P., Bouchard, M., Hashimi, S., Monk, B., & Frank, R. (2016). The emergence of violent narratives in the life-course trajectories of online forum participants. *TSAS Report*.
- Levin, B. (2002). Cyberspace: A legal and historical analysis of extremists' use of computer networks in America. *American Behavioral Scientist*, 45(6), 958-988.
- Loeber, R., Farrington, D. P., Stouthamer-Loeber, M., & White, H. R. (2008). *Violence and Serious Theft: Development and Prediction from Childhood to Adulthood*. New York, NY: Routledge.
- Lum, C., Kennedy, L. W., & Sherley, A. (2006). Are counter-terrorism strategies effective? The results of the Campbell systematic review on counter-terrorism evaluation research. *Journal of Experimental Criminology*, 28(1), 77-101.
- Lyons, B. & Henderson, K. (2005). Opinion leadership in computer-mediated environment. *Journal of Consumer Behaviour*, 4(5), 319-329.
- Macdonald, M., Frank, R., Mei, J., & Monk, B. (2015). Identifying digital threats in a hacker web forum. In *Proceedings of the International Symposium on Foundations of Open Source Intelligence and Security Informatics (FOSINT)*, Paris, France, pp. 926-933.
- Macnair, L. & Frank, R. (2017). "To my brothers in the West...": A thematic analysis of videos produced by the Islamic State's al-Hayat Media Center. *Journal of Contemporary Criminal Justice*, online first, 1-20.
- Macovei, E., (2013). Neo-Nazis sympathizers on the forums of the Romanian online publications. *Styles of Communication*, 5(1), 93-109.
- Marriott, M. (1999, March 18). Rising tide: Site born of hate. *New York Times*. Retrieved from <http://www.nytimes.com/1999/03/18/technology/rising-tide-sites-born-of-hate.html?mcubz=0>
- Meddaugh, P. M. & Kay, J. (2009). Hate speech or 'reasonable racism?' The other in Stormfront. *Journal of Mass Media Ethics*, 24(4), 251-268.
- Mei, J. & Frank, R. (2015). Sentiment crawling: Extremist content collection through a sentiment analysis guided web-crawler. In *Proceedings of the International Symposium on Foundations of Open Source Intelligence and Security Informatics (FOSINT)*, Paris, France, pp. 1024-1027.
- Meloy, J. R. (2011). Approaching and attacking public figures: A contemporary analysis of communications and behavior. In C. Chauvin (Ed.), *Threatening Communications and*

Behavior: Perspectives on the Pursuit of Public Figures (pp. 75-101). Washington, DC: The National Academies Press.

- Meloy, J. R. (2016). A method to investigate the individual terrorist. *FBI Law Enforcement Bulletin*. Retrieved from <https://leb.fbi.gov/2016/april/perspective-identifying-warning-behaviors-of-the-individual-terrorist>
- Meloy, J. R. & Gill, P. (2016). The lone-actor terrorist and the TRAP-18. *Journal of Threat Assessment and Management*, 3(1), 37-52.
- Meloy, J. R., Hoffmann, J., Guldemann, A., & James, D. (2012). The role of warning behaviors in threat assessment: An exploration and suggested typology. *Behavioral Science and the Law*, 30(3), 256-279.
- Meloy, J. R., Hoffmann, J., Roshdi, K., Glaz-Ocik, J., & Guldemann, A. (2014). Some warning behaviors discriminate between school shooters and other students of concern. *Journal of Threat Assessment and Management*, 2(3-4), 140-152.
- Meloy, J. R., Mohandie, K., Knoll, J. L., & Hoffmann, J. (2015). The concept of identification in threat assessment. *Behavioral Science and the Law*, 33(2-3), 213-237.
- Meloy, J. R. & O'Toole, M. E. (2011). The concept of leakage in threat assessment. *Behavioral Science and the Law*, 29(4), 513-527.
- Meloy, J. R., Roshdi, K., Glaz-Ocik, J., & Hoffmann, J. (2015). Investigating the individual terrorist in Europe. *Journal of Threat Assessment and Management*, 1(3), 203-2011.
- Melucci, A. (1995). The process of collective identity. In H. Johnston & B. Klandermans (Eds.), *Social Movements and Culture* (pp. 41-63). Minneapolis, Minnesota: University of Minnesota Press.
- Miller, E. (2012). Patterns of onset and decline among terrorist organizations. *Journal of Quantitative Criminology*, 28(1), 77-101.
- Monahan, J. (2012). The individual risk assessment of terrorism. *Psychology, Public Policy, and Law*, 18(2), 167-205.
- Monahan, J. (2017). The individual risk assessment of terrorism: Recent developments. In G. LaFree and J. D. Freilich (Eds.), *The Handbook of the Criminology of Terrorism* (pp. 520-534). West Sussex, UK: Wiley Blackwell.
- Morris, N. A. (2017). Methodological advances in the study of terrorism: Using latent class growth analysis to estimate terrorism trends. In G. LaFree and J. D. Freilich (Eds.), *The Handbook of the Criminology of Terrorism* (pp. 260-275). West Sussex, UK: Wiley Blackwell.

- Morris, N. A. & LaFree, G. (2017). Country-level predictors of terrorism. In G. LaFree and J. D. Freilich (Eds.), *The Handbook of the Criminology of Terrorism* (pp. 93-117). West Sussex, UK: Wiley Blackwell.
- Morris, N. A. & Slocum, L. A. (2012). Estimating country-level terrorism trends using group-based trajectory analysis: Latent class growth analysis and general mixture modeling. *Journal of Quantitative Criminology*, 28(1), 103-139.
- Mullin, C. W. & Young, J. K. (2012). Cultures of violence and acts of terror: Applying a legitimization-habitation model to terrorism. *Crime and Delinquency*, 58(1), 28-56.
- Nagin, D. S. (1999). *Analyzing developmental trajectories: A semiparametric, group-based approach*. *Psychological Methods*, 4(2), 139-157.
- Nagin, D. S. (2005). *Group-based Modeling of Development*. Cambridge, MA: Harvard University Press.
- Nagin, D. S. & Land, K. C. (1993). Age, criminal careers, and population heterogeneity: Specification and estimation of nonparametric, mixed Poisson model. *Criminology*, 31(2), 327-362.
- Nagin, D. S. & Tremblay, R. E. (1999). Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and nonviolent juvenile delinquency. *Child Development*, 70(5), 1181-1196.
- Nagin, D. S., Pagani, L., Tremblay, R. E., & Vitaro, F. (2003). Life course turning points: The effect of grade retention on physical aggression. *Development and Psychopathology*, 15(2), 343-361.
- Nagin, D. S. & Tremblay, R. E. (2001). Analyzing developmental trajectories of distinct but related behaviours: A group-based method. *Psychological Methods*, 6(1), 18-34.
- Nash, R., Bouchard, M., & Malm, A. (2013). Investing in people: The role of social networks in diffusion of a large-scale fraud. *Social Networks*, 35(4), 686-698.
- Neo, L. S., Dillion, L., & Khader, M. (2016). Identifying individuals at risk of being radicalised via the Internet. *Security Journal*. DOI: 10.1057/s41284-016-0080-z
- Neumann, P. R. (2013). Options and strategies for countering online radicalization in the United States. *Studies in Conflict and Terrorism*, 36(6), 431-459.
- Neumann, P. R. & Rogers, B. (2007). Recruitment and mobilisation for the Islamist militant movement in Europe. *The International Centre for the Study of Radicalisation and Political Violence*. Retrieved from http://icsr.info/wp-content/uploads/2012/10/1234516791ICSREURsearchReport_Proof1.pdf
- Ng, S. H. & Bradac, J. J. (1993). *Power in Language: Verbal Communication and Social Influence*. Newbury Park, CA: Sage.

- O'Callaghan, D., Greene, D., Conway, M., Carthy, J. & Cunningham, P. (2014). An analysis of interactions within and between extreme right communities in social media. In M. Atzmueller, A. Chin, D. Helic, & A. Hotho (Eds.), *Ubiquitous Social Media Analysis* (pp. 88-107). Berlin, Germany: Springer.
- O'Callaghan, D., Greene, D., Conway, M., Carthy, J. & Cunningham, P. (2014). Down the (white) rabbit hole: The extreme right and online recommender systems. *Social Science Computer Review*, 33(4), 1-20.
- O'Keefe, D. J. (2002). *Persuasion: Theory and Research* (2nd Ed.). Thousand Oaks, CA: Sage.
- Oaten, A. (2014). The cult of the victim: an analysis of the collective identity of the English Defence League. *Patterns of Prejudice*, 48(4), 331-349.
- Oldham, J. (1998, January 25). Web of hate growing on the net. *The Jerusalem Post*.
- Parkin, W. S. & Freilich, J. D. (2015). Routine activities and right-wing extremists: An empirical comparison of the victims of ideologically-and non-ideologically-motivated homicides committed by American far-rightists. *Terrorism and Political Violence*, 27(1), 182-203.
- Parliament of Canada. (2004). *Bill C-250*. Retrieved from http://www.parl.ca/Content/Bills/372/Private/C-250/c-250_3/c-250_3.pdf
- Perry, B. (2001). *In the Name of Hate: Understanding Hate Crimes*. New York, NY: Routledge.
- Perry, B. (forthcoming). Right thinking: Criminologists on right-wing extremism. In S. Ashe, J. Busher, G. Macklin, & A. Winter (Eds.), *Researching the Far Right: Theory, Method and Practice*. London, UK: Routledge.
- Perry, B. & Olsson, P. (2009). Cyberhate: The globalization of hate. *Information and Communications Technology Law*, 18(2), 185-199.
- Perry, B. & Scrivens, R. (2015). Right-Wing Extremism in Canada: An Environmental Scan. Ottawa, ON: *Public Safety Canada*.
- Perry, B. & Scrivens, R. (2016a). White pride worldwide: Constructing global identities online. In J. Schweppe & M. Walters (Eds.), *The Globalisation of Hate: Internationalising Hate Crime* (pp. 65-78). New York, NY: Oxford University Press.
- Perry, B. & Scrivens, R. (2016b). Uneasy alliances: A look at the right-wing extremist movement in Canada. *Studies in Conflict and Terrorism*, 39(9), 819-841.
- Piquero, A. R., Brame, R., Mazerolle, P., & Haapanen, R. (2002). Crime in emerging adulthood. *Criminology*, 40(1), 137-170.
- Piquero, A. R., Farrington, D. P., & Blumstein, A. (2003). The criminal career paradigm. *Crime and Justice*, 30, 359-506.

- Piquero, A. R., Farrington, D. P., & Blumstein, A. (2007). *Key Issues in Criminal Career Research: New Analyses of the Cambridge Study in Delinquent Development*. New York, NY: Cambridge University Press.
- Poletta, F. & Jasper, J. M. (2001). Collective identity and social movements. *Annual Review of Sociology*, 27(1), 283-305.
- Pressman, D. E. (2009). *Risk Assessment Decisions for Violent Political Extremism*. Retrieved from <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/2009-02-rdv/2009-02-rdv-eng.pdf>
- Pressman, D. E. & Flockton, J. (2012). Calibrating risk for violent political extremists and terrorists: The VERA 2 structured assessment. *British Journal of Forensic Practice*, 14, 237-251.
- Rau, K. (2015). *Lesbian, gay, bisexual, and transgender rights in Canada*. Retrieved from <http://www.thecanadianencyclopedia.ca/en/article/lesbian-gay-bisexual-and-transgender-rights-in-canada/>
- Reid, E. & Chen, H. (2007). Internet-savvy U.S. and Middle East extremist groups. *Mobilization: An International Quarterly Review*, 12(2), 177-192.
- Reid, E., Qin, J., Zhou, Y., Lai, G., Sageman, M., Weimann, G., & Chen, H. (2005). Collecting and analyzing the presence of terrorists on the web: A case study of jihad websites. In P. Kantor, G. Muresan, F. Roberts, D. D. Zeng, F.-Y. Wang, H. Chen, & R. C. Merkle (Eds.), *Intelligence and Security Informatics* (pp. 402-411). Berlin, Germany: Springer.
- Roberts, K. & Horgan, J. (2008). Risk assessment and the terrorist. *Perspectives on Terrorism*, 2(6), 3-9.
- Sageman, M. (2004). *Understanding Terror Networks*. Philadelphia, PA: University of Pennsylvania Press.
- Sageman, M. (2008). *Leaderless Jihad: Terror Networks in the Twenty-first Century*. Philadelphia, PA: University of Pennsylvania Press.
- Sageman, M. (2014). The stagnation in terrorism research. *Terrorism and Political Violence*, 26(4), 565-580.
- Sampson, R. J. & Laub, J. H. (2003). Life-course desisters? Trajectories of crime among delinquent boys followed to age 70. *Criminology*, 41(3), 555-592.
- Sawyer, J.P. & Hienz, J. (2017). What makes them do it? Individual-level indicators of extremist outcomes. In G. LaFree and J. D. Freilich (Eds.), *The Handbook of the Criminology of Terrorism* (pp. 47-61). West Sussex, UK: Wiley Blackwell.
- Schafer, J. A. (2002). Spinning the web of hate: Web-based propagation by extremist organization. *Journal of Criminal Justice and Popular Culture*, 9(2), 69-88.

- Schafer, J. A., Mullin, C. W., & Box, S. (2014). Awakening: The emergence of white supremacist ideologies. *Deviant Behavior*, 35, 173-196.
- Schmidt, A. P. & Jongman, A. J. (1988). *Political Terrorism: A New Guide to Actors, Authors, Concepts, Databases, Theories, and Literature*. Amsterdam, Netherlands: North-Holland Publishing
- Schneider, K. (1995, March 13). Hate groups use tools of the electronic trade. *New York Times*. p. A12.
- Scrivens, R. (2016). Bridging computer sciences and social sciences: the search for extremist content online. *VOX-Pol Network of Excellence Blog*. Retrieved from <http://www.voxpol.eu/bridging-computer-sciences-social-sciences-search-extremist-content-online/>
- Scrivens, R., Davies, G., & Frank, R. (2017). Searching for signs of extremism on the Web: an introduction to Sentiment-based Identification of Radical Authors. *Behavioral Sciences of Terrorism and Political Aggression*, ahead of print, 1-21.
- Scrivens, R. & Frank, R. (2016). Sentiment-based classification of radical text on the Web. In *Proceedings of the 2016 European Intelligence and Security Informatics Conference (EISIC)*, Uppsala, Sweden, pp. 104-107.
- Scrivens, R. & Perry, B. (2017). Resisting the right: Countering right-wing extremism in Canada. *Canadian Journal of Criminology and Criminal Justice*. Ahead of Print. DOI: 10.3138/cjccj.2016.0029.
- Seib, P. & Janbek, D. M. (2011). *Global Terrorism and New media: The Post-al Qaeda Generation*. London, UK: Routledge.
- Sheffield, M. (2017, August 28). Stormfront, the Internet's oldest major racist website, has domain suspended. *Salon*. Retrieved from <http://www.salon.com/2017/08/28/stormfront-internets-oldest-major-racist-website-has-domain-suspended/>
- Silber, M. D. & Bhatt, A. (2007). *Radicalization in the West: The Homegrown Threat*. New York, NY: New York City Police Department.
- Silke, A. (2001). The devil you know: Continuing problems with research on terrorism. *Terrorism and Political Violence*, 13(4), 1-14.
- Silke, A. (2014). Risk assessment of terrorist and extremist prisoners. In A. Silke (Ed.), *Prisons, Terrorism and Extremism: Critical Issues in Management, Radicalisation and Reform* (pp. 108-121). London, UK: Routledge.
- Simi, P. (2010). Why study white supremacist terror? A research note. *Deviant Behavior*, 31(3), 251-273.

- Simi, P. & Futrell, R. (2015). *American Swastika: Inside the White Power Movement's Hidden Spaces of Hate* (2nd Ed). Lanham, MD: Rowman and Littlefield Publishers.
- Simi, P., Futrell, R., & Bubolz, B. F. (2016). Parenting as activism: Identity alignment persistence in the white power movement. *The Sociological Quarterly*, 57(3), 491-519.
- Snow, D. (2001). Collective identity and expressive forms. *University of California, Irvine eScholarship Repository*, <http://repositories.cdlib.org/csd/01-07>
- Southern Poverty Law Centre. (2014). *White Homicide Worldwide*. Retrieved from <https://www.splcenter.org/20140401/white-homicide-worldwide>
- Southern Poverty Law Centre. (2015). *Intelligence files: Stormfront*. Retrieved from <http://www.splcenter.org/get-informed/intelligence-files/groups/stormfront>
- Southern Poverty Law Centre. (2016), *Take the money and run: How Don Black's son escaped the white supremacist movement he was born to inherit*. Retrieved from <https://www.splcenter.org/hatewatch/2016/11/03/take-money-and-run-how-don-black's-son-escaped-white-supremacist-movement-he-was-born>
- Southern Poverty Law Center. (2017). Hate groups increase for second consecutive year as Trump electrifies radical right. Retrieved from <https://www.splcenter.org/news/2017/02/15/hate-groups-increase-second-consecutive-year-trump-electrifies-radical-right>
- Stern, K. S. (2001). Hate and the Internet. *Journal of Hate Studies*, 1, 57-107.
- Stevens, T. & Neumann, P. R. (2009). Countering online radicalisation: A strategy for action. *The International Centre for the Study of Radicalisation and Political Violence*. Retrieved from <http://icsr.info/wp-content/uploads/2012/10/1236768491ICSROnlineRadicalisationReport.pdf>
- Tateo, L. (2005). The Italian extreme right on-line network: An exploratory study using an integrated social network analysis and content analysis approach. *Journal of Computer-Mediated Communication*, 1(2), 117-125.
- Thelwall, M. & Buckley, K. (2013). Topic-based sentiment analysis for the social web: The role of mood and issue-related words. *Journal of the American Society for Information Science and Technology*, 64(8), 1608-1617.
- Thiesmeyer, L. (1999). Racism on the web: Its rhetoric and marketing. *Ethics and Information Technology*, 1(2), 117-125.
- Thomas, T. L. (2003). Al Qaeda and the Internet: The danger of "cyberplanning". *Parameters*, 33(1), 112-123.
- Thompson, K. C. (2001). Watching the Stormfront: White nationalists and the building of community in cyberspace. *Social Analysis*, 45(1), 32-52.

- Torres-Soriano, M. R. (2013). The dynamics of the creation, evolution, and disappearance of terrorist Internet forums. *International Journal of Conflict and Violence*, 7(1), 164-178.
- Treadwell, J. & Garland, J. (2011). Masculinity, marginalization and violence: A case study of the English Defence League. *British Journal of Criminology*, 51(4), 621-634.
- Tremblay, R. E., Pihl, R. O., Vitaro, F., Dobkin, P. L. (1994). Predicting early onset of male antisocial behavior from preschool behavior. *Archives of General Psychiatry*, 51, 732-739.
- Tsfati, Y. & Weimann, G. (2002). www.terrorism.com: Terror on the internet. *Studies in Conflict and Terrorism*, 25(5), 317-332.
- Tzoumakis, S., Lussier, P., Le Blanc, M., & Davies, G. (2012). Onset, offending trajectories, and crime specialization in violence. *Youth Violence and Juvenile Justice*, 11(2), 143-164.
- Valente, T.W. & Pumpuang, P. (2007). Identifying opinion leaders to promote behavior change. *Health Education & Behavior*, 34(6), 881-896.
- Warr, M. (1989). What is the perceived seriousness of crimes? *Criminology*, 27(4), 795-822.
- Weimann, G. (1994). *The Influentials: People who Influence People*. Albany, NY: State University of New York Press.
- Weimann, G. (2004). www.terror.net: How modern terrorism uses the internet. *United States Institute of Peace (USIP) Special Report*, 116, 1-12.
- Weimann, G. (2006). Virtual disputes: The use of the internet for terrorist debates. *Studies in Conflict and Terrorism*, 29(7), 623-639.
- Weimann, G. (2008). The psychology of mass-mediated terrorism. *American Behavioral Scientist*, 52(1), 69-86.
- Weimann, G. (2010). Terror on Facebook, Twitter, and YouTube. *Brown Journal of World Affairs*, 16(2), 45-54.
- Weimann, G. (2012). Lone Wolves in Cyberspace. *Journal of Terrorism Research*, 3(2), 75-90.
- Weisburd, A. A. (2009). Comparison of visual motifs in Jihadi and Cholo videos on YouTube. *Studies in Conflict and Terrorism*, 32(12), 1066-1074.
- Weisburd, D., Bushway, S., Lum, C., & Yang, S-M. (2004). Trajectories of crime at places: A longitudinal study of street segments in the City of Seattle. *Criminology*, 42(2), 283-321.
- Weisburd, D., Groff, E.R., & Yang, S-M. (2012). *The Criminology of Place: Street Segments and our Understanding of the Crime Problem*. New York, NY: Oxford University Press.

- Wellman, B. (2001). Physical place and cyberspace: The rise of personalized networking. *International Journal of Urban and Regional Research*, 25(2), 227-252.
- Westlake, B. G. & Bouchard, M. (2015). Criminal careers in cyberspace: Examining website failure within child exploitation networks. *Justice Quarterly*, 33(7), 1154-1181.
- Westlake, B. G., Bouchard, M., & Frank, R. (2011). Finding the key players in online child exploitation networks. *Policy Internet*, 3(2), 1-25.
- Wheeler, A. P., Worden, R. E., & McLean, S. J. (2015). Replicating group-based trajectory models of crime at micro-places in Albany, NY. *Journal of Quantitative Criminology*, 32(4), 589-612.
- Whine, M. (1999). Cyberspace – a new medium for communication, command, and control by extremists. *Studies in Conflict and Terrorism*, 22(3), 231-245.
- Williams, M. L. & Burnap, P. (2015). Cyberhate on social media in the aftermath of Woolwich: A case study in computational criminology and big data. *British Journal of Criminology*, 56(2), 211-238.
- Wooden, W. S. & Blazak, R. (1995). *Renegade Kids, Suburban Outlaws: From Youth Culture to Delinquency*. Belmont, CA: Wadsworth.
- Wojcieszak, M. (2010). 'Don't talk to me': Effects of ideological homogenous online groups and politically dissimilar offline ties on extremism. *New Media and Society*, 12(4), 637-655.
- Wong, M., Frank, R., & Allsup, R. (2015). The supremacy of online white supremacists – an analysis of online discussions of white supremacists. *Information and Communications Technology Law*, 24(1), 41-73.
- Zhang, Y., Zeng, S., Huang, C.-N., Fan, L., Yu, X., Dang, Y., Larson, C. A., Denning, D., Roberts, N., & Chen, H. (2010). Developing a Dark Web collection and infrastructure for computational and social sciences. In *Proceedings of the 2010 IEEE International Conference on Intelligence and Security Informatics (ISI)*, Atlanta, GA, pp. 59-64.
- Yoo, Y. & Alavi, M. (2004). Emergent leadership in virtual teams: What do emergent leaders do? *Information and Organization*, 14(1), 27-58.
- Zhou, Y., Qin, J., Lai, G., Reid, E., & Chen, H. (2005). Building knowledge management system for researching terrorist groups on the web. In *Proceedings of the 11th Americas Conference on Information Systems (AMCIS)*, Omaha, NE, pp. 2524-2536.
- Zuev, D. (2010). The movement against illegal immigration: Analysis of the central node in the Russian extreme-right movement. *Nations and Nationalism*, 16(2), 261-284.

Appendix A

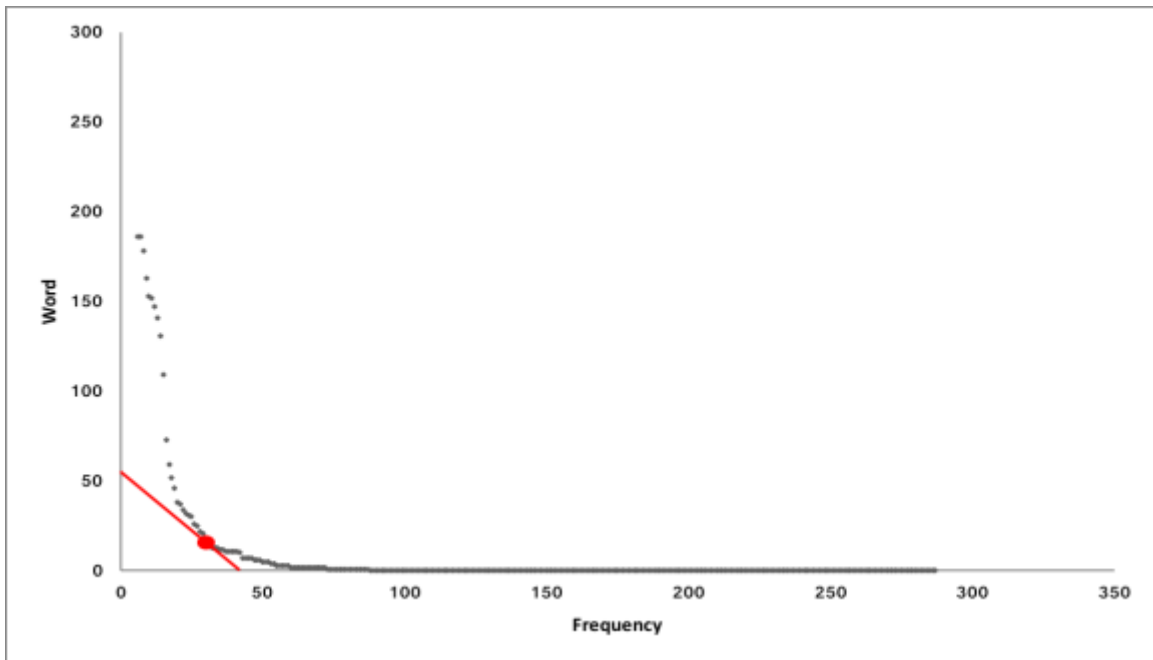


Figure A. Word frequency distribution graph and inflection point for discussions about Jews

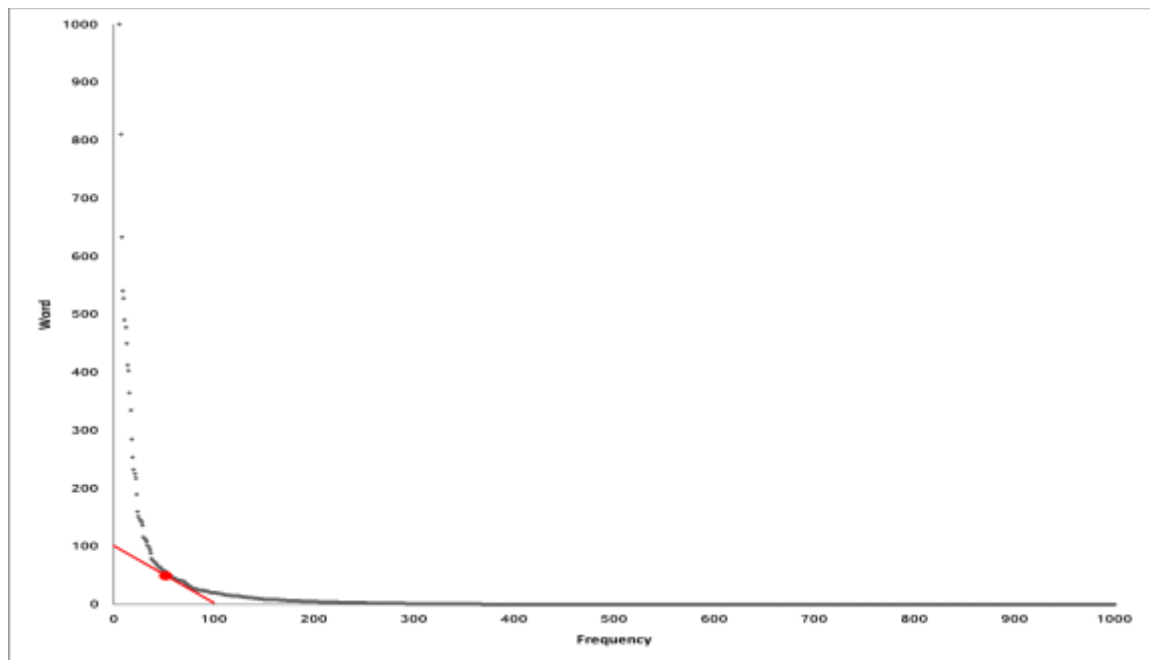


Figure B. Word frequency distribution graph and inflection point for discussions about Blacks

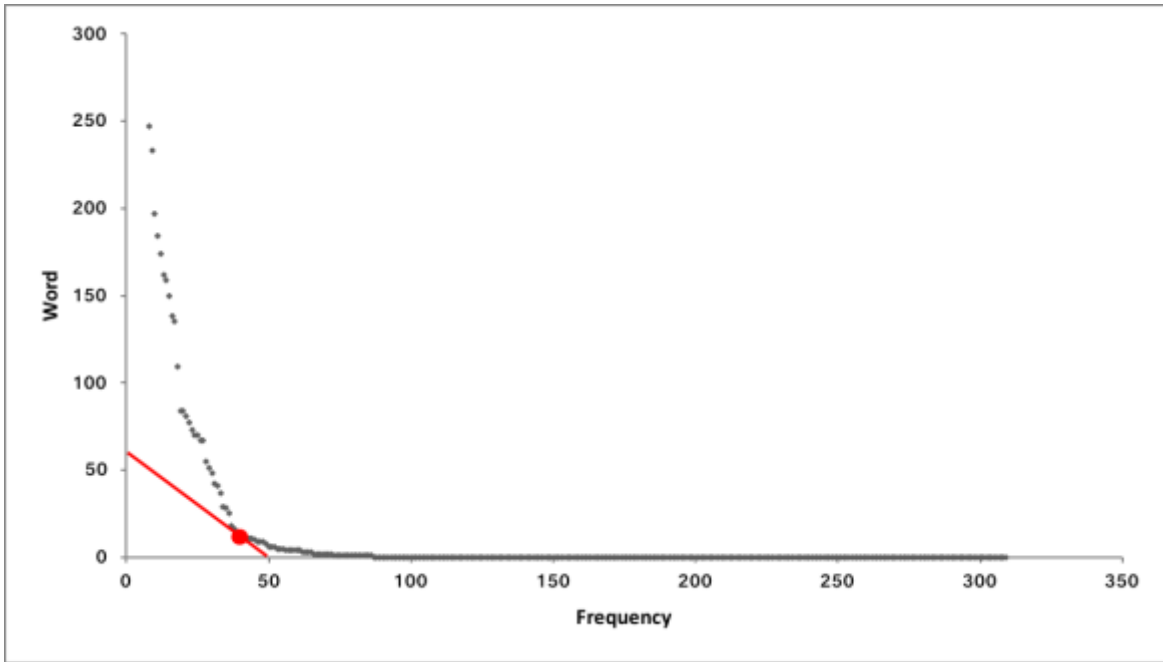


Figure C. Word frequency distribution graph and inflection point for discussions about LGBTQs

Appendix B

Table A. Randomly sampled lists of words for each topic

<u>Jews</u>		<u>Blacks</u>		<u>LGBTQs</u>	
Word	Frequency	Word	Frequency	Word	Frequency
jews	8,988	blacks	3,797	gay	2,148
jew	4,255	africa	1,581	homosexual	948
zionist	1,684	negro	1,000	homosexuals	663
zog	639	negroes	528	gays	522
zionists	619	slaves	450	homo	386
jewry	186	slave	403	lesbian	321
semitite	153	ghetto	217	homos	233
judaism	152	apes	112	fags	184
semites	141	nigga	53	queer	174
hebrew	109	negress	46	fag	159
kike	73	kaffir	45	lesbians	138
jewess	59	coon	42	queers	135
kikes	46	nogs	42	faggot	84
moses	32	spade	40	transgender	84
zogs	30	groid	39	fruits	73
abe	26	kfc	32	bisexual	70
yom	25	darkie	25	fairy	70
shylock	22	voodoo	22	faggots	67
hebrews	21	harlem	20	dyke	48
yids	15	niggas	20	bugger	37
hebe	13	brownie	15	buggers	29
heeb	13	smokey	15	dykes	25
yid	13	wog	13	pansy	18
beanie	11	nig-nog	12	pansies	16
heeb	11	spook	12	buggery	14
ike	7	tyrone	12	lesbianism	11
seinfeld	7	boogie	10	lesbo	11
jewesses	6	fubu	9	tranny	11
hymie	5	spades	9	bisexuals	9
kyke	4	negresses	8	fairies	6
zhid	3	nig-nogs	7	butch	5
zhids	3	dawg	6	lesbos	4
abbie	2	bantus	5	poofter	4
beanies	2	jiggs	5	sods	4
falasha	2	latifah	3	dikes	3
hooknose	2	jigga	2	twink	3
kykes	2	sambos	2	fanny	2
pinocchio	2	africoons	1	flamers	2
falashas	1	bootlips	1	flamer	1
hebes	1	golliwog	1	poofs	1
hymies	1	shiner	1	poofers	1
sheeny	1	zoot	1	trannys	1

Finalized list of keywords for online discussions about Jews, Blacks, and LGBTQs

abbie	harlem	nigga
abe	hebe	niggas
africa	hebes	nogs
africoons	hebrew	pansies
apes	hebrews	pansy
bantus	heeb	pinocchio
beanie	heebz	poofs
beanies	homo	poofter
bisexual	homos	poofers
bisexuals	homosexual	queer
blacks	homosexuals	queers
boogie	hooknose	sambos
bootlips	hymie	seinfeld
brownie	hymies	semitite
bugger	ike	semites
buggers	jew	sheeny
buggery	jewess	shiner
butch	jewesses	shylock
coon	jewry	slave
darkie	jews	slaves
dawg	jigga	smokey
dikes	jiggs	sods
dyke	judaism	spade
dykes	kaffir	spades
fag	kfc	spook
faggot	kike	tranny
faggots	kikes	trannys
fags	kyke	transgender
fairies	kykes	twink
fairy	latifah	tyrone
falasha	lesbian	voodoo
falashas	lesbianism	wog
fanny	lesbians	yid
flamer	lesbo	yids
flamers	lesbos	yom
fruits	moses	zhid
fubu	negress	zhids
gay	negresses	zionist
gays	negro	zionists
ghetto	negroes	zog
golliwog	nig-nog	zogs
groid	nig-nogs	zoot

List of keywords for online discussions about Jews

abbie
abe
beanie
beanies
falasha
falashas
hebe
hebes
hebrew
hebrews
heeb
heebes
hooknose
hymie
hymies
ike
jew
jewess
jewesses
jewry
jews
judaism
kike
kikes
kyke
kykes
moses
pinocchio
seinfeld
semitite
semites
sheeny
shylock
yid
yids
yom
zhid
zhids
zionist
zionists
zog
zogs

List of keywords for online discussions about Blacks

africa
africoons
apes
bantus
blacks
boogie
bootlips
brownie
coon
darkie
dawg
fubu
ghetto
golliwog
groid
harlem
jigga
jiggs
kaffir
kfc
latifah
negress
negresses
negro
negroes
nig-nog
nig-nogs
nigga
niggas
nogs
sambos
shiner
slave
slaves
smokey
spade
spades
spook
tyrone
voodoo
wog
zoot

List of keywords for online discussions about LGBTQs

bisexual
bisexuals
bugger
buggers
buggery
butch
dikes
dyke
dykes
fag
faggot
faggots
fags
fairies
fairy
fanny
flamer
flamers
fruits
gay
gays
homo
homos
homosexual
homosexuals
lesbian
lesbianism
lesbians
lesbo
lesbos
pansies
pansy
poofs
poofter
poofers
queer
queers
sods
tranny
trannys
transgender
twink