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Samford
Undergraduate
Research
Journal

Issue V
Spring 2019

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Social Sciences

Restorative Justice as a Means of Post-Civil War Reconciliation:

The Cases of Rwanda and
Argentina

Rebecca Weatherford

Society views restorative justice as an ineffective tool in restoring peace after a conflict because it does not result in a traditional retributive sentence. My analysis challenges this conventional wisdom, arguing that restorative justice practices can reconcile warring parties following a civil war. This analysis discusses the use of restorative justice practices as an alternative to traditional systems, outlines the process in which restorative justice was used in Rwanda and Argentina, elaborates on the effect the practices had on legislative policies, and discusses the conditions in which restorative justice practices were used to reconcile social sufferings caused by civil wars. The overall aim is to articulate the ways in which restorative justice can be used as a mechanism to unify a country following a violent intrastate conflict.

Introduction

“People were scared...If I talked about my kidnapped son at the hairdresser or supermarket they would run away. Even listening was dangerous. But I couldn't keep quiet. We needed everyone to know, even if nobody believed us. That's probably why they called us the Mad Mothers at first... Of course we were mad...Mad with grief, with impotence.”¹ The Mujeres de la Plaza del Mayo are an example of citizens actively demanding justice for the wrongdoing their government officials committed during the violent civil war in Argentina known as the Dirty Wars. During the Argentine Dirty Wars, between 20,000 to 30,000 Argentine citizens – friends, family, and neighbors – simply “disappeared” at the hands of the military junta government, though their loved ones knew that they would not reappear.² Similarly, a government-supported genocide in Rwanda occurred in 1994 in which the Hutu population murdered the Tutsis who were considered ethnically inferior.³ As with the Argentine civil war, the death toll is a vague estimate, but the UN proposes between 500,000 and 1,000,000 deaths in the 100-day conflict.⁴ This thesis addresses the use of restorative justice practices in Rwanda and Argentina after their respective civil wars. I will examine the use of the gacaca courts in Rwanda and the CO-NADEP truth commissions in Argentina as a methodology of reconciling the warring factions and restoring peace to the nation.

The literature surrounding justice takes the approach that in intrastate conflict only one side suffers and that the sole possibility for the restoration of peace in the nation is through traditional justice systems, such as a court setting. I will argue that restorative justice practices are successful methods of restoring peace and reconciling divided populations in the context of post-civil war states. To prove this argument, I will employ a controlled comparison of two least-likely case studies in a process tracing in order to challenge the common theory that restorative justice is not an effective form of reconciliation. By constructing a timeline in which the use of restorative justice practices caused positive legislative action, I will conclude that restorative justice practices did indeed build environments of reconciliation.

In my study, I will investigate the process in which restorative justice practices following a civil

war can reconcile the warring factions and foster peace within a distinct time period. I will argue that restorative justice is a successful means of fostering reconciliation after a civil war because, as in case studies of Rwanda and Argentina, the practices employed did create peace. The following chapters will include a process-tracing of the Rwandan and Argentine case studies to illustrate in what manners restorative justice practices were used in each state and if they indeed aided in post-conflict reconciliation of the factions involved. Section One outlines the scholarly debate regarding civil wars, restorative justice, the gacaca courts in Rwanda and the truth commissions in Argentina. Section Two introduces my research questions that will guide the analysis. Section Three discusses the research methodology employed. Section Four elaborates on the Rwandan and Argentine cases studies and analyzes their use of restorative justice in bringing peace to the state after their civil wars. Section Five summarizes the analysis and outlines the conclusions of my thesis. It also includes broader implications for the international sphere and possible opportunities for further study.

Cases of This Study

In the Rwandan context of my study, I analyze whether the gacaca courts are an effective manner of using restorative justice in the context of a civil war. Civil war literature states that genocides only cause one side to suffer – in this case, the Tutsis. However, this claim is contrary to the nature of restorative justice. Restorative justice argues that in the Rwandan context, both the Hutus and Tutsis have suffered due to a breach of the social contract. Moreover, little is discussed about the process of social reconciliation as society progressed from the genocide to the redrawing of the province lines. Scholars do not discuss why the redrawing of province lines was seen as necessary and what the role of restorative justice was in the trace of events. My study will focus on the influence of the gacaca tribunals in bringing reconciliation between the Hutus and Tutsis in Rwanda from 1994, which was the end of the genocide, to 2006, which was the year in which the Rwandan government redrew the province lines to make them more ethnically diverse.⁵ I chose to study Rwanda because the genocide remains a prominent case study in

1. Uki Goñi, “40 years later, the mothers of Argentina's ‘disappeared’ refuse to be silent,” *The Guardian*, April 28, 2017.

2. Vladimir Hernandez, “Painful search for Argentina's disappeared,” *BBC News*, March 24, 2013.

3. Scott Straus, “How many perpetrators were there in the Rwandan genocide? An estimate,” *Journal of Genocide Research* 6:1 (August 2006): 85–86, <https://doi.org/10.1080/1462352042000194728>.

4. Marijke Verpoorten, “Le coût en vies humaines du génocide rwandais : le cas de la province de Gikongoro” *Population* 60:4 (2005): 331, <https://doi.org/10.3917/popu.504.0401>.

5. United Nations Environment Programme, *From Post-Conflict to Environmentally Sustainable Development*. Nairobi, 2011.

international relations. The genocide can be classified under my definition of civil war because the Hutu faction became deliberately violent against the Tutsis within the state of Rwanda.

Likewise, little literature discusses the effects of the truth commissions in leading the Argentine government to pass the legislation requiring that the government pay reparations to victims. My study will focus on the effects of the CONADEP truth commissions in 1983 until the passage of the amended reparations law in 1994. This study will contribute to the process tracing of how the victims of the Dirty War persuaded the Argentine government to offer reparations to the victims of the disappearances, though the dictator during the Dirty Wars denied their existence.⁶ I chose to study Argentina's CONADEP truth commissions because, though not typically classified as a civil war, the Dirty Wars are an example of a deliberate infliction of violence of one faction within a state (the government) against another (those with a different political ideology).

Definitions

Violent conflict and civil wars do not pose an isolated security threat. Rather, they affect those outside of a state's physical borders, which makes them prevalent topics in the study of international relations. Several definitions of terms vital to my thesis can be unclear. This section will define key terms as they relate to my argument.

The term "restorative justice" refers to non-traditional manners of justice, as opposed to traditional courts with a judge, jury, and lawyers. Most often, the victim and offender meet with a facilitator to discuss the crime, its effects on the individual and the implications for the greater community. The facilitator is an unbiased third party. Restorative justice practices are the implementation of restorative justice into the greater context of the community. In some instances, this results in community service, shortened prison sentences, or mediation circles in which the victim and offender arrive at an agreement on how reparations should be made properly. Restorative justice, according to Zehr and Mika, both professors of restorative justice, is a "harm-centered approach: the central-

ity of victims, the obligations of offenders (and the meaning of accountability), the role of the community, and the active engagement of all parties in the justice equation are distinctive elements"⁷. Restorative justice practices differ from traditional justice because there is a focus on righting the wrong done to both parties, whereas in traditional justice systems there is retribution for the harm done without significant regard to the reaction of the victim(s).

The term "civil war" refers to a deliberate, violent conflict – resulting in physical harm, bloodshed, or death – between at least two parties within a region that is defined by legally-recognized geographic borders of a state. Although they are rarely, if ever, formally declared⁸, civil wars erupt following the formation of a belligerent force with some militarized organization. The created insurgency denies another faction's power over its own, thus creating a sense of sovereignty for the party. The civil war grows out of the battle over which party has a more reasonable argument for its sovereignty and which has the resources to support itself.

Conceptual Framework

Since the end of the Cold War, civil wars have become the primary mode of organized violence throughout the world.⁹ Because civil wars influence human and international security, they are heavily-studied problems within international relations; state reconciliation following the war, however, is less discussed. The literature discussing state reconciliation views the world from a constructivist perspective. The restorative processes following the civil wars in Rwanda and Argentina required societal reconciliation with the influence of nongovernmental actors and – in the case of Argentina – monetary aid from other states. Moreover, societal paradigms and beliefs about the conflicts influenced the role and extent to which the restorative justice methods foster reconciliation. The literature on this topic takes a constructivist approach, that is, it argues the "identities of states are a variable; they likely depend on historical, cultural, political, and social context".¹⁰

6. Crenzel, Emilio, "Argentina's National Commission on the Disappearance of Persons: Contributions to Transitional Justice." *International Journal of Transitional Justice* 2 (June 17, 2008): 173-191. doi: 10.1093/ijtj/ijn007

7. Zehr, Howard and Harry Mika, "Fundamental Concepts Of Restorative Justice." *Contemporary Justice Review* 1:1 (March 1998): 47-55. SocINDEX with Full Text, EBSCOhost (accessed September 13, 2018).

8. Nathan Canestro, "Towards a practitioner-centric definition of civil war." *Civil Wars* 18:3 (September 2016): 359-377. Academic Search Premier, EBSCOhost (accessed September 13, 2018).

9. Jeffrey T. Checkel, "Theoretical Pluralism in IR: Possibilities and Limits." In *Handbook of International Relations*, eds. Walter Carlsnaes, Thomas Risse, and Beth A. Simmons, 220-241. (London: Sage Publications Ltd., 2013).

10. Ted Hopf, "The Promise of Constructivism in International Relations Theory," *International Security* 23:1 (Summer 1998), 171-200.

Theories of Civil Wars

The prominent argument within the study of civil wars and violent intrastate conflicts by political scientists is that such disputes occur as if they are in silos – the conflict does not receive recognition until it affects the economic, political, or social stability of the international community. The common narrative in civil war theory is that civil wars do not always start when the violence begins. Instead, civil conflicts are instigated by political and economic conflicts that erupt at a specific breaking point because, “reliance on violence as a starting point for civil war misses the possibility that political developments might precipitate a civil war before fighting breaks out.”¹¹ Though intrastate conflict may turn violent in an instant, the tensions that cause the conflict itself mount over a longer period of time. Factions do not evolve into belligerence or militarization until they “cast off their allegiance”¹² believing violent conflict will fix their grievances or until they have nothing left to lose.¹³

The largest assumption within the civil war literature is that the international political sphere does not operate through a realist lens, which would remove the possibility for the violent conflicts to be termed “civil wars”. Statism – the idea that sovereign and internationally recognized states control global politics and economics – requires that states are the dominant actors in a political sphere – not non-sovereign or non-state actors.¹⁴ Most believe that the wars begin and continue solely within the geographical borders of the state. This assumption inherently rules out the possibility for outside intervention – whether that entails peacekeeping or funding from other countries – due to non-intervention norms. Scholars agree that civil wars evolve from heightened emotional tensions and require militarized forces. Moreover, the literature emphasizes that the violent conflict escalates when at least one side seeks resources to weaken the other – typically through burglary.¹⁵

A problem within the civil war literature is that scholars, such as Canestaro, Grier and Walter, maintain the assumption that civil wars cause death and economic upheaval within the state.

Few look at the social cost of the war or how the two warring factions reconcile themselves following the cessation of the violence. Reconciliation is instead often discussed in a psychological context, such as the length of time it takes an individual to cope or the effects of the violence or trauma in an individual’s ability to function on a daily basis.

While the primary focus of civil war studies includes the causes of the war, how to prevent them, and case studies involving economic development after the war, discussions about reconciliation after civil conflict must be had because peace within a state prevents conflict. According to scholar Barbara Walter, “Of the 103 countries that experienced some form of civil war between 1945 and 2009, only 44 avoided a subsequent return to civil war. Thus, even if combatants are able to temporarily end their war, violence tends to break out again over time.”¹⁶ My study is essential in the context of human security because if reconciliation following a civil war can return a divided state to tolerance of one another, the likelihood of another war is diminished, which fosters human security for the people within the state and the surrounding region.

Theories of Restorative Justice

Though the idea of restorative justice has existed for decades, its implementation as an alternative to incarceration and other traditional forms of justice is fairly new. The literature found regarding restorative justice agrees that the practice should focus on the harms of wrongdoing more than the rules that have been broken.¹⁷ As opposed to a focus on punishing the crime committed, the practice should aim to reconcile both the perpetrator and the victim with the final goal of reintegration into society. The practice of restorative justice recognizes that in traditional courts, the victims are not offered closure, but restorative justice offers victims and perpetrators an opportunity for apologies, questions, and closure.¹⁸ While restorative justice exists in many forms, three fundamentals are: emphasis on those who have been wronged, the idea that harm to another person

11. Canestaro, “Towards a practitioner-centric definition of civil war,” 359-377

12. Grier, Robert Cooper, and Supreme Court Of The United States. U.S. Reports: Prize Cases, 67 U.S. 2 Black 635. 1862. Periodical. <https://www.loc.gov/item/usrep067635/>.

13. Barbara F. Walter, “Civil Wars, Conflict Resolution and Bargaining Theory”, in *Handbook of International Relations*, eds. Walter Carlsnaes, Thomas Risse, and Beth A. Simmons, 650-672. (London: Sage Publications Ltd., 2013).

14. Azadany, Amanullah Haidary. “How Would a Realist Explain the Civil War in Afghanistan?” *European Scientific Journal* 12:8 (March 2016): 401-407.

15. Checkel, “Theoretical Pluralism in IR: Possibilities and Limits,” 220-241.

16. Walter, “Civil Wars, Conflict Resolution and Bargaining Theory,” 650-672.

17. Zehr and Mika, “Fundamental Concepts Of Restorative Justice,” 1-2.

18. United Nations Office on Drugs and Crime, *Handbook on Restorative Justice Programs*. (2006), https://www.unodc.org/pdf/criminal_justice/Handbook_on_Restorative_Justice_Programmes.pdf

creates liability and a responsibility to fix it, and the only way to surpass an issue is to reconcile the victim and the offender.¹⁹

A common assumption found in the restorative justice literature is that its focus on fixing the root cause of an issue places a new emphasis on victim–perpetrator reconciliation. However, as the literature recognizes, reconciliation is only possible if both parties are willing to work together to surmount the issue. Another assumption is restorative justice practices work best with small-scale offenses because these are the cases in which it is most commonly used. The literature encouraged focuses their qualitative studies on minor infractions, such as drug violations or classroom disagreements, as successful examples of restorative justice. Therefore, the major problem with this literature is that it lacks comparative case studies of restorative justice practices following state-wide disturbances. Because there is diversity in the conflicts that are resolved and the manifestations of restorative justice practices that exist internationally, there is little discussion about which method best functions on national level, let alone with any specification to the style of crime that was endured.

Because of the absence of a comparative analysis of two distinct forms of restorative justice on a national scale in the international literature, my thesis will attempt to contribute to a new and evolving perspective on restorative justice practices, which will validate its use for which many non-governmental organizations are already advocating internationally. Research proving the successes of restorative justice in varying locations and cultures will prove that the practices are adaptable for all states, that it can be useful alternatives to incarceration, and that it provides a means of reconciliation after a variety of conflicts.

Theories of the Rwandan Gacaca Courts

One example of recent nation-wide restorative justice following a civil war, the gacaca courts in Rwanda after its genocide in 1994, has caused much debate in literature, specifically two dominant – and contrasting – theories. Generally, the

literature states that the gacaca tribunals allowed for Rwandans to speak openly about their experiences during the genocide and gave people the sense that they were personally receiving justice.²⁰ Similarly, some scholars in the international community argue that the gacaca courts were successful because they pushed government to pass legislation to promote racial reconciliation in a citizen's daily life. On the other hand, other scholars argue that the courts were not successful, though there is not a consensus on the reason. The structural nature of the gacaca courts historically focused on small-scale infractions, such as theft or libel, and therefore set the norm that the crimes against humanity committed during the genocide were not taken seriously.²¹ Others argue that the flaw in the gacaca tribunals came from the victims viewing the perpetrators as dangerous criminals who are unworthy of forgiveness.²²

A major assumption in the literature is that the courts were used as an alternative to the traditional prison sentence due to the magnanimity of the genocide. Because the government charged such a large sum of Hutus after the violence, overcrowding in the prisons, lack of legally trained officials in the nation, and unrest among judges demanded another way to bring justice to the nation.²³ The problem with the literature available is that the role of the courts to the political legislation following the implementation of the new democratic government is an understudied topic. Scholars are missing the link that proves whether or not the gacaca tribunals were successful in aiding state-wide reconciliation.

Theories of the Argentine Truth Commissions

Like in the case of the gacaca courts in Rwanda, scholars disagree regarding the successfulness of the Argentine truth commissions created by the Comisión Nacional sobre la Desaparición de Personas (CONADEP). Some argue that the commissions were successful methods of restorative justice because the victims and their families were allowed to construct a truth regarding what happened during the Dirty Wars, though they were negated and rejected by the Argentine dictator.²⁴

19. Gerry Johnstone and Daniel W. Van Ness, "The meaning of restorative justice" In *Handbook of Restorative Justice*, ed. Gerry Johnstone and Daniel W. Van Ness, 5–24 (Devon, United Kingdom: Willan Publishing, 2007).

20. Charlotte Clapham, "Gacaca: A Successful Experiment in Restorative Justice?" (PhD diss., University of Sheffield, 2012).

21. Stef Vandeginste, "Rwanda: Dealing with Genocide and Crimes against Humanity in the Context of Armed conflict and Failed Political Transition," In *Burying the Past: Making Peace and Doing Justice after Civil Conflict*, ed. Nigel Biggar, 251–285 (Washington, D.C.: Georgetown University Press, 2003).

22. Cori Wielenga and Geoff Harris. "Building peace and security after genocide: the contribution of the gacaca courts in Rwanda," *African Security Review* 20:1 (March 2011): 15–25. doi: 10.1080/10246029.2011.561008.

23. Penal Reform International. *Access to justice in sub-Saharan Africa: the role of traditional and informal justice systems*. (London: Astron Printers Ltd., 2000), <http://www.gsdc.org/docs/open/ssaj4.pdf>

24. Crenzel, "Argentina's National Commission on the Disappearance of Persons: Contributions to Transitional Justice," 175.

CONADEP conducted investigations that crafted a new norm focused on the wrongdoing done during the war and that cultivated a societal desire for the truth of what happened under the authoritarian regime.²⁵ Human rights organizations and international jurisprudence laws support this theory.²⁶ Other sources cite the continued emotional scar from the civil war as evidence that the truth commissions were not successful.²⁷ This stance is difficult to support, however, because after a trauma, it is difficult to forgive and perform daily duties as if they never happened. Much of the literature discusses the cultural climate of Argentina following the Dirty Wars, particularly the institution of democracy and the implementation of CONADEP. Argentina was divided socially and suffered from thousands of disappearances. The literature assumes that because those who caused the disappearances continue to walk free, the state will be difficult to reconcile, and restorative justice “may be considered as utopian”.²⁸ The suffering was different for each person involved, which divided the social sphere and polarized opinions on the government’s offer of reparation payments to the victims and families of the disappeared, as well as the amnesty laws for those involved in the disappearances.²⁹ The major problem within the CONADEP literature is that the majority of the works were written in the 2000s or 2010s, thus making the conclusions drawn about the effectiveness of the truth commissions obsolete since reconciliation is time-sensitive. Cooperation between what were once warring parties can foster peace as time progresses.

Research Questions

Using the available literature, the research questions of this paper study the functionality and success of restorative justice practices in the context of Rwanda and Argentina after their civil wars. This thesis investigates the extent that restorative justice practices restore peace following a civil war. More specifically, it investigates the external factors that influence, how the role of social re-

sources affect the outcomes of restorative justice method, and what restorative justice mechanism is the most productive. Finally, the thesis questions the extent that restorative justice practices restored peace in Rwanda and Argentina and repaired the cultural divide that permitted the war.

Civil wars and human security are issues within the larger security framework that is central to the study of international relations. Security threats in one state, as seen in both Rwanda and Argentina, can cause instability in the region through economic turmoil, refugee crises, and fear. The goal of this thesis is two-fold: to understand further how parties can be unified peacefully after a conflict and to promote a cycle of justice that can improve the social environments to Rwanda and Argentina, as well as other countries.

Research Methods

Case studies are most often used for investigations in the social sciences because they “have illuminated virtually every subject studied by political economists”.³⁰ Moreover, according to Professor Charles Lipson, case studies allow for an exploration of the behavior of actors and how their actions affect other circumstances.³¹ Because it focuses on a small subset of actors in comparison to large-n qualitative studies, a case study can investigate a given issue in greater depth, which therefore allows it to explore the motivations of an actor’s actions.³² The advantages of a case study make it ideal for my research because I am seeking to understand the cause of the success or failure of restorative justice practices in Rwanda and Argentina.

To this purpose, this thesis will investigate two cases and will utilize the least-likely, and therefore theory-confirming, type of case study.³³ Evaluating two cases allows the opportunity for affirmation or denial of the theory, because as Professor Emerita of International Relations, Odell states, “A claim that the theory is valid in general cannot be considered established without having observed other cases.”³⁴ The least-likely type tests

25. Crenzel, “Argentina’s National Commission on the Disappearance of Persons: Contributions to Transitional Justice,” 175.

26. “Argentina: The ‘Truth Trials.’” Human Rights Watch. http://pantheon.hrw.org/reports/2001/argentina/argen1201-04.htm#P215_57412 (accessed September 16, 2018).

27. Madison Chapman, “Argentina’s Soiled National Fabric: The Dirty War, Trials, and Truth Commissions.” In *Berkeley Political Review* (November 21, 2015).

28. Ayeray Medina Bustos, “Paths of Truth, Justice and Reconciliation in Argentina” (paper presented at the 51st Annual Conference of the Societas Ethicas, Maribor, Slovenia, August 2014), 120.

29. Nora Sveaass and Anne Margrethe Sønneland, “Dealing With the Past: Survivors’ Perspectives on Economic Reparations in Argentina”. *International Perspectives in Psychology: Research, Practice, Consultation* 4:4 (2015): 230-231.

30. John S. Odell, “Case Study Methods in International Political Economy”, *International Studies Perspectives*, 2 (2001): 161-176.

31. Charles Lipson, *How to Write a BA Thesis* (Chicago: The University of Chicago Press, 2005).

32. Odell, “Case Study Methods in International Political Economy,” 169.

33. *Ibid.*, 165-166.

34. Odell, “Case Study Methods in International Political Economy,” 171.

the case study that is the most challenging to the stated theory. As Lipson explains, in a “hard case”, the “case is deliberately biased against you... [and if] it works there, it’s obviously a strong argument.”³⁵ If the least-likely case, after exploration, follows as the theory would predict, it offers the strongest support for the theory.

For this thesis, least-likely case studies can challenge the prevailing theory. Rwanda serves as a least-likely theory type because after the state’s decision to install the *gacaca* courts, it created a societal disturbance for the courts were historically viewed as a tool to handle small-scale infractions, such as libel and theft. Therefore, victims complained that the courts set a norm for evaluating the crimes against humanity committed during the genocide not as seriously as they should.³⁶ Similarly, Argentina poses itself as a least-likely case study because following the Dirty Wars and the democratization of the state, Argentine citizens were suspicious of their government. Thus, upon the construction of the CONADEP truth commissions, there was much hesitation in trusting the government-led agency to foster reconciliation in the community.³⁷

This study uses a mixed methodology of process tracing and controlled comparison. Process tracings, as explained by Professor Stephen Van Evera, “are often unique – no other theories predict the same pattern of events... hence process tracing often offers strong test of a theory”.³⁸ Process tracings allow the investigator to study the actions of actors and how these actions cause a specific outcome.³⁹ Unlike quantitative studies, process tracing studies account for the antecedent conditions and complex factors of a given event.⁴⁰ These benefits have made case studies a popular methodology “involved in writing almost any case study”.⁴¹ The thesis also employs a controlled comparison, which “explores paired observations in two or more cases” in order to prove “if values on the pairs are congruent or incongruent with the test theory’s predictions”.⁴² Though Van Evera mentions that controlled comparisons are often

difficult to prove causality because the two cases are often not identical,⁴³ Odell argues, “A claim that the theory is valid in general cannot be considered established without having observed other cases”.⁴⁴ Therefore, a controlled comparison between Rwanda and Argentina can bolster the argument that restorative justice practices are functional in restoring peace after violent civil conflicts.

I have chosen Rwanda and Argentina as cases for this study because both cases prove to be rich in data, which Stephen Van Evera argues is vital in process tracing because the methodology requires a substantial amount of data.⁴⁵ Because of the atrocities in both civil wars, there has been great coverage in both of their aftermaths and both of their reconciliation agents put in place by the new governments. The abundance in data from the government documents, non-governmental organization (NGO) statements, and secondary sources prove useful to formulate an understanding of the process in which the restorative justice institutions in each state fostered peaceful reconciliation. Moreover, the restorative justice practices used in Rwanda and Argentina mirror current policy concerns internationally. Because other states, such as the United States, Australia, and South Africa are implementing restorative justice practices to combat mass incarceration, the case studies in Argentina and Rwanda can prescribe policy answers to these states.⁴⁶

I will use qualitative data to analyze my theory. The qualitative data will include government decisions, legislation that was passed, and testimonies of those involved in courts of each country. Qualitative research will prove useful in supporting my theory because it is “getting at the processes that led to these outcomes, process that experimental and survey research are often poor at identifying”.⁴⁷ While there is a common assumption that quantitative data provides a stronger case than qualitative research, qualitative case studies provide proof of “how x plays a role causing y” because quantitative data focuses on “to what extent variance in x causes variance in y”.⁴⁸

35. Lipson, *How to Write a BA Thesis*, 103.

36. Vandeginste, “Rwanda: Dealing with Genocide and Crimes against Humanity in the Context of Armed conflict and Failed Political Transition.”

37. Anthony W. Pereira, *Political (In)justice: Authoritarianism and the Rule of Law in Brazil, Chile, and Argentina*. (Pittsburgh, PA: University of Pittsburgh Press, 2005). 117-139.

38. Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca: Cornell University Press, 1997), 65.

39. *Ibid.*, 68.

40. *Ibid.*, 66.

41. Odell, “Case Study Methods in International Political Economy,” 167.

42. Van Evera, *Guide to Methods for Students of Political Science*, 56-57.

43. *Ibid.*, 57-58.

44. Odell, “Case Study Methods in International Political Economy,” 171.

45. Van Evera, *Guide to Methods for Students of Political Science*, 79.

46. *Ibid.*, 83-84.

47. Joseph A. Maxwell, *Qualitative Research Design: An Interactive Approach* (Thousand Oaks, CA: Sage Publications).

48. Maxwell, *Qualitative Research Design: An Interactive Approach*, 31.

Case Study: Rwanda

When the plane carrying Rwandan President Juvenal Habyarimana – a Hutu – was shot down in April of 1994, the political and social tensions that had been building in the country erupted into a violent three-month long civil war pitting the “superior” Hutu population against the “inferior” Tutsis.⁴⁹ The violence erupted due to tensions created by a social hierarchy that was constructed during the nation’s colonial era.⁵⁰ Reconciliation after the war began with intervention and peacekeeping efforts by the United Nations and their creation of International Criminal Tribunal for Rwanda (ICTR).⁵¹

The ICTR, a traditional court was established for, “the prosecution of persons responsible for serious violations of humanitarian law would... contribute to the process of national reconciliation”.⁵² The tribunals were responsible for convicting high-level criminals of the genocide, such as government and faction leaders, but they did nothing to bring justice to the lower-level and community-based perpetrators.⁵³ While the ICTR did attempt to bring justice to the victims of the genocide on a national scale, little was done to console the individual or reconcile the wrongdoing on a personal level.⁵⁴ The criminals – neighbors and family members of the deceased – continued to roam freely. Most of them lived without accountability for the violence they committed, and it was “acknowledged that many people compromised in the massacres remain free”.⁵⁵ To that end, the tribunals were largely ineffective for fostering social reconciliation for the common Rwandan citizen because, “the main sentiment in Rwanda regarding the ICTR may well be massive ignorance: ordinary people know or understand next to nothing about the tribunal’s work, proceedings, or results”.⁵⁶ The main success of the ICTR was the creation of culpability for those who allowed the genocide to ensue.

While the tribunals crafted the narrative that the ethnic cleansing of the genocide was a violation of international standards of human rights,

they did not force liability on an individual or on the communal level, which was essential to reconciling the two ethnic groups within the provinces of the state and restoring a normal daily functionality. The ICTR tribunals, therefore, “are incapable of approaching those who have experienced the genocide... The Rwandans have placed great hope in the ICTR. They are very disappointed.”⁵⁷ Moreover, the tribunal judges were not necessarily of Rwandan nationality. Instead, they were from member states of the United Nations. Judges were not required to be familiar with the genocide or the culture in which the ethnic cleansing took place. While the United Nations (UN) attempted to bring justice to Rwanda, the ICTR ignored the need for state-level reconciliation and restoration of peace through domestic determination. The ICTR took an important first step in generalizing the violence within the civil war as inappropriate and condemning it as a violation of human rights. It did not, however, foster reconciliation. As with most traditional courts, the perpetrator received a sentence for the injustice he or she committed, but that was all. The common Rwandan person was not included. They were not offered an opportunity to discuss the beatings or sexual violence they endured, and as a result, they were prevented from reconciling themselves with their perpetrator. The ICTR conveyed the message that, while individuals were involved in the injustices and harms of the war, they were not needed – or wanted – in the process of restoring peace and justice to their own nation.

As the first tribunal in the international sphere to sentence perpetrators in a genocide, the ICTR set the precedent that the violations of humanitarian law in the 1994 Rwandan Civil War grew out of social tensions between ethnicities. While legal repercussions were necessary to force accountability for the injustices, the state needed to overcome its social differences and promote a unified nation that recognized the its past and looked to dissolve racial differences. Therefore, with the goal of promoting social reconciliation and restoring peace between the two divided ethnicities, the new Rwandan democracy instituted a

49. Barnett, Michael. *Eyewitness to a Genocide: The United Nations and Rwanda* (Ithaca, NY: Cornell University Press, 2002).

50. Peter Uvin, “Reading the Rwandan Genocide,” in *International Studies Reviews* 3:3 (Autumn, 2001): 75–99.

51. “Background Information on the Justice and Reconciliation Process in Rwanda” <http://www.un.org/en/preventgenocide/rwanda/about/bgjustice.shtml>

52. Robert D. Sloane, “The International Criminal Tribunal for Rwanda,” in *The Rules, Practice, and Jurisprudence of International Courts and Tribunals*, ed. Chiara Giorgetti (Martinus Nijhoff): 261–282.

53. Megan Lowe, “The International Criminal Tribunal for Rwanda,” in *Managing Conflict in the Developing World: Essays for Emerging Scholars* 2 (December, 2014): 49–62.

54. *Ibid.*, 50.

55. International Crisis Group. *Five years after the genocide in Rwanda: Justice in question.*

56. Peter Uvin and Charles Mironko, “Western and Local Approaches to Justice in Rwanda,” in *Global Governance* 9:2 (June 2003): 219–231.

57. Vandeginste, “Rwanda: Dealing with Genocide and Crimes against Humanity in the Context of Armed conflict and Failed Political Transition.”

new form of the nation's historic gacaca courts in 2001 as a method of restorative justice.⁵⁸ Historically, Rwanda used the gacaca courts as a regional-level and community-based form of justice to reconcile minor infractions.⁵⁹ It is important to note that "the custom was based on fundamental values of respect for the human being which today are no longer in existence".⁶⁰ The gacaca courts were a restorative alternative to the traditional and limited ICTR tribunals that only focused on national-level infractions and inherently ignored personal wrongdoings. Unlike the UN's ICTR, the restorative justice alternative gave the Rwandan communities a sense of control over the justice and reconciliation in their post-civil war state.⁶¹ The restorative justice aspect of the Rwandan gacaca courts gave a voice to the victims of the civil war that were previously silent in the post-conflict state or ignored during the ICTR tribunals. Within a year of its implementation, international human rights organizations reported that "the justice side of the Gacaca programme is well under way".⁶² Although the brutality of the genocide still traumatized most, the restorative justice practices of the gacaca courts psychologically and emotionally gave the perpetrators an opportunity to rectify their wrongdoings directly with the victims. This process gave the Tutsis an opportunity to be heard as citizens with the same rights as their Hutu neighbors – an equality and freedom to which they were not accustomed.

Moreover, the pattern of equal rights regardless of ethnicity continued in 2002 with the drafting of the post-civil war Rwandan Constitution. Prior to the constitution's legalization, those who worked for the drafting commission surveyed citizens in each province of the nation so that a conversation of the constitution and the opinions of the state's citizens could be included.⁶³ In this manner, the Constitution of 2003 served to be truly democratic in its representation of all Rwandan people – especially when it states, "We, the People of Rwanda... resolved to fight the ideology of genocide and all its manifestations and to eradicated ethnic, regional and any other form

of divisions".⁶⁴ Without the dialogue commenced under the influence of the restorative justice practices in the gacaca courts, the Tutsi population of Rwanda would not have realized their equal rights as citizens following their attempted extermination during the state's civil war. The democratic process of drafting the new constitution serves as a witness to the power of the gacaca courts. These courts began an environment of peace because of the fact that "genuine public participation requires social inclusion", and "the prerequisite of any livable alternative to the horrors many nations have experienced is that all parties are willing to try to keep talking about their disagreements."⁶⁵ The gacaca courts and the diffusion of constitution drafting committee members into each Rwandan province prove this point.

Furthermore, the restorative justice prevalent in the gacaca courts challenged what could have been seen as a pardon for crimes against humanity. In July of 2005, the Rwandan authorities published a statement declaring that they would release about 36,000 prisoners who partook in the 1994 killings due to overcrowding in the state prisons.⁶⁶ Upon their release, the detainees would have a trial within the provincial gacaca courts.⁶⁷ The release of such a large quantity of criminals and their subsequent application to the jurisdiction of the gacaca courts attests to the success of the restorative justice practices functioning in each province of Rwanda. If the gacaca courts were not bringing some form of justice or reconciliation to the state, the government would not have seen them as a viable alternative to the traditional courts run by the state. The "tribunals will introduce innovative approaches to the criminal process of Rwanda, such as work related penalties (community service), which will help the re-integration of criminals in society".⁶⁸ Just as community service is used internationally as community-based form of reparations for an injustice to the community, so too did the gacaca courts use work-related penalties to foster peace within two historically divided ethnicities that must live alongside one another in their post-conflict state, which some claim "is a

58. Emma M. Costello, "Justice for Whom? The Gacaca Courts and Restorative Justice for Survivors of Sexual Violence in Rwanda" (BA Thesis, University of Michigan, 2016).

59. Vandeginste, "Rwanda: Dealing with Genocide and Crimes against Humanity in the Context of Armed conflict and Failed Political Transition."
60. C. Ntampaka, "Le retour à la tradition dans le règlement des différends: Le gacaca du Rwanda," *Dialogue* (October–November 1995): 96 (translation of Stef Vandeginste)

61. Clapham, "Gacaca: A Successful Experiment in Restorative Justice?"

62. Penal Reform International. *PRI Research on Gacaca Report, Rapport I: Gacaca jurisdictions and its preparations, July – December 2001*. London: Astron Printers, Ltd, 2002.

63. United States Institute of Peace (USIP), *Special Report: Democratic Constitution Making*, no. 103 (July 2003).

64. Government of Rwanda, *Constitution of 2003* (May 2003).

65. USIP, *Special Report: Democratic Constitution Making*.

66. Home Office, United Kingdom, *Operational Guidance Note: Rwanda*, no. 7 (January 2007).

67. "Release of thousands of prisoners begins," *IRIN*, August 1, 2005.

68. Penal Reform International. *PRI Research on Gacaca Report, Rapport I: Gacaca jurisdictions and its preparations, July – December 2001*.

good thing".⁶⁹

Restorative justice practices of the gacaca courts fostered an increase in democratic participation of the previously divided Hutus and Tutsis. In 2001, the Rwandan government saw the necessity to take a further step in the establishment of peace for the region: redrawing the ethnically segregated provincial lines.⁷⁰ The redrawing of provincial lines in 2006 bring greater ethnic diversity. The Rwandan democracy's "national reconciliation discourse is based on the strategy that ethnicity in Rwanda was invented... all references to Hutu, Tutsi and Twa are suppressed (and occasionally accused of being divisive)".⁷¹ The election to ignore ethnicity that was hitherto a decisive characteristic speaks to Rwanda's transition since the end of the civil war in 1994. The "decentralization milestone" that made "a clear break with the past and promote[d] power sharing and reconciliation" in the state indubitably stemmed from the racial equality between the Hutu and Tutsi populations that was established during the balancing of powers within the gacaca courts. The value of their ethnicity within the Rwandan nation that was recognized during the gacaca courts legitimized the suffering of the Tutsis during the Hutu-led genocide, which forced acknowledgement of the implicit societal tensions that inherently prevented racial equality, such as the segregated province lines before 2006.

The use of restorative justice in the Rwandan gacaca courts as a political and social method for justice was essential in promoting social reconciliation. The use of the courts as an alternative to overcrowding in the state prisons and to the lack of legal professionals gave the victims of the genocide an opportunity to speak about their suffering, cope with their traumas, and demand justice from their government and neighbors.⁷² Though the state had been ethnically – and thus, socially and politically – divided since its colonization, its strides to recognize the dangers of racial division and overcome them since the genocide serves as a blueprint for states still struggling to overcome racial boundaries, like the United States.

The ability of the gacaca courts to foster peace through coexistence and cooperation of

formerly divided ethnicities is impressive. Many Rwandans were hesitant that the use of gacaca courts would downplay the terror and suffering caused by the perpetrators of the genocide because of their historical use for minor infractions. The courts have served as a foundation for equalizing both parties and legitimizing the pain experienced by the ethnic tensions. Overall, the gacaca courts in Rwanda were successful in fostering social reconciliation after the 1994 civil war because, "most of the people who participated in the gacaca courts firmly state that they have paved the way of reconciliation among the Rwandan, even though the memory of the genocide is still present... Gacaca is credited with laying the foundation for peace, reconciliation and unity in Rwanda."⁷³

Case Study: Argentina

In the 1970s, the Argentine government – though nominally run by Juan Peron and later his wife and Vice President, Isabel Martinez de Peron – was largely under the militarized control of Jorge Rafael Videla.⁷⁴ The Argentine military junta rarely used traditional courts to administer justice during the Dirty Wars. Instead, detention centers, called "terror courts" were used to prosecute citizens convicted of political dissidence against the regime.⁷⁵ Though the military regime was required by law to release the political prisoners within fifteen days, those in jail were often tortured and never seen again, receiving the title "desaparecido" or "disappeared".⁷⁶

With the fall of Videla's military regime and the installation of a democratic regime at the end of the Dirty Wars in 1983, the government recognized the need for social reconciliation following the statewide conflict. Thus, President Raúl Alfonsín created the National Commission on the Disappearance of Persons (CONADEP) truth commissions, which ran for only nine months.⁷⁷ The CONADEP truth commissions were a manifestation of restorative justice practices because they were not traditional justice courts in that they could not convict those who perpetrated the injustices or caused the disappearances of Argentina citizens. Instead, the truth commissions gave the victims

69. Penal Reform International. *PRI Research on Gacaca Report, Rapport I: Gacaca jurisdictions and its preparations, July – December 2001.*

70. United Nations Environment Programme, *From Post-Conflict to Environmentally Sustainable Development.*

71. Susanne Buckley-Zistel, "Remembering to Forget: Chosen Amnesia as a Strategy for Local Coexistence in Post-Genocide Rwanda," in *Africa: Journal of the International African Institute* 76:2 (2006): 131–150.

72. Clapham, "Gacaca: A Successful Experiment in Restorative Justice?"

73. "Gacaca Community Justice: Legacy," <http://gacaca.rw/about/legacy-2/>.

74. Maria Seoane and Vicente Muleiro, *El Dictador: La historia secreta y pública de Jorge Rafael Videla* (Sudamericana, 2016), 13.

75. Pereira, *Political (In)justice: Authoritarianism and the Rule of Law in Brazil, Chile, and Argentina.* Pittsburgh, 119.

76. *Ibid.*, 120.

77. Priscilla B. Hayner, "Argentina: National Commission on the Disappeared, 1983–1984," in *Unspeakable Truths: Transitional Justice and the Challenge of Truth Commissions*, (New York: Routledge Taylor & Francis Group), 45–47.

and their families an environment in which they could speak openly about the injustice done to them and demand justice from the government. The government and international human rights groups applauded the creation of CONADEP because the truth commissions were based on doctrine and jurisprudence that focused on the right to the truth, specifically that “the relatives had the right to know the truth about the fate of their loved ones”.⁷⁸ The international sphere saw the CONADEP truth commissions as a positive step taken by the Argentine government in reconciling the military regime and citizens. They were one of the first changes brought to the nation by the new government.⁷⁹ While it is impossible to measure quantitatively the success of the truth commissions, the role of CONADEP in beginning a national dialogue of the injustice done at the hands of the military regime is highly significant. Without the environment in which victims of the Dirty Wars’ disappearances could safely discuss the injustices they endured, social reconciliation could not have begun. The CONADEP commissions renewed the victims’ voices and proved to the state and international spheres that there indeed was a breach of human rights laws that required investigation and amendments.

After the dissolution of the CONADEP truth commissions, the organization published its findings in its report, *Nunca Más*, in 1984.⁸⁰ The report records known statistics – though they are only rough estimates – of citizens who were held, tortured, and “disappeared” by order of the militarized government during the Dirty Wars. Following its description of the horrors of the Dirty Wars and eye-witness accounts of victims or their families, CONADEP recommends to the Argentine government that: “appropriate laws be passed to provide the children and/or relatives of the disappeared with economic assistance, study grants, social security and employment and, at the same time, to authorize measures considered necessary to alleviate the many and varied family and social problems caused by the disappearances”.⁸¹ CONADEP does not announce that the recommended reparations payment will alleviate the emotional,

physical, or social pains caused by the Dirty Wars. Instead, *Nunca Más* suggests that measures will “ensure that this curtailment of human rights is never repeated in Argentina”.⁸² It is impossible to assume that the suggestions made by CONADEP could instantaneously reconcile the wrongdoings done by the military to its people. However, it is vital to note that suggestions made by this governmental agency set the precedent that reparations needed to be made as an act of contrition and acknowledgement of the harm done during the civil war.

In the midst of the social reconciliation following the CONADEP truth commissions and the publication of *Nunca Más*, Argentina faced hyperinflation and economic instability that is often associated with the dissolution of a violent state conflict and the creation of a new government. The economic crisis forced the resignation of President Raúl Alfonsín and resulted in the early succession of Carlos Menem in 1991.⁸³ The Menem administration pegged the new Argentine peso to the United States dollar in 1991. As a reaction, the inflation rate skyrocketed to 27 percent.⁸⁴ The pegging, known as the Convertibility Law, produced short-term increased productivity that domestic and international economists questioned whether or not it would be sufficient to stabilize the state. As a means of stabilization, the International Monetary Fund (IMF) intervened “to preserve the exchange rate regime with a substantial commitment of resources”.⁸⁵ Without the intervention of the IMF as a financial resource during the Argentine economic crisis, the state would not have recovered from its debt following the post-Dirty War era. Debt would have prevented the possibility of the state to pass legislation requiring the government to pay reparation laws to the victims of the Dirty Wars or the families of the “disappeared” as outlined in *Nunca Más*.⁸⁶

The CONADEP truth commissions, the publication of *Nunca Más*, and the economic crisis under the presidency of Carlos Menem were all contributing factors to the 1994 reparations laws passed by the Argentine government that vowed reparations payments to the victims of the Dirty

78. “Argentina: The ‘Truth Trials.’”

79. Victor Espinoza Cuevas, María Luisa Ortiz Rojas and Paz Rojas Baeza, “Truth Commissions: An Uncertain Path?” Santiago de Chile: Association for the Prevention of Torture, 2002.

80. Comisión Nacional sobre la Desaparición de Personas, “Nunca Más”, (1984).

81. *Ibid.*

82. *Ibid.*

83. Fabian Echegaray and Carlos Elordi, “Public Opinion, Presidential Popularity, and Economic Reform in Argentina, 1989–1996,” in *Public Support for Market Reforms in New Democracies*, ed. Susan C. Stokes (Cambridge University Press, 2012), 187–214.

84. International Monetary Fund, “The IMF and Argentina: 1991–2001”, (2004).

85. *Ibid.*, 3.

86. Comisión Nacional sobre la Desaparición de Personas, *Nunca Más*.

Wars or the families of the “disappeared”.⁸⁷ The new legislation was a welcomed act invoking social and political reconciliation that was absent during the 1986 and 1987 policies that abolished the possibility for legal prosecution for violations of human rights during the reign of the military junta.⁸⁸ The legal action of the Argentine government – which repealed its previous refusal to admit the wrongdoing of the military regime – continued the social environment that allowed the victims of the disappearances to cope with the injustices. While some victims saw the reparations as a “means by which President Menem tried to “buy” silence and compliance”, others commented that receiving the, “reparation helped my economic situation and it was also a way of feeling some recognition, to be in the place of a survivor” because sharing their experiences was, “quite good for me”.⁸⁹

The CONADEP truth commissions established by President Raúl Alfonsín were influential in restoring peace to Argentina after the conclusion of the military junta’s rule and the forced disappearances of citizens during the Dirty Wars. The truth commissions allowed Argentine citizens – especially those who did not live in large cities such as Buenos Aires or those who lived in poverty and therefore did not have access to legal resources – to file a report and demand justice for the loss of their loved ones.⁹⁰ Moreover, the commissions also received statements from military personnel who were willing to give their testimony – at the time protected by amnesty laws – which legitimized the suffering and statements of those who were victims of the civil war. The restorative justice practices employed by CONADEP created a public truth that the disappearances during the Dirty War did indeed occur, though the dictator stated otherwise.⁹¹ Therefore, CONADEP offered a greater access to justice and societal reconciliation.

The use of restorative justice in Argentina following the state’s civil war crafted a political and legal recognition of the need for forgiveness, which is essential in promoting social reconciliation. The vast attendance and use of the truth commissions gave victims throughout the state the opportunity to speak about, process, and cope with the traumas they endured. It is laudable that over 1,400 depositions were held under the CONADEP truth commissions.⁹² During the military

junta, the National Penal Court (Cámara en lo Penal de la Nación) and therefore the entirety of the judicial branch of the government only served to incite fear in the country’s people. Argentina was not politically or socially unified before the Dirty Wars began, and therefore one cannot expect the country to be unified even after the CONADEP truth commissions. However, the fact that so many people revealed the evil of the dictatorship that politically and socially divided Argentina serves as proof that the restorative justice practices served as a motivating force that demanded action from the passive albeit new democratic government.

The country was socially divided due to the opposing social tension of the victims and perpetrators of the violence who worked for the military government, though its purpose should be to protect its nation, and therefore its people. The “main purpose [of the CONADEP truth commissions] is to heal wounds and establish the truth”.⁹³ The use of the restorative justice practices far exceeded its minor expectations of crafting dialogue. While it did force conversations that were uncomfortable and difficult for both factions – military and civilian alike – the truth commissions established the precedent that the military committed gross violations of human rights that were only being perpetuated by the amnesty laws enacted by President Carlos Menem. The truth commissions gave a voice to the victims who continued to advocate for justice and recognition of the wrongdoings in both the social and political sphere. The social outcry created a tension within the state that demanded greater justice in the form of reparation payments to the victims. These reparations were only made possible through the publication of *Nunca Más* and the economic crisis under President Carlos Menem so that the IMF could intervene and make reparation payments financially possible for the state.

Conclusion

In this thesis, I explored a variety of sources in relation to restorative justice, civil war theory, gacaca courts in Rwanda, and CONADEP truth commissions in Argentina to understand the process between restorative justice practices and the restoration of peace through legislation. After

87. Nora Sveaass and Anne Margrethe Sønneland, “Dealing With the Past: Survivors’ Perspectives on Economic Reparations in Argentina,” 230–231.

88. *Ibid.*, 226.

89. *Ibid.*, 231–232.

90. Crenzel, “Argentina’s National Commission on the Disappearance of Persons: Contributions to Transitional Justice,” 173–191.

91. *Ibid.*, 174.

92. Comisión Nacional sobre la Desaparición de Personas, *Nunca Más*.

93. Bustos, “Paths to Truth, Justice and Reconciliation in Argentina,” 131.

suffering a civil war, both Argentina and Rwanda needed to reconcile the warring factions after the imposition of a democratic government – a process which is slow and ongoing but saw great improvement in the years after the conflicts ended.

The least-likely case studies done on the uses of restorative justice practices in both Rwanda and Argentina provide strong evidence for my argument that restorative justice practices successfully restore peace after a civil war. Therefore, I conclude that restorative justice is an effective alternative to traditional legal court systems because it give victims a more active role in crafting a justice narrative, whereas the traditional courts typically focus on the wrongdoing done by the perpetrator and do not reconcile the two groups.

The gacaca courts in Rwanda, like the truth commissions in Argentina, created an environment in which victims of the civil wars and their families could share their testimonies of the horrors of the war and could demand justice from the responsible parties. The ability to confront the tensions within each nation that caused the violent conflict allowed for reconciliation between what was previously rivaling factions. In Rwanda and Argentina, both parties now live and work alongside one another more harmoniously than they did before the war. Though this harmony cannot only be attributed to restorative justice, the practices did influence the extent to which this manifestation of peace was possible within each country.

In the context of this study, restorative justice practices used in the gacaca courts of Rwanda and in the CONADEP truth commissions of Argentina were deemed successful because they created an environment that allowed for victims of the civil wars to have their voices heard and demand legislative action to amend the injustices endured during the conflicts and restore peace to the state in that manner. This investigation does not deem that restorative justice practices brought each individual a sense of justice or removed any post-traumatic stress or suffering. Because coping emotionally, psychologically, and physically is subjective and occurs over varying lengths of time, it is impossible to claim – and should not be attempted – that the restorative justice practices implemented in both states mended all disagreements and allowed both countries to resume life as if the wars never happened.

Though it falls outside of the scope of this

study, the implementation of similar methodologies after civil conflicts in other nations further supports the success of restorative justice practices that Rwanda and Argentina used. Both Chile and Brazil published human rights reports; Brazil even took the name *Nunca Mais* in 1985.⁹⁴ Chile, modeling after Argentina, instituted truth commissions as well.⁹⁵ Similarly, African states such as the Democratic Republic of Congo, Liberia, and Sierra Leone created truth commissions comparable to the gacaca courts in hopes of restoring peace within their borders following a violent conflict.

Implications

Because of the nature of reconciliation as a personal interaction with others in the community and the state, the findings from this study may be difficult to extrapolate onto a national level. Though a state may appear to have reconciled the differences between two warring factions, there is still the likelihood that individuals within the two factions still have not made peace. Regardless, investigations should be made to see if restorative justice could be used in other countries that have been plagued by intrastate conflicts. That hypothesis, however, like in the cases of Rwanda and Argentina, would be highly reliant on the cultural and economic contexts of the region and the particularities of each civil war. As with my case studies, the effectiveness of the methodology is dependent on the context of the environment in which it is used.

As mentioned earlier, because war and violence affects each individual to a varying degree, it cannot be argued that restorative justice assists in managing the effects of trauma uniformly. It cannot be stated that all victims believed they had received “justice” for the harm done to them. There is conventional wisdom in the international community that beside economic and infrastructural turmoil, conflicts often cause higher rates of sexual violence. “War is gendered in its dynamics and these dynamics are ever-changing”, and therefore, it may be beneficial to the international sphere to investigate the use of restorative justice in a more specialized context.⁹⁶ Sexual violence in wartime is prevalent for men and women. The effects of restorative justice practices on sexual violence victims would serve as an interesting case study because rape is considered an under-

94. Pereira, *Political (In)justice: Authoritarianism and the Rule of Law in Brazil, Chile, and Argentina*, 160.

95. *Ibid.*, 21.

96. Jana Krause and Cynthia Enloe, “A Wealth of Expertise and Lived Experience: Conversations Between International Women Peace Activists at the ‘Women Lead to Peace Summit’ Preceding the Geneva II Peace Talks on Syria, January 2014,” in *International Feminist Journal of Politics*, 17:2 (2015): 328–338.

reported form of violence that exists in nearly all styles of war.⁹⁷ Little investigation has been made to study the use of restorative justice in cases of a personal violent crime such as rape.

Although little research has been done on restorative justice practices and victims of sexual assault, scholars have begun research into the United States drug courts to mirror those used within the school systems of New Zealand. There has been little investigation on the impact on restorative justice practices on international crime rates and trends over time. It could benefit the international community to investigate the use of restorative justice practices to reconcile the effects violent crimes such as gang violence, murders, and hate crimes, as these are becoming more prevalent in our modern world. This study may serve as a basis for further investigation into similar topics, or it may influence the use of restorative justice practices in other nations as an alternative to the traditional courts that have caused the world's mass incarceration issue.

97. Sandesh Sivakumaran, "Sexual Violence Against Men in Armed Conflict," in *The European Journal of International Law*, 18:2 (2007), 253-276.

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Sciences

A New Approach to Cystic Fibrosis Treatment:

Personalized Medicine through
CRISPR/Cas9 and Organoid
Models

Claire Johnson

This literature review focuses on gene editing therapies, specifically CRISPR/Cas9 systems, and their ethical considerations in application to Cystic Fibrosis (CF). It also seeks to present the most current research available on the exciting, new frontier of gene therapies. CF is a debilitating disease with a diverse array of clinical manifestations that range from early lung failure to gastrointestinal dysfunction due to a defect in the CFTR inflammation pathway. Researchers have been interested in using gene editing tools like CRISPR/Cas9 to replace the mutated amino acid with the correct one to restore protein function. Because of the diverse types of mutations present in CF patients, scientists have begun to examine personalized medicine through the application of organoids, which are organ models grown in vitro from stem cells taken from the patient. Scientists have been able to harvest these organoids from patients and have edited them with success. Because gene editing therapies are so novel, many biological concerns have arisen as to what the long term effects of these types of therapies are. Many ethical concerns have also been presented that warrant special consideration when working with therapies that modify the human genome. This review seeks to explore current advances and delineate a prudent path forward.

A New Genetic Age with the Discovery of CRISPR/Cas9

Even prior to Watson, Crick, and Franklin's monumental discovery of the structure of the universal genetic material, deoxyribonucleic acid (DNA), scientists like Félix d'Herelle explored bacterial transformation by viruses. d'Herelle's research in soldiers with dysentery described this process even without concrete knowledge of the genetic material that underlies the observed phenomenon (Doudna and Sternberg, 2017). As scientists learn more about the mechanisms of the genetic machinery of different organisms, a broader range of constructive applications become available for the manipulation of these mechanisms. One of these discoveries is a bacterial immunity known as Clustered Regularly Spaced Palindromic Repeats (CRISPR). CRISPR is a system in which a bacterium is able to insert parts of invading viral DNA into its own chromosome, surrounded by CRISPR sequences. The bacteria have evolved this mechanism in order to withstand future viral infections and possible death. Next to these CRISPR sequences in the DNA are sequences that code for *cas* enzymes, which are endonucleases that are able to make double-stranded breaks in bacterial DNA for the insertion of the new viral DNA (Doudna and Sternberg, 2017). In this way, some bacteria are able to adapt their genomes to mount an immune-like response against future viral infection. The most common of these endonucleases is from a class termed Cas9 and has been widely used in gene editing studies (Doudna and Sternberg, 2017). Only within the last decade, however, have CRISPR/Cas9 systems gained the attention of the scientific community, as well as the general public. If bacteria have the machinery to cut, insert, and edit their own genetic material with a high rate of fidelity, endless possibilities exist for the therapeutic application of this machinery within the human genome.

Cystic Fibrosis (CF) is an autosomal recessive genetic disorder that is marked by a defect in the cystic fibrosis transmembrane regulator (CFTR) protein. The CFTR protein is a chloride channel responsible for maintaining ion balance within cells. Without proper CFTR function, multiple organ systems are affected, especially those that contain epithelial tissue (Dutta, et al., 2017). CF patients often have a thick mucus present in their lungs, making it increasingly difficult to breathe as the disease progresses. A lesser known complication from this genetic disease appears in the gastrointestinal system, which often manifests as a disruption in gut microbiota and system dysfunction, among other

symptoms (Schippa, et al., 2013 and Dorsey, et al., 2017). Because CF is a monogenetic mutation, it is a target for CRISPR/Cas9 therapies. In order to attempt genetic edits on effective models of CF, researchers have been interested in the applications of organoids, which are small tissue-like structures grown *in vitro*, often from preexisting stem cells. The intersection of gene editing technology combined with a human modeling mechanism presents an exciting new era in Cystic Fibrosis therapeutics.

Applications of CRISPR/Cas9 in Cystic Fibrosis Treatment

Cystic Fibrosis, while a monogenetic mutation, has many diverse loci that can be affected within this single gene. Different types of mutations can also manifest in diverse symptoms and severities of the disease. Among the most common mutations is a deletion of the amino acid Phenylalanine at gene locus F508 (F508del) that affects about 45% of CF patients (Wainright et al., 2015). Since this CF gene is recessive, the most severely affected patients are homozygotes, but patients that are heterozygous for the gene have also been found to have some complications from the mutation (Schippa, et al., 2013). The CFTR channel affected by this deletion, or other mutations in the CFTR pathway, depending on the patient's genotype, plays a large role in fluid balance. Positively charged amino acids line the channel of this transmembrane protein in order to attract the negatively charged chloride ion. When one of these positively charged amino acids is mutated to a neutral amino acid, chloride ions do not move through the channel at the same rate that they would in a normal patient (Li et al., 2018). The F508del mutation, while not a mutation of a positively charged amino acid, most likely has a direct effect on this channel, even though it is not directly located in the channel. This particular amino acid could be structurally significant to making sure the properly charged amino acids are available in the channel of the protein. Without the proper function of this pathway, fluid balance is disrupted, and a thick mucus can aggregate in many different organ systems, especially those enriched in epithelial tissues, like the lungs and intestines. This mucus buildup can lead to blockages in these organ systems and, in extreme situations, respiratory distress and death (Dutta, et al., 2017).

Another consequence of disruption in the CFTR pathway is a lack of inflammatory response in affected cells. This particular response is an easily manipulated process that is clearly observed and has therefore proven to be an effective method of

determining whether or not gene editing was successful. In order to manipulate this inflammatory pathway, a technique termed the “forskolin assay” has been developed. The forskolin assay utilizes the unique properties of an enzyme termed “Forskolin,” which was discovered in the 1980s as a useful promoter of cAMP activity in cells. This particular enzyme produces an inflammatory cell reaction by way of an increase of cAMP (Seamon and Daly, 1981). With this technique, cells are exposed to this enzyme that increases cellular cAMP levels, and then they are examined for expansion, which would signal a normal genotype (Schwank et al., 2013). This inflammation reaction is a visible, easily quantifiable characteristic of successful gene editing that is especially useful when it comes to modeling gene edits in organoids.

While not a new term, the organoid, is attracting attention for its ability to be used as a human organ modeling system. As early as 1946, scientists sought to use human stem cells grown *in vitro* to form small organ structures, terming them “organoids.” As the technology has developed, however, researchers have been able to grow these structures with increasing accuracy to represent the *in vivo* structures that they mimic (Dutta, et al., 2017). Thus, the term organoid has become more exclusive in recent years, to include certain types of 3D structures that are grown from either pluripotent stem cells (PSCs) or adult stem cells (ASCs), the former of which are undifferentiated and can be manipulated to grow into many different types of cells (Dutta, et al., 2017). Organoids are unique in that they are able to differentiate completely into structures that mimic organs, one of which being intestinal cells. Many types of cells are present in the intestine, and researchers have been able to grow organoids that contain all of these different cell types successfully. However, these types of diverse organoids can only be grown from PSCs, while those grown from ASCs only mature into the epithelial type of cell taken from the host (Driehus and Clevers, 2017). These ASCs are the most common organoids used in the modeling of CF and have proven to be a valuable asset, especially for their susceptibility to CRISPR/Cas9 editing (Driehus and Clevers, 2017).

Organoids derived from intestinal epithelial cells (ASCs) of CF patients have been successfully transformed by CRISPR/Cas9 editing tools with accuracy and fidelity to respond normally to the forskolin assay. This was accomplished using the homologous recombination technique to ensure proper rejoining of cuts made by the Cas9 enzymes (Schwank et al., 2013). The cells that were successfully transformed showed a 177% increase

in surface area as a response to the cAMP versus cells that still had nonfunctional CFTR mechanisms (Schwank et al., 2013). This increase in surface area is significant because it shows proper cellular control of fluids in response to stimulation, and therefore fluid balance can also be achieved via these functional fluid channels. These edits, however, have not only been made in intestinal epithelial cells derived from ASCs but in other types of cell tissue as well.

Edits have also been successfully made to differentiated PSCs. These PSCs, taken from skin of CF patients, has been successfully transformed with CRISPR/Cas9 and then differentiated into lung epithelial cells that elicit the normal inflammatory reaction present in patients with the normal genotype (Fig. 1). Normal inflammatory reaction shows proper fluid balance mechanisms; if cells are able to send a large amount of fluid to an area at any given time, the proper channels like CFTR are functioning properly to control the movement of fluid. If the normal inflammatory reaction could be elicited in patients with CF, this reaction would be indicative of proper CFTR function in cells, which reduces mucus buildup as the body is able to respond to improper fluid balance. Thus, this reaction would prevent respiratory difficulties and disruptions in gut microbiota commonly found in the CF phenotype. These novel types of therapies could be potentially invaluable in treating CF in a variety of patients with a variety of mutations, instead of the current wide-spread “one size fits all” treatments that are currently in use.

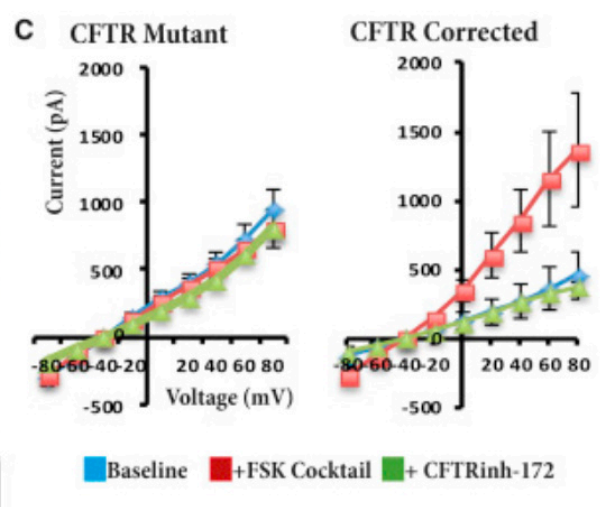


Figure 1. Inflammatory reaction of lung epithelial cells in response to Forskolin Baseline current of cells with and without a CFTR mutation versus current of cells with the addition of Forskolin (FSK Cocktail). In corrected cells, a much greater inflammatory response was elicited in response to Forskolin addition, as evidenced by the greater slope of the FSK Cocktail line (Firth, et al., 2015).

The current accepted treatment for CF widely targets at treating the symptoms of CF, rather than the cause. Often, the first line of defense for these symptoms is anti-mucosal drugs and bronchodilators aimed at combating the lung symptoms. Another option for treatment, depending on the unique manifestation of symptoms in each patient, is probiotics or antibiotics aimed at restoring the normal gut microbiome to help reestablish normal intestinal system function (Dorsey and Gonska, 2017). Recent drug trials have explored drugs that attempt to keep CFTR channels open for a longer amount of time, to allow a greater passage of chloride ions to pass through (Wainright, et al., 2015). However, CRISPR could provide a therapeutic solution to the root of the problem by targeting cells at the genetic level, which is the cause of this debilitating disease.

Another advantage to CRISPR/Cas9 gene editing systems that are derived from organoids is the opportunity for personalized treatments for CF. While 45% of CF mutations are the F508del, another 55% of patients are affected by diverse genetic mutations that would need to be targeted by different CRISPR sequences. Researchers have been successful, for example, in producing mouse models of a common nonsense mutation that produces Cystic Fibrosis, the G542X mutation (McHugh, et al., 2018). This ability to produce a mutation for gene editing models provides the opportunity for CF patients with different mutations to be able to receive gene editing treatments. Further still, the derivation of organoids from patients with diverse mutations has made available many types of cells for exploration of cures for the many genotypes of CF (Marson, et al., 2017). These types of organoids could potentially be stored in a biobank, which is a storage facility for harvested genetic material, to use for future use with patients that could have similar mutations (Fig. 2). This advent of personalized medicine could change the way genetic diseases are treated as a whole using CRISPR/Cas9.

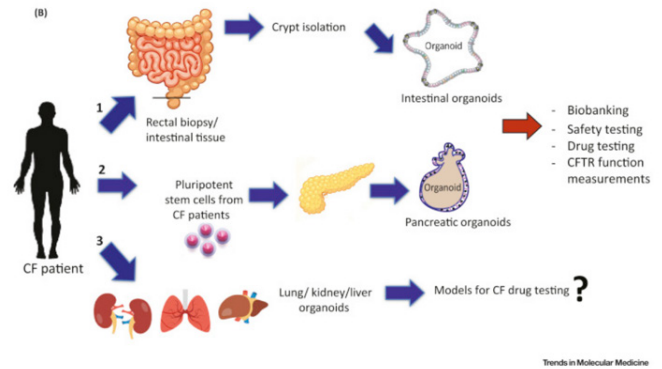


Figure 2. Possible applications for CF organoids. This scheme shows some of the many applications for organoids taken from CF patients, most notably the storage of the cells in biobanks for future use (Dutta, et al., 2017).

Ethical Considerations for Gene Editing Treatments: How Far is too Far?

The development of such a powerful, accessible tool found in CRISPR/Cas9 and organoid models presents a set of wide-reaching and complex ethical dilemmas that must be carefully considered while proceeding with this type of research. Perhaps one of the most visible, hotly-debated issues is the question of whether or not to proceed some with genetic research on discarded human embryos. These types of edits would ultimately be germ-line edits, which are heritable edits that tend to raise concerns both in the scientific community and general public. While CF research at this time appears to focus more on somatic cell edits, germ-line considerations are still of interest because pre-implantation screening is becoming more popular in *in vitro* fertilization settings and could potentially identify embryos that have mutations that commonly manifest into the CF phenotype. If the CRISPR/Cas9 technology were to advance to the point of making these germ line edits in the CF loci, there would need to be careful ethical consideration of this kind of heritable change.

In order to perfect this type of germ-line modification, the most pertinent model for this research appears to be discarded, non-viable human embryos. Supporters of this idea are quick to make a distinction between discarded and created embryos and which of those are morally permissible for this type of research. Discarded embryos are those that have been made for the purpose of implantation and reproductive therapies but for various reasons are not deemed as viable options for successful reproduction. Created embryos are those that have been created for the specific purpose of research, with no reproductive intent (Devolder, 2013). Supporters often argue that research is only

permissible on discarded embryos, and that this research is not only permissible, but desirable primarily because of the positive outcomes that outweigh the detrimental effects (Gyngell, et al., 2017). These positive outcomes include the increase in scientific knowledge on the basis of the Nothing-Is-Lost principle (NIL_p). The NIL_p argues that because discarded embryos are to be discarded regardless of whether research is done on them or not, there is no moral detriment because of an outcome that was going to occur anyway (Devolder, 2013). Non-supporters of embryologic research dispute this principle as evidence for moral permissibility, citing that the NIL_p either applies to both discarded and created embryos, or neither. That is, the application of the NIL_p must apply to created embryos as well, since the outcome is essentially the same, and technically, there seems to be no loss, as in the discarded case. The NIL_p must either apply to experimentation on all embryos, regardless of origin, or not be valuable moral currency for any type of embryologic experimentation (Devolder, 2013).

While *in vitro* genetic testing and manipulation of embryos with CF has sparked considerable ethical debate, genetic testing on newborns that show possible signs of CF after birth has been widely accepted. As early as 2004, the Center for Disease Control and Prevention and Cystic Fibrosis Foundation published a document containing their recommendations for the benefits of early genetic testing of newborns that show early signs of CF. Benefits of early testing and diagnosis can provide better outcomes in disease management and cognitive development for affected patients (Centers for Disease Control and Prevention, 2004). This post-birth testing is ethically the most widely accepted genetic intervention currently available to CF patients. It will remain to be seen if stem-cell organoid interventions and *in vitro* testing become equally as accepted.

Ethical professionals are not the only group to find issues with embryological germ-line editing. Multiple scientific organizations have also recommended that germ-line editing research be either halted or continued with extreme caution, simply on a scientific basis alone. Pioneers of this field with a vested interest in this type of research came together to discuss the implications and ramifications of this type of research in 2015. Their recommendation was to discourage germ-line edits at the time the conference was held, citing a lack of knowledge of future effects as possible reasons for which to slow this type of scientific progress (Baltimore, et al., 2015). Still others have called for constant governmental regulation through organizations like

the Food and Drug Administration (FDA), should this type of CRISPR/Cas9 research proceed. Some argue that CRISPR/Cas9 should be tried in very few patients to begin with, even waiting as long as fifteen years to monitor the effects of these types of edits longitudinally before attempting to begin widespread clinical trial (Evitt, et al., 2015).

Using organoids as organ models presents ethical concerns for both the development and implementation of gene edits into patients. While organoids may seem like a safer, less-controversial vector for gene editing research, rather than testing on human embryos, there is still some concern as to their moral permissibility. These tissues are still developed from PSCs of living patients, and with storage in bio-banks, there is question as to whether patient consent would need to be continually obtained for the preservation of these tissues long term, or if patient tissues derived from organoids should even be used in pre-clinical testing. These considerations should all be taken into account when proceeding with organoid models in both a clinical and research setting (Bredenoord, et al., 2017). Public opinion with patients whom organoids may directly affect has also been gauged, with many stating that they are cautious about proceeding with organoid research. While many potential patients reported seeing little issue with the use of organoids in gene edits, some were apprehensive about the storage and commercialization of these tissues in a widespread manner (Boers, et al., 2018). These concerns are of vital importance, as it is these patients that will be making an informed consent to these types of therapies based on the information that they are given.

CRISPR/Cas9 and the Next Steps for Cystic Fibrosis Care

Cystic Fibrosis is a debilitating disease that often results in an early death for affected patients without a lung transplant or other invasive treatment (Firth, et al., 2015). While life expectancy for patients with CF has increased, CF is still a disease that often yields major life complications (Firth, et al., 2015). CRISPR/Cas9, paired with organ system modeling in organoid tissues, could prove to be a valuable therapy that attacks the root of the genetic problem. CRISPR/Cas9 therapies are also able to be highly personalized, allowing for patients with different types of mutations to be treated effectively. These therapies, while successful *in vitro*, have not been tested clinically, due to the dangerous nature of adverse consequences when considering gene editing therapies. These consequences can include

the possibility of off-target edits, which are erroneous edits that were not originally intended in experimental design. These edits are often random and can be detrimental to the already healthy functions of these affected cells. Future research of this therapy would involve confirming efficiency and fidelity of these CRISPR/Cas9 processes and then proceeding to clinical trials. There have already been some successful edits of intestinal stem cells from CF patients *in vitro*, but it remains to be seen if these procedures would be effective clinically (Schwank, et al., 2013).

While CRISPR/Cas9 could be an effective treatment for CF given more in-depth research in preventing off-target edits, there have been questions as to whether gene edits in organoids would be useful in a disease like CF, due to the multi-systemic nature of the disease (Schwank, et al., 2013). For example, while the main organ system affected by CF is thought to be the respiratory system, the intestinal system is also affected. Some concerns exist as to whether multiple edits in different types of endothelial cells would be effective, versus a single, easily controlled edit in one system. These concerns would ultimately need to be addressed before beginning patients on this type of treatment.

There are also ethical concerns that come into play with any type of stem cell research or gene editing. The best types of evaluation of these issues employ opinions from a wide variety of sources, as to determine the best course of action that yields the greatest common good while alleviating human suffering. Based on the current available ethical research, it seems plausible that these technologies will continue to develop at a slow rate over the coming years, should careful regulation and prudence be observed. While new clinical treatments can take upwards of a decade to become accepted, this time could be even longer due to the nature of what is at stake with off-target edits, to ensure a high rate of success of the intended therapies. With the rapid pace of the development of CRISPR technology, however, it could be projected that personalized CRISPR therapies could be undergoing clinical trials to examine widespread use within the next decade. If the number of organoids that have been harvested and stored from patients continues to increase steadily, a greater potential exists for an increased number of available genetic models on which to research these methods. One could anticipate a possibility for commercialization of the organoid market and a subsequent increase in using these tissues in a common clinical setting, despite

many of the ethical hurdles these technologies face.

No overarching reasons seem to warrant halting all types of research in regards to gene editing. However, continuing this research demands that the subject and circumstance of that research be chosen very carefully, while pausing at every step of the way to obtain consent, reflect upon best practices, and choose a course which respects the bio-ethical rights and sanctity of life of all those affected. While professionals have warned the world to go slowly as researchers try to discover the power with which we might wield these new tools of gene editing, it will ultimately be up to us to decide how to act. May it be responsibly.

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History

Twentieth-Century Supremacy and Duty:

A Comparison of British Opinion
Manipulation in the Boer War and
the First World War

Mackenzie Strong

Throughout the last century, historians devoted much scholarship to studies of the Great War and propaganda usage therein, while Boer War opinion manipulation received less attention. Furthermore, the limited available scholarship comparing opinion manipulation between the Boer War and the First World War presented an over-simplified narrative and required more nuance. Manipulators of opinion utilized print and pictorial media as their platforms in both wars and often focused on the theme of the barbarity of the “Other.” Unofficial agencies dominated the production of British Boer War propaganda, and many pieces emphasized British supremacy, whereas opinion manipulation in the First World War witnessed the creation of governmentalized propaganda and frequently expressed appeals to civilian duty. Through analysis of editorials and news articles within *The Times*, alongside political cartoons and propaganda posters, a complicated narrative of British opinion manipulation emerged. Consideration of the complex comparisons between Boer War and First World War propaganda in Britain provided insight into early twentieth century conflict. The different themes represented the intricacies of each conflict, like Boer War imperialist aims and Great War societal mobilization. In contrast, the similarities between propaganda in the two wars reflected the continuity of specific fears concerning the maintenance of the empire that plagued the British throughout the century, anxieties that frequently manifested in the theme of the brutality of the “Other.” Although thematic variation revealed the unique natures of these early twentieth-century conflicts, a shared concern underscored many propaganda pieces in both the Boer War and the First World War.

A mere twelve years separated the end of the Boer War and the beginning of the First World War. Although these conflicts themselves differed greatly, British usage of opinion manipulation in the two wars lacked such obvious distinction. Scholarship concerning comparisons between British presentations of the last great Victorian conflict and the first modern war was minimal at best. The narrative of propaganda usage in early twentieth century conflicts was one that required more nuance than previous scholarship allocated. British opinion manipulation during the Boer War and the First World War often combined print and pictorial media, which frequently focused on the brutality of the “Other.”¹ Despite similar mediums and a common prominent theme, the focus of many propaganda pieces differed between the conflicts. Unofficial agencies and themes of British supremacy dominated Boer War propaganda, whereas the overall narrative of the Great War demonstrated powerful appeals to a citizen’s sense of duty and witnessed the creation of a governmentalized business of manipulating public opinion.

Little historical attention focused on the Boer War since, as military historian Byron Farwell noted, interest in the Great War “eclipsed” that of this final Victorian conflict.² Moreover, scholars dedicated even fewer comparative studies to British opinion manipulation utilized in both wars. Within the limited extant historiography, the central debates involved methodology and content. Methodological discussions occasionally consisted of different scholarly approaches to studying propaganda that ranged from those conducted over an entire historical period to analyses of the work of a specific opinion manipulation agency during a particular conflict, but predominantly focused on definitions of propaganda.³ Throughout the last century, scholars assigned various definitions to the term “propaganda.” These classifications ranged from negative associations with words such as “unjust” and “unnecessary,” as in Yale scholar Leonard W. Doob’s terminology, to far more neutral descriptions. British imperialism historian John

M. MacKenzie defined propaganda as a mode for “the transmission of ideas and values,” and communications professors Garth S. Jowett and Victoria O’Donnell argued that such a transmission aimed to influence “the recipients’ attitudes” to further the goals of the influencer.⁴

In addition, historical studies of British opinion manipulation during the Boer War and the First World War also differed with respect to propaganda content. While these historical studies lacked consensus concerning what avenues of opinion manipulation deserved expanded study—arguments that ranged from pamphlets and print media to posters and other pictorial media forms—prominent themes within British propaganda from the two conflicts especially contributed to scholarly debates. On the one hand, scholars such as British imperialism historian John S. Ellis and modern British historian Nicoletta F. Gullace emphasized negative language and depictions in opinion manipulation during the Boer War and the First World War and particularly focused on portrayals of the barbarity of an opposing side.⁵ On the other hand, some historians maintained that such negative propaganda played too significant a role in opinion manipulation studies, as these portrayals monopolized scholarly attention. First World War historian David Monger attempted to complicate the narrative of British opinion manipulation by including, alongside such negative propaganda as atrocity stories, appeals to senses of duty among civilians.⁶ Within this scholarship, however, few studies exist that explicitly compare British opinion manipulation between the Boer War and the First World War. The narrative of propaganda usage in the two most impactful wars of the early twentieth century, therefore, requires expansion, which in turn adds much needed nuance to the story of twentieth century conflict.

Despite the relative scarcity of Boer War propaganda studies, the 1899 conflict nonetheless earned a negative reputation in British military history. According to historian Thomas Pakenham, the Boer War ranked as the “longest... bloodiest...

1. For a brief summary on this idea of the “Other,” see John S. Ellis, “‘The Methods of Barbarism’ and the ‘Rights of Small Nations’: War Propaganda and British Pluralism,” *Albion: A Quarterly Journal Concerned with British Studies* 30, no. 1 (Spring 1998): 65.

2. Byron Farwell, *The Great Anglo-Boer War* (New York: Harper & Row, 1976), xi.

3. John M. MacKenzie, *Propaganda and Empire: Manipulation of British Public Opinion, 1880-1960* (Manchester: Manchester University Press, 1988), 2-3, 9-10; David Monger, *Patriotism and Propaganda in First World War Britain: The National War Aims Committee and Civilian Morale* (Liverpool: Liverpool University Press, 2012), 1-2.

4. Leonard W. Doob, *Public Opinion and Propaganda* (Hamden, CN: Archon Books, 1966), 240; MacKenzie, *Propaganda and Empire*, 3; Garth S. Jowett and Victoria O’Donnell, *Propaganda and Persuasion* (Newbury Park: Sage Publications, 1986), 15-16.

5. John S. Galbraith, “The Pamphlet Campaign on the Boer War,” *The Journal of Modern History* 24, no. 2 (June 1952): 111; James Thompson, “‘Pictorial Lies?’ Posters and Politics in Britain c. 1880-1914,” *Past and Present* 197, no. 1 (November 2007): 178-181; Nicoletta F. Gullace, “Barbaric Anti-Modernism: Representations of the ‘Hun’ in Britain, North America, Australia, and Beyond,” in *Picture This: World War I Posters and Visual Culture*, ed. Pearl James (Lincoln, NE: University of Nebraska Press, 2009), 62-64; Gary S. Messinger, *British Propaganda and the State in the First World War* (Manchester: Manchester University Press, 1992), 2-3; Ellis, “‘Methods of Barbarism,’” 49; Gullace, “Barbaric Anti-Modernism,” 63-64.

6. Monger, *Patriotism and Propaganda*, 6-9.

and the most humiliating war” in which the nation fought between the beginning of the nineteenth century and the first decade of the twentieth century.⁷ Conflict in South Africa did not originate with the Boer War. Tension already existed between Europeans and those living in the southernmost African territory, which extended back through the centuries. In the middle of the seventeenth century, the Dutch—via a joint-stock company named the Dutch East India Company—established a colony on the southwestern point of what would become South Africa. After a century and a half of Dutch control, Britain gained possession of the colony in the aftermath of the Napoleonic Wars.⁸ Regardless of this transfer of control, the entirety of South Africa was not united as a single colony; by the 1870s there were four major territories: the Cape Colony, the Natal, the Orange Free State, and the Transvaal. Tension in these states heightened throughout the nineteenth century, as the British variably granted independence to some of the territories while attempting to subjugate others.⁹ Thus, the majority of the century witnessed intense struggles over what Pakenham termed “imperial interference” in South Africa, manifesting in two conflicts of the name Boer War.¹⁰

The First Boer War occurred between 1880 and 1881 and resulted in the continued independence of the Transvaal Colony, albeit with constraints imposed by the Empire. The Second Boer War—often referenced as simply the Boer War—began in October 1899 and ended in May 1902.¹¹ While these wars were distinct, both consisted of the same belligerents. In each case, a group of South Africans opposed British control, a habit that they had formed during the century and a half of Dutch rule in South Africa. This group, dubbed the “Boers,” consisted primarily of an amalgamation of European Protestant colonists from Germany, the Netherlands, France, and eventually Britain—though they were distinct from Afrikaners. The Boers largely held agricultural occupations, predominantly functioning as semi-nomadic agriculturalists who constantly pushed borders to access new lands, which Pakenham cited as an endeavor that “brought them progressively deeper into African territory.” Given their wandering whims and Britain’s variable treatment of the independence

of the South African territories, the Boers in the Transvaal chafed under imperial control.¹²

Two decades after the Transvaal reasserted its independence in the First Boer War, harsh conflict again broke out between the Boers and imperialist Britain when the British sought to re-annex the Transvaal state. According to Farwell, though fighting strategy in the Boer War began as a mimicry of the stylized “set-piece battles” of the eighteenth century, it quickly devolved into guerilla warfare as the Boers fought to maintain independence.¹³ The battles themselves were not the only examples of the brutality of the Boer War. In an endeavor to hinder civilian support of the Boers, the British essentially engaged in warfare with the noncombatants as the British army tore through the Transvaal. Pakenham described the subsequent destruction and theft of civilian property, and he particularly highlighted the devastation that extended to Boer women and children whom the British “concentrated in camps along the railway lines.”¹⁴ Mass disease obliterated such encampments, and the number of citizens who perished within such confines ranged from twenty to thirty thousand.¹⁵ The Boer War of 1899–1902 ended in British victory and the Boers’ submission to imperial rule, but it was in no way an easy or simple defeat for the imperial power. Indeed, a conflict that many in Britain wholly believed would not last more than two months drained the nation for nearly three years—both financially and in terms of human life. The war cost more than two hundred million pounds and twenty-two thousand fatalities, not to mention the nearly eighty-thousand wounded. Thus, Britain emerged as the victor of the Boer War, yet the conflict cost the nation its nineteenth-century reputation as an unlimited European power.¹⁶

Although the Boer War was costly and carved out a unique place in British military history, knowledge of the First World War abounded with more regularity than that of the Boer War, which resulted in a comparatively extensive historiography on the conflict. Nonetheless, the complexities of the origination and events of the Great War require elaboration. Modern European historian John H. Morrow, Jr. described how Europe summited the beginning of the twentieth century with

7. Thomas Pakenham, *The Boer War* (New York: Random House, 1979), xix.

8. *Ibid.*, xiii.

9. Farwell, *Great Anglo-Boer War*, 3–13; Pakenham, *Boer War*, xii–xiv.

10. Pakenham, *Boer War*, xiii.

11. Pakenham, *Boer War*, 615; Farwell, *Great Anglo-Boer War*, 14, 436.

12. Farwell, *Great Anglo-Boer War*, 4–6; Pakenham, *Boer War*, xiii–xiv.

13. Pakenham, *Boer War*, xiii–xiv; Farwell, *Great Anglo-Boer War*, xi; Pakenham, *Boer War*, xxi.

14. Pakenham, *Boer War*, xxi–xxii.

15. Farwell, *Great Anglo-Boer War*, xiv; Pakenham, *Boer War*, xxi–xxii.

16. Farwell, *Great Anglo-Boer War*, xii, 436–438; Pakenham, *Boer War*, 607.

its heavyweight nations more powerful than ever before, largely due to the continent's "industrial and technological supremacy."¹⁷ This power in turn entangled the web of European relations and ultimately led to a complicated global war. The multifaceted question of how the conflict originated was one of the greatest complexities of the First World War.

A myriad of different elements combined to impel Europe to battle—including the assassination of Austro-Hungarian Archduke Franz Ferdinand and the complex European alliance system—but one of the most significant factors that complicated relationships between European powers was imperialism. As the twentieth century dawned, Europeans firmly entrenched in their ideologies the idea that European nations had the divine right and duty to colonize the world and bring civilization to "lesser" peoples across the globe. By 1914, most European nations strove either to expand their territorial holdings throughout the world or at the very least to defend those they already possessed. Germany was particularly anxious to acquire new colonies in the final decades of the nineteenth century and the first decade of the twentieth. According to Morrow, German leaders felt disgruntled that Britain and France previously laid claim to "the wealthiest and most fertile domains."¹⁸ Imperial expansion furthered hostilities amongst already competitive European nations and brought them to the brink of war; the assassination of Franz Ferdinand was merely the spark that lit the kindling already in place.

From the first spark to the embers of the armistice announcement on November 11, 1918, the Great War was unlike any previous conflict. The most unique element of this particular war was the mass mobilization of civilians alongside the millions of soldiers. Morrow demonstrated that every aspect of domestic life became inextricably interwoven with the war, from industry to "high and popular culture." Due to this close connection between the war and society, Morrow defined the battles of the Great War as ones "of attrition" or "siege-like battles that endured for months."¹⁹ The First World War was not only a total war in terms of civilian involvement, but also in regard to the totality of the destruction left in its wake. In addition to global financial devastation and the loss of millions of lives worldwide, Morrow assessed the havoc that the Great War wreaked upon the Euro-

pean landscape as having left battlefields "dangerous and muddy moonscapes littered with the human and material debris of war."²⁰ Thus, the First World War was the first total war of the twentieth century, in which whole populations contributed to the war effort and likewise faced the sufferings that accompanied such warfare.

The warfare tactics and initial conflicts differed drastically between the Boer War and the First World War, yet both wars—in their own right—took a toll on the British public, creating a crucial role for the manipulation of public opinion. Comparisons between the manipulation used in the wars proved as complex as the conflicts themselves, yet moments of clarity appear within the overall complicated narrative. Significant overlap occurred between opinion manipulation during the Boer War and that of the First World War with respect to the media forms used to display the overall narratives of the two conflicts, specifically as propagandists in both wars heavily relied upon print media. In previous centuries, one of the most important forms of print media was the pamphlet, leaflets of opinion manipulation circulated by their authors. However, according to scholar John S. Galbraith, the "advent of the penny newspaper" ultimately led news media on the whole to overshadow previous forms of print media in terms of significance by the late nineteenth and early twentieth centuries.²¹ Opinion manipulation of both early twentieth century conflicts reflected this increased use of news media. *The Times*, a newspaper based in London, played a particularly important role as a vehicle for the manipulation of opinion during the Boer War and the First World War.

Coverage of the intricacies of the Boer War abounded in articles from *The Times* within the three years of conflict. From letters to the editor to commercial advertisements, the British utilized this newspaper as an outlet to manipulate public opinion about the war. Concerned citizens wished to influence their fellow Britons' opinions on the Boer War, a desire that manifested in a number of letters to the editor of *The Times* on all aspects of war. Some letter writers—like C. F. Tobias—addressed central issues of why conflict once more occurred in South Africa, and their letters focused on dispelling "baseless" accusations of gilded greed and emphasized more altruistic motives for reestablishing peace in South Africa.²² Others who wrote to the editor in turn highlighted the

17. John H. Morrow Jr., *The Great War: An Imperial History* (London: Routledge, 2005), 1.

18. Morrow, *The Great War*, 29–30, xii, 35, 8–9, 36, 11.

19. *Ibid.*, 278, 349, 281.

20. *Ibid.*, 284–285.

21. Galbraith, "The Pamphlet Campaign," 111.

22. C. F. Tobias, "The War," *Times* (UK), November 8, 1899, *The Times* Digital Archive.

“variableness” of conditions British soldiers faced in South Africa and reassured the public of the “immense heroism” of British officers.²³ Companies even joined the fray, as they placed advertisements in newspapers to persuade the readers to purchase their products—such as Sparklets, a liquid aerator—and send them to South Africa to “assist in alleviating the sufferings of [British] troops.”²⁴

Like the Boer War, the First World War captured the attention of citizens and advertisers alike, and received even more coverage in newspapers. Editorials concerned with this war similarly gave attention to the issues that propelled Britain into the conflict. Here, such pieces emphasized the “ideal of self-sacrifice” and reiterated what the nation had to lose in this Great War: “the Empire and civilization” and “even [Britain’s] national existence.”²⁵ Alongside input from the population at large, companies once again utilized the increasing influence of news media and covered whole pages with advertisements for products such as OXO, a food supplement with “reviving, strength-giving power” that was equally as “invaluable” to soldiers on the front as it was to families in the home.²⁶ Evident in the abundance of letters to the editor, articles, and advertisements, news media was crucial to both the dissemination of information about the two wars and the manipulation of public opinion about the conflicts.

Propagandists of the Boer War and the Great War did not stop with news articles. Modern British historian James Thompson argued that these manipulators of opinion capitalized on “the centrality of pictorial propaganda” in the twentieth century and often utilized images alongside short verbal appeals to manipulate British opinion of both wars.²⁷ Political cartoons appeared as a key avenue of opinion manipulation during the Boer War that involved both words and images. Cartoonists most often published their images in magazines and other circulating materials, which the creator then occasionally compiled and re-

published in the form of a book. F. C. Gould, for example, combined selections of his cartoons originally published in periodicals like the *Westminster Gazette* and the *Westminster Budget* and created a compilation of pictorial opinion manipulation concerning the Boer War.²⁸ Short captions most often accompanied Boer War political cartoons. For instance, Gould’s “The ‘Statesman’s Game’” portrayed Colonial Secretary Joseph Chamberlain as Bellona—the Roman goddess of warfare—who gripped the wrist of John Bull—the personification of Britain, much like Uncle Sam in America. Under the image, John Bull questioned Chamberlain/Bellona: “War? Where—why—when? What’s it going to cost, and what good will come out of it?”²⁹ Alongside these short captions, those intent upon manipulating public opinion occasionally accompanied their pictorial propaganda with longer pieces of writing. Cartoonists like Gould and Sir Wilfred Lawson compiled satirical poems and accompanied many of those verses with cartoons. While the work spanned the last few decades of the nineteenth century and the first few years of the twentieth, a number of these poems and images directly related to the Boer War.³⁰ Gould’s and Lawson’s poem “Kruger’s Bible” consisted of twelve pithy lines and correlated to the image of a satirized “British patriot.” Both the poem and the cartoon seemed to criticize not only nineteenth- and now twentieth-century British patriotism, but also the morality of British actions in South Africa.³¹ Regardless of length, Boer War propagandists united words and images in their efforts to manipulate the British public’s conceptions of the conflict.

Similar combinations of pictorial and verbal opinion manipulation appeared frequently in the form of posters throughout the Great War. As with most political cartoons of the Boer War, First World War posters combined images and short captions to appeal to the viewer most effectively. In the 1915 Parliamentary Recruiting Committee poster entitled “Britain Needs You At Once,” the creators accompanied an image of England’s patron

23. “Impressions of a Colonist during the Anglo-Boer Campaign, 1899–1900,” *Times* (UK), August 17, 1900, *The Times Digital Archive*.

24. “Sparklets and the Boer War,” *Times* (UK), November 25, 1899, *The Times Digital Archive*.

25. A.M. Curteis, “Ideals and Compulsion,” *Times* (UK), October 13, 1915, *The Times Digital Archive*; “Security,” *Times* (UK), January 11, 1918, *The Times Digital Archive*.

26. “OXO Ld.,” *Times* (UK), January 22, 1915, *The Times Digital Archive*.

27. Thompson, “Pictorial Lies?,” 178.

28. F. Carruthers Gould, *The Westminster Cartoons: A Pictorial History of Political Events Connected with South Africa, 1899–1900* vol. 4 (London: Westminster Gazette, 1900), ii.

29. Political Cartoon. F. Carruthers Gould, “The ‘Statesman’s Game,’” in *The Westminster Cartoons: A Pictorial History of Events Connected with South Africa, 1899–1900*, vol. 4 (London: Westminster Gazette, 1900), 10. Accessed via HathiTrust Digital Library.

30. Sir Wilfred Lawson and F. Carruthers Gould, *Cartoons in Rhythm and Rhyme* (London: T. F. Unwin, 1905).

31. Poem. Sir Wilfred Lawson and F. Carruthers Gould, “Kruger’s Bible,” in *Cartoons in Rhyme and Line* (London: T.F. Unwin, 1905), 44.

Accessed via HathiTrust Digital Library. Cartoon image. Sir Wilfred Lawson and F. Carruthers Gould, “Oh! bravo, British Patriot!,” in *Cartoons in Rhyme and Line* (London: T.F. Unwin, 1905), 45. Accessed via HathiTrust Digital Library.

saint—Saint George—valiantly fighting a dragon with the poster's titular caption.³² Although posters dominated First World War opinion manipulation in terms of combining visual and verbal media, propagandists occasionally used political cartoons within periodicals to influence the British public. Satirical magazines such as *Punch, or the London Charivari* often incorporated such cartoons in their portrayals of the overall narrative of the First World War. A 1916 issue, for example, printed "Injured Innocence," a political cartoon caricaturing Germany's disregard for Belgium's neutrality.³³ Thus, one continuity in opinion manipulation between the Boer War and the First World War appeared in the importance of print media like news articles alongside combinations of pictorial and verbal propaganda and specifically in the continued use of political cartoons.

Along with reliance upon print and pictorial media, the theme of the barbarity of the "Other" emerged within various forms of opinion manipulation and retained continuity from the Boer War to the First World War. Citizens, war correspondents, and cartoonists alike capitalized upon this theme during the Boer War. In news articles and letters to the editor concerning the war, the most common recipients of accusations of brutality were the Boers themselves. *The Times* war correspondents relayed stories of alleged Boer barbarity witnessed in South Africa, predominantly focused on the outrages that British citizens in the territory reportedly suffered. According to one *Times* article, the Boers apparently "snatched a baby from the arms of its mother" in an attempt to illicit an aggressive response from the father. The Boers also allegedly sought out opportunities to frighten British women, primarily through forcing their rifles through the windows of trains and threatening British citizens with force unless they "disavowed [their] British sympathies."³⁴ Perhaps Boer War propagandists included these explicit references to the perceived sufferings of British female figures in South Africa to appeal specifically to women's sympathies in Britain and to garner their support for the war.

Another *Times* article provided further evidence for accusations of the barbarity of the Boers through a description of their treatment of the wounded British soldiers they took as prison-

ers. One private suffered seven bullet wounds, and upon the discovery that his wounds impaired him from walking, his captors apparently "threw him to the ground, and he sustained four broken ribs by the fall."³⁵ Manipulators of opinion occasionally juxtaposed these brutal Boer acts with British humanity and gentility. For example, two articles from *The Times* cited either the tender care Boer soldiers received from British nurses and orderlies or the overall "good conduct" of British soldiers in South Africa. One piece even twisted the exile of Boer prisoners of war into a benefit the British bestowed upon them, claiming that those prisoners' lives and "experiences [were] enlarged" by their forced removal from their homes.³⁶ Juxtapositions between supposed British kindness and alleged Boer harshness in print media emphasized the theme of the barbarity of the "Other" evident within Boer War propaganda.

Political cartoon renderings of the Boer War also powerfully demonstrated this theme of the barbarism of the "Other." However, these pictorial pieces often portrayed the conductors of brutality not as the Boers, but rather as the figures in the British government who led the nation into war in South Africa and faced criticism from their opponents.³⁷ Lawson's and Gould's poem and cartoon entitled "Cock-A-Doodle-Do" represents this theme of barbarism. The image features a rooster with the face of Colonial Secretary Joseph Chamberlain, which stands upon the back of a turtle labeled "fishmongers." The corresponding poem condemns the brutality of British and Conservative imperialism, dubbing the government officials involved in the war as the "bullies of the world."³⁸ Another of Gould's political cartoons likewise capitalizes on this perceived barbarity of the actions that British government officials undertook to lead the nation into the Boer War. In "A Heated Spirit," Chamberlain once again figures as the target of Gould's negative conceptions of the war. The cartoon displays a workshop setting, with Chamberlain standing at a grindstone with a sharp tool in hand. Other tools litter the floor surrounding the Colonial Secretary, and a single sheet of paper that reads "TRANSVAAL" lays directly opposite Chamberlain. The caption, a quote from Charles Dickens's *Barnaby Rudge*, vividly im-

32. Propaganda poster. "Britain Needs You At Once" (Parliamentary Recruiting Committee, 1915). Accessed via online database of the Imperial War Museum.

33. Political cartoon. "Injured Innocence," *Punch, or the London Charivari*, May 31, 1916. Accessed via HathiTrust Digital Library.

34. "The Transvaal Crisis," *Times* (UK), October 7, 1899, *The Times* Digital Archive.

35. "Return of Sick and Wounded," *Times* (UK), April 9, 1900, *The Times* Digital Archive.

36. Burdett-Coutts, "Our Wars and Our Wounded," *Times* (UK), June 30, 1900, *The Times* Digital Archive; "The War," *Times* (UK), May 3, 1901, *The Times* Digital Archive; "The Military Situation," *Times* (UK), June 6, 1900, *The Times* Digital Archive.

37. Ellis, "Methods of Barbarism," 57.

38. Cartoon image and poem. Sir Wilfred Lawson and F. Carruthers Gould, "Cock-A-Doodle-Do," in *Cartoons in Rhyme and Line* (London: T.F. Unwin, 1905), 46-47. Accessed via HathiTrust Digital Library.

plies the barbarism of Chamberlain and the British government's involvement in the Boer War. The Dickensian character—whom Chamberlain represents—claims that “Something will come of this!” and simply hopes that such a result “mayn't be human gore!”³⁹ This near-manic determination and especially the callous reference to human casualty depicts the thematic conception of the brutality of the “Other,” and here Chamberlain stands in for the British government as the fulfillment of this role.

First World War manipulators of opinion also thematically emphasized the brutality of the “Other.”⁴⁰ In various media platforms, Germany most often acted in the role of the “Other.” Newspaper articles particularly emphasized Germany's purported barbaric practices in warfare, often focused on their conduct at sea. According to one correspondent, Germany's intended blockade of the British Isles bore no resemblance to a traditional blockade because it did not adhere to the “well-understood” rules and “established conditions of a blockade.” Most contrary to these international naval rules was Germany's refusal to “take precautions for the safety of the crew or passengers” of any vessel deemed an enemy target by sending out a warning before an attack. The correspondent labeled this lack of concern for humanity a “reversion to barbarism... contrary to the usage of all civilized nations,” and even equated Germany's brutality to piracy.⁴¹ Indeed, J. Holland Rose wrote to the editor of *The Times* and explained how until “the unprovoked attack of Germany upon Belgium,” the author advocated for British neutrality. This example of German “aggression” altered Rose's stance and led him or her to believe that efforts to stop German brutality required British involvement in the increasingly global conflict.⁴²

Manipulators of opinion through pictorial media likewise capitalized on alleged German barbarity as a prominent theme.⁴³ “Injured Innocence,” that 1916 political cartoon, powerfully portrays this theme. The “German ogre” occupies the foreground of the image, standing in front of a door, under which oozes a thin stream of blood with its left foot firmly placed upon the torn shreds of “Belgian neutrality.” The figure holds a club in its

right hand and gestures with its bloody left hand to the background where bodies litter the ground.⁴⁴ According to Gullace, this cartoon illuminated the perceived German “barbaric indifference to the restraints of civilized warfare.”⁴⁵ Similarly, a number of First World War propaganda posters in Britain emphasized this theme of supposed inherent German brutality. For example, a 1918 poster, which the National War Savings Committee published, demonstrates what they believed German victory and subsequent occupation would bring. Set inside an industrial manufacturing space, the image shows figures in civilian clothes under the scrutiny and the lash of German military characters. Toward the bottom left corner, two German figures—with whips upraised—flank a kneeling worker, who appears to have a bloodied face.⁴⁶ Therefore, although the figure of the “Other” understandably took different forms in the two conflicts, British opinion manipulation in verbal and pictorial media during the Boer War and the Great War allocated much attention to the theme of brutality and thus justified—or challenged—British involvement in each conflict.

Here the commonalities largely stopped. While the two wars paralleled each other with respect to avenues and prominent themes of their propaganda, there were nonetheless marked differences. One of the most significant differences between Boer War and Great War opinion manipulation concerned the producers of propaganda pieces. Of course, civilians played an important role in the creation and dissemination of opinion manipulation through newspapers and editorial pieces, evident in propaganda from both conflicts. Nonetheless, the twelve years between the wars created a stark divide in regard to who manipulated opinions. Unofficial agencies dominated Boer War propaganda, whereas the government became increasingly involved in opinion manipulation during the First World War—so much so that it would color twentieth- and twenty-first-century popular assumptions about what entity was primarily responsible for propaganda production.⁴⁷

Unofficial propaganda may have characterized Boer War opinion manipulation, but the government was not entirely uninvolved. In fact, politi-

39. Political cartoon. F. Carruthers Gould, “A Heated Spirit,” in *The Westminster Cartoons: A Pictorial History of Events Connected with South Africa, 1899-1900*, Vol. 4 (London: Westminster Gazette, 1900), 9. Accessed via HathiTrust Digital Library.

40. Ellis, “Methods of Barbarism,” 49, 64-66.

41. “Barbaric Sea Practices,” *Times* (UK), February 8, 1915, *The Times* Digital Archive.

42. J. Holland Rose, “The Public and the War,” *Times* (UK), August 10, 1914, *The Times* Digital Archive.

43. Gullace, “Barbaric Anti-Modernism,” 61-64.

44. Political cartoon. “Injured Innocence,” *Punch, or the London Charivari*, May 31, 1916. Accessed via HathiTrust Digital Library.

45. *Ibid.*, 62.

46. Propaganda poster. F. Gregory Brown, “To Prevent This – Buy War Savings Certificates Now” (London: National War Savings Committee, June 1918). Accessed via online database of the Imperial War Museum.

47. Messinger, *British Propaganda and the State*, 1-2.

cal affiliations and tendencies played a crucial role. At the time of the 1899 conflict, the Conservative party dominated the bicameral British government, with the Liberal party as the opposition. Each political party had opposing views of imperialism. John S. Ellis explained that Conservatives adhered to a principle called “New Imperialism,” which affirmed “Anglo-Saxon racial superiority” and assumed the assimilation or dissolution of smaller nations. Liberals, on the other hand, viewed Britain “as a multinational state at the center of a multinational empire,” according to Ellis. He maintained that they argued that force did not hold the empire together, but that “the bonds of imperialism must be based upon mutual goodwill, voluntarism, and the recognition of the principle of nationality.” Furthermore, Ellis argued that Liberals condemned “‘barbarism’” as “the oppression of small nations through the brutal use of force” and linked this term to “the ‘New Imperialism’ of the Conservatives.”⁴⁸ Such ideological differences characterized British politics in the late nineteenth century and produced a sharp divide between Conservatives and Liberals, which was evident even in the predominant opinion manipulation from non-governmental agencies.

Influences of this bicameral split concerning imperialism and the tension in South Africa vividly appeared in Boer War propaganda. News articles and editorial pieces from *The Times* often displayed a more Conservative influence, demonstrated in many correspondents’ consistent emphasis on the cruelty of the Boers and the “tenacity and courage” of British soldiers.⁴⁹ In contrast to such articles in *The Times*, many political cartoons involving the Boer War appeared Liberal in ideology. Gould’s cartoon “Such a Surprise” exemplifies this Liberal influence as it mocks the Conservatives who brought Britain to war. The image consists of two Conservative ministers, Mr. Balfour and Sir Ridley, who hold what appears to be a newspaper and look rather concerned. Emblazoned on the open page of the newspaper is a picture of a rifle-wielding figure sitting atop a horse, under which the word “BOER” partially appears. In the caption, Balfour exclaims to Ridley that the Boers “[have] actually got horses!” Ridley responds, “And look... they’ve got rifles too! What a shame to deceive us!”⁵⁰ This cartoon demonstrates Liberal influence, as it satirizes figures of the Conservative

government and alludes to their hasty and ill-thought-out involvement with war in South Africa.

The 1901 *Punch* political cartoon “Pay! Pay! Pay!” likewise demonstrates Liberal tendencies. The illustration depicts a seemingly frustrated John Bull standing in front of a machine with a stack of books and a couple of coins at his feet. The machine bears the label “S. AFRICAN WAR” at its top, and at its center, the word “PEACE” stands out. The accompanying caption indicates the rising frustration of the personification of Britain regarding the Boer War as John Bull “put[s] a lot of pennies into this machine” and endeavors to continue to do so until he receives results. This particular cartoon represents Liberal influence through the satirical depictions of John Bull’s frustrations and concerns. His sole qualm with the Boer War regards finances, despite the skulls and bones and horrified face that decorate the South African War machine.⁵¹ The image insinuates that Britain effectively ignored human costs and only focused on the financial burden and the attainment of results from the war, which mirrors aspects of Liberal views of Conservative imperialism. Thus, political affiliations heavily influenced Boer War propaganda, in both print and pictorial forms of media.

Politics likewise came into play in Great War opinion manipulation in Britain but in a vastly different way. The First World War marked a change in how people perceived the production of propaganda. Modern British historian Gary S. Messinger described how, after 1918, popular perception linked government and opinion manipulation together so tightly that this connection “[overshadowed] all other sectors of society involved in systematic efforts to win over public opinion.”⁵² Increased governmental belief in the need for domestic propaganda largely brought about this change. According to Monger, newly minted Prime Minister David Lloyd George embarked on an enhanced mission in 1916 to “bolster civilian morale” after nearly three years of total war. Therefore, the First World War witnessed the creation of more government agencies responsible for manipulating public opinion, such as the National War Aims Committee. Indeed, by war’s end in 1918, opinion manipulation had become governmentalized.⁵³

48. Ellis, “Methods of Barbarism,” 49, 57, 54, 49.

49. “Tactics and the War,” *Times* (UK), April 14, 1900, *The Times* Digital Archive.

50. Political cartoon. F. Carruthers Gould, “Such a Surprise,” in *The Westminster Cartoons: A Pictorial History of Political Events Connected with South Africa, 1899–1900*, vol. 4 (London: Westminster Gazette, 1900), 38. Accessed via HathiTrust Digital Library.

51. “Pay! Pay! Pay!” Political cartoon, in *Punch, or The London Charivari*, April 24, 1901. <https://hdl.handle.net/2027/uc1.32106019661567>. Accessed via HathiTrust Digital Library.

52. Messinger, *British Propaganda and the State*, 1–2.

53. Monger, *Patriotism and Propaganda*, 1.

This increased involvement of government in the manipulation of public opinion was particularly evident in First World War posters. A number of government committees published their own propaganda posters throughout the Great War in order to persuade the British public in favor of their interests. One particular agency was the Parliamentary Recruiting Committee, the posters of which primarily targeted potential military recruits left among the British on the home front. The 1915 poster “Come Lad Slip Across and Help” makes this precise appeal. In the image, a map of the English Channel, southeastern Britain, and northwestern France dominates the space. Two figures stand atop this map. One, a civilian with his back to the viewer, stands firmly on Britain, near the coast that borders the Channel. The other figure, a soldier, stands on France, with his left foot on Ypres. The two men shake hands across the small strip of ocean that separates Britain from the Continent. The caption implores the British civilian to “slip across and help,” indicating that the soldier standing upon France is asking the other figure to join him in the war.⁵⁴ Government agencies used posters particularly to target potential soldiers and recruit them to aid those already engaged in combat.

Committees for the recruitment of troops were not the only government agencies that published posters during the First World War. In fact, many of the pictorial pieces targeted the efforts of those who firmly remained in Britain and the avenues available to them on the domestic front to help win the war. The National War Savings Committee, for example, used propaganda posters to appeal to British civilians to purchase war bonds. A piece from 1918 features the London skyline, with the dome of St. Paul’s Cathedral as the dominating silhouette. Three spotlights cross the sky, two of which reveal two small planes, with what appears to be explosions surrounding them on all sides. The caption directly targets the citizens of London, asking them to purchase war bonds that “feed the guns” and will “help bring [the enemy planes] down.”⁵⁵ Both the Parliamentary Recruiting Committee and the National War Savings Committee—along with other governmental agencies—utilized propaganda posters to further their own interests through the manipulation of public opinion. These pieces, therefore, reflected increased

government involvement in opinion manipulation during the First World War and marked a distinction between Boer War and Great War propaganda.

Opinion manipulation differed between the Boer War and the First World War not only externally, with respect to the producers of such propaganda, but also internally, as—aside from the continued portrayals of the barbarism of the respective “Other”—themes expressed within opinion manipulation pieces varied with each conflict. One such motif that was fairly unique to Boer War propaganda was the competency of British troops, which was particularly evident in newsprint. War correspondents and civilians alike took it upon themselves to reassure the British populace of their soldiers’ abilities. In a letter to the editor of *The Times*, Colonel W. F. Nuthall emphasized the “splendid courage” of the British soldier in South Africa amidst a discussion of the vast inequality of the circumstances that British and Boer soldiers found themselves in during battle. Nuthall explained that the Boer soldiers had the advantage of time because they fought in the manner of guerilla warfare: they hid from their enemies and caught them off guard. The British, on the other hand, were in a dissimilar position. Instead of the shelter and the time that the Boer soldier possessed, Nuthall highlighted that the British counterpart had to advance toward the “unseen enemy” in the midst of “a perpetual storm of lead.” Nuthall additionally reassured the editor and the populace that the British rifle was equivalent to the one the Boers used and stated that any discrepancy in marksmanship between the two armies derived from those different conditions they faced in battle.⁵⁶ A separate *Times* news article similarly emphasized the supremacy of the British army, praising soldier and officer alike as “truly magnificent.” Their “unflinching courage,” according to the author, demonstrated the excellence of the British forces in South Africa despite the surprising length of the conflict.⁵⁷

News articles and editorials emphasized the competency of not just the British military but also of the British state overall. The same article that extolled the magnificence of British soldiers and officers also emphasized the “tenacity and courage” that the people of Britain possessed, demonstrated in their ability to withstand various

54. Propaganda poster. “Come Lad Slip Across and Help” (London: Parliamentary Recruiting Committee, 1915). Accessed via online database of the Imperial War Museum.

55. Propaganda poster. “Feed the Guns with War Bonds” (London: National War Savings Committee, 1918). Accessed via online database of the Imperial War Museum.

56. W.F. Nuthall, “Our Service Rifle and the Mauser,” *Times* (UK), January 22, 1900, *The Times* Digital Archive.

57. “Tactics and the War.”

setbacks.⁵⁸ The author of another piece, a Dutch reverend in the Orange Free State, even magnified British superiority. He urged his fellow South Africans to “take the friendly hand” of “the greatest civilising Power” in the world, a power “built on the foundation of peace and good will among men.” Instead of bolstering confidence in the British military forces, the author—through the use of the superlative—focused on the holistic superiority that reportedly characterized the British state.⁵⁹ Thus, the theme of the competency of the British military in Boer War opinion manipulation expanded the conversation to one of British supremacy. Nevertheless, this common theme among numerous *Times* articles starkly contrasted the predominant thematic elements within much of the pictorial opinion manipulation from the Boer War, including Gould’s cartoons and those published in *Punch*.⁶⁰ Thematically, these pieces largely questioned the assertions of British supremacy and the nineteenth-century imperialist conceptions evident within much of the writing in *The Times*. A further indication of the cartoons’ Liberal influences, this prominent theme corroborated Ellis’s argument that Liberals viewed the imperialism of their opponents as a sign of “an arrogant and bullying form of British nationalism that smothered rather than liberated peoples who fell under its sway.”⁶¹

In just a few years, however, wartime propagandists took a drastically different tact. Instead of extolling—or questioning—the brilliance of the British military, opinion manipulation in the First World War often appealed to a sense of duty within British civilians. Monger argued that although the National War Aims Committee produced a greater quantity of pieces focused on the barbarity of Germany, appeals to “civilian duty” nonetheless significantly contributed to opinion manipulators’ portrayal of the overall narrative of the war.⁶² First World War print and pictorial media alike vividly expressed this emphasis on the duty of the home front. Authors of news articles and editorials often incorporated this theme by stressing British unity in the midst of the war. One letter to the editor of *The Times* called attention to the solidarity of Britain through a reference to a past conflict, in which Ireland and Scotland fought alongside England. The

correspondent argued that if Britain demonstrated unity then—when fewer “rights and privileges of... citizenship” were available to Irish and Scottish peoples—it was not possible for the nation to fracture in this great conflict.⁶³ Here, the author linked civilian duty and national unity, as individuals had the responsibility to support the national cause. Other correspondents of *The Times* likewise highlighted the duty of British citizens in a broader conversation of national unity. One news article, published just over a week after Britain entered the war, analyzed the attitude of the industrial north in England toward the conflict. The author chose this particular part of the nation because past wars met with much criticism among the people here and wreaked economic havoc. In 1914, however, the author ultimately concluded that “the community remains calm and confident, loyal and absolute.” In praise of the northern communities’ unity and level-headedness, the correspondent explained that there were no excessive public displays in support of the war but rather that the members of those communities merely “accept[ed] the war as a national duty” and altered their lives as individuals to support this nationwide cause.⁶⁴

Propaganda posters from the First World War additionally appealed to a sense of duty among the British, often through a variety of pleas. Of course, numerous pieces targeted potential recruits and their sense of duty through military service to their country. Alfred Leete’s iconic 1914 poster conveys this theme. An image of Field Marshal Lord Kitchener dominates the center of the page and points directly out toward the viewer. The strategic placement of Kitchener’s image allows the poster to read: “Britons. [Kitchener] wants you. Join your country’s army! God save the king!”⁶⁵ The appeal to the viewer to support king and country through military service clearly represented an attempt to evoke a sense of duty within a potential British recruit.

Propagandists not only utilized posters to target potential recruits, but they also appealed to the duty of those who were not and would not be soldiers. E. J. Kealey’s “Back Them Up” from 1915, for example, features a gentlemanly figure in civilian clothes. Silhouetted behind him are

58. “Tactics and the War.”

59. “A Free-Stater’s Appeal to His Countrymen,” *Times* (UK), March 27, 1900, *The Times* Digital Archive.

60. Political cartoon. F. Carruthers Gould, “Such a Surprise,” in *The Westminster Cartoons: A Pictorial History of Political Events Connected with South Africa, 1899–1900*, vol. 4 (London: Westminster Gazette, 1900), 38. Accessed via HathiTrust Digital Library. Political cartoon. “Pay! Pay! Pay!” *Punch, or The London Charivari*, April 24, 1901. Accessed via HathiTrust Digital Library.

61. Ellis, “Methods of Barbarism,” 63.

62. Monger, *Patriotism and Propaganda*, 8–9.

63. “The Irish in the Great War,” *Times* (UK), September 14, 1914, *The Times* Digital Archive.

64. “Britain in War Time,” *Times* (UK), August 13, 1914, *The Times* Digital Archive.

65. Propaganda poster. Alfred Leete, “Britons. Join Your Country’s Army!” (London, 1914). Accessed via online database of the Imperial War Museum.

artillery and a factory; the man reaches into his pocket with his right hand. The caption calls for the viewer to “Invest in the War Loan,” indicating that the figure in the image intends to do “[His] Duty” through such an investment.⁶⁶ Some poster creators and publishers made everyday actions the focus of their appeals to duty on the home front. Robert Baden-Powell connected the work of civilians at home to British military effort in “Are You in This?” The poster features several figures, the majority of which appear to be civilians. The image portrays two central figures hard at work, a demonstration that their daily efforts at their jobs impact the two soldiers standing guard on the hill behind them.⁶⁷

Among the multitude of posters that spoke to a sense of duty among British men, or even among an unclassified audience, a smaller yet substantial amount of First World War propaganda posters directly appealed to the duty of British women. Some pieces focused references to women’s duty on traditional—even stereotypical—domestic roles. The 1917 Ministry of Food’s “Don’t Waste Bread!” specifically demonstrates this connection between women’s civilian duties during the war and their supposed roles as homemakers. The illustration features a mother and daughter sitting at a table in the foreground, where the mother slices into a loaf of bread. In the background behind the figures, a large ship barrels through choppy seas toward a German U-boat. The caption combines the two juxtaposed scenes, as it implores the woman to “save two slices” of bread daily and suggests that such actions help Britain “defeat the ‘U’ Boat.”⁶⁸ Such propaganda thereby connected women and their daily roles and actions with contributions to the overall war effort. Other First World War posters, however, directed appeals to female duty through opportunities for British women to engage directly with military activities. The Ministry of Munition’s 1916 poster “On Her Their Lives Depend” illustrates this appeal. The central figure, a woman dressed in industrial apparel, smiles at the audience while soldiers in the background work with artillery.⁶⁹ The emphasis of such a poster is unmistakable, as well as its aim: munitions work in factories is indispensable to the soldiers on the Continent, and—since

a woman’s civilian wartime duty clearly extends to such work—British women should join the munitions industry. Furthermore, First World War propaganda posters occasionally connected female duty with military service, particularly late in the war. The Women’s Royal Air Force, for example, released pieces such as the 1918 poster “Women! The Royal Air Force Needs Your Help!” to aid in recruitment.⁷⁰ Regardless of the specific target audience, First World War propagandists infused print and pictorial media with the theme of civilian duty in order to motivate British citizens to contribute to the overall war effort, thereby manipulating public opinion concerning the narrative of the war and mobilizing British society toward participation in wartime activities.

In light of these numerous similarities and differences, comparisons between the opinion manipulation of the Boer War and the First World War are rather complicated, yet the relative lack of such comparative studies within historical scholarship indicated the opposite. Straightforwardness characterized comparisons within the extant scholarship that explicitly connected Boer War and Great War opinion manipulation, where a tendency to oversimplify the discussion emerged. Ellis, for example, paralleled Liberal rhetoric of the brutality of the Conservative government during the Boer War with First World War British language of the barbarity of Germany—but the comparison ended there, without much elaboration on the differences that existed between the opinion manipulation of each war.⁷¹ While similarities between the propaganda that manipulated opinion about the two wars made for fascinating study, such study nevertheless led to an oversimplified narrative of early twentieth century opinion manipulation. Complicating this narrative better reflects the complexities of the context and of the conflicts themselves.

Boer War and First World War opinion manipulation in Britain shared the common avenues of print and pictorial media, as well as a continued theme of the barbarity of the “Other.” Nonetheless, propaganda pieces from each conflict demonstrated elements unique to that war. Manipulators of opinion in the Boer War were largely unofficial agencies, and their products often focused on the issue of British superiority. In contrast, Great War

66. Propaganda poster. E.J. Kealey, “Back Them Up” (London: Parliamentary War Savings Committee, 1915). Accessed via online database of the Imperial War Museum.

67. Propaganda poster. Robert S.S. Baden-Powell, “Are You in This?” (London: Parliamentary Recruiting Committee, 1915). Accessed via online database of the Imperial War Museum.

68. Propaganda poster. “Don’t Waste Bread!” (London: Ministry of Food, 1917). Accessed via online database of the Imperial War Museum.

69. Propaganda poster. “On Her Their Lives Depend” (London: Ministry of Munitions, 1916). Accessed via online database of the Imperial War Museum.

70. Propaganda poster. “Women! The Royal Air Force Needs Your Help!” (Women’s Royal Air Force, 1918). Accessed via online database of the Imperial War Museum.

71. Ellis, “Methods of Barbarism,” 65.

propaganda witnessed the increasing involvement of government, and pieces of opinion manipulation frequently appealed to a citizen's sense of duty. The different themes expressed in Boer War and First World War propaganda stemmed from the varied nature of the conflicts. In newsprint opinion manipulation from the Boer War, emphasis on the supremacy of the British nation reflected the imperialist aims of their involvement in another South African war and the difficult conditions of fighting guerilla-style soldiers; Boer War pictorial propaganda largely condemned this imperial quest through satirized representations of supposed British superiority. Conversely, First World War opinion manipulation's frequent appeals to the duty of civilians—and the specific references to women's duties in numerous appeals—demonstrated the totality of the war and the need to mobilize the population in greater amounts than seen in previous conflicts.

Moreover, a complex comparison of Boer War and First World War propaganda additionally revealed a continuity of the worries that plagued the British, extending beyond the turn of the century. The British retained fears and questions about the maintenance of the empire throughout both wars, anxieties that frequently manifested in those barbaric portrayals of the respective "Other." Demonstrations of alleged Boer brutality reflected British concerns about the inability to maintain the empire in its expanded Victorian form, and depictions of apparent British cruelty called into question the nature of the nation's imperialism. Descriptions of supposed German brutalism in opinion manipulation expressed similar fears, as unrestrained naval warfare and disregard for previous treaties not only threatened the British Isles but the entirety of the British Empire. Perhaps these shared anxieties demonstrated a continuity within the foundational nature of early twentieth-century warfare. Thoughts of empire colored many opinion manipulation pieces and hearkened back to the origins of each war. Imperialism drove the British to conflict in South Africa, much as it propelled Britain—along with the world—to war in the First World War. Additionally, questions about British supremacy and conceptions of duty were likewise inextricably connected to imperialist ideologies in the late nineteenth and early twentieth centuries. These two wars, with their undeniable differences, may have had more in common than previously recognized. Thus, while themes of wartime propaganda often differed between these early twentieth-century conflicts, concerns about imperialism provided the impetus for much of the opinion manipulation in

both the Boer War and the First World War.

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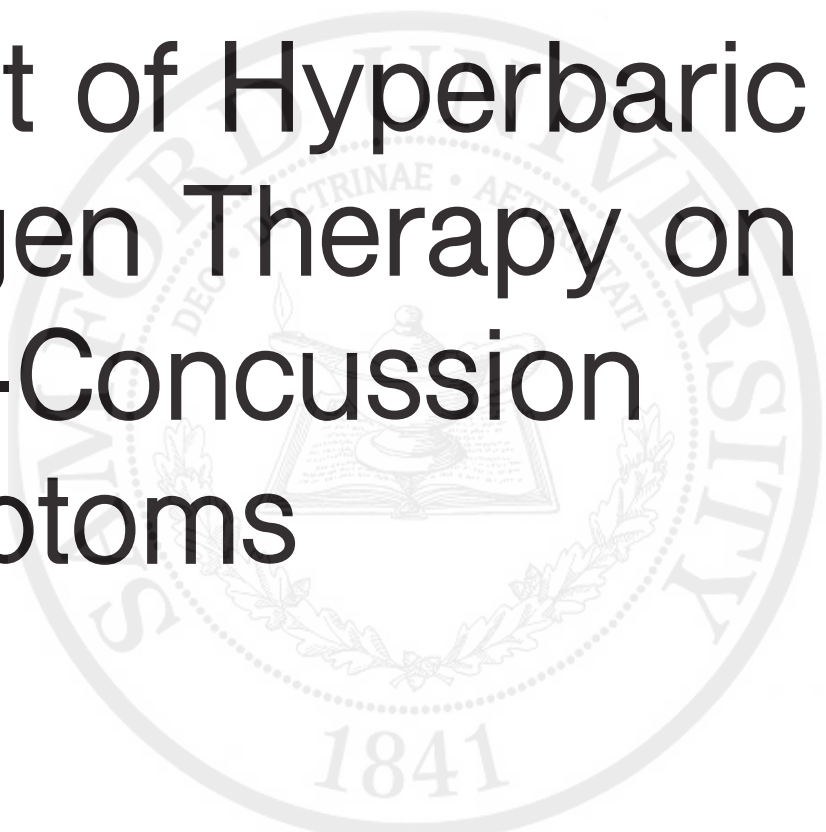
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Sciences

Effect of Hyperbaric Oxygen Therapy on Post-Concussion Symptoms



Leah Spurgeon

Brain injuries can cause both physical and cognitive symptoms that inhibit daily life. A patient suffering from either a recent or previous mild traumatic brain injury is at risk for post-concussion syndrome, characterized by lingering symptoms one of which being chronic headaches. Concussions are injuries that affect a wide variety of patients, including athletes, victims of motor vehicle accidents, and veterans suffering from post-blast injuries. This study uses a mixture of archived data, combined with a questionnaire that was given to qualifying patients, to test the effects of Hyperbaric Oxygen Therapy (HBOT) on the symptoms of a mild traumatic brain (mTBI) injury. The design of this study was a cumulative case study, which aimed to generalize the results of several published studies into a broader discussion of this therapy. The archived data was combined with a surveyed population to make the results of the experiment more applicable to a wider variety of patients, because most archived data only used veterans as patients, while the survey's population consisted mainly of athletes. The results of this study, through both forms of data collection, showed that patients who received the oxygen treatment demonstrated greater improvement from symptoms associated with their injury, with statistical significance according to three separate paired t-tests. It is recommended for future research that a larger diversity of population be used to further this research.

Section 1: Introduction

Mild Traumatic Brain Injuries (mTBI) in the form of concussions are dangerous injuries that can have extensive recovery times as well as lasting impacts on patients. They can have both long term and short term consequences, and these injuries have been linked to other neurodegenerative diseases, such as post-traumatic stress disorder (PTSD) and depression. Miller and colleagues (2015) write in a scholarly article that an mTBI is more common than breast cancer, AIDS, multiple sclerosis, and spinal cord injury, showing the relevance of brain damage. The majority of mTBI patients fall into three main categories: car crash victims, veterans with blast injuries, and high-intensity athletes. Young athletes in contact sports or high-level training, as described by Polito and colleagues (2010), are at high risk of brain damage due to the constant stress they put on their bodies, and they often are at higher risks of receiving blows to the neck and cranial region. Another group of patients affected are those involved in motor vehicle accidents. These victims often obtain concussions as a result of whiplash and sudden impact to the skull depending on the severity of the crash (Car crashes with mild traumatic brain injury, 2011). The last and most common group of patients consists of veterans who suffered blast injuries while on duty, leaving them at a much higher risk of developing other cognitive disorders later in life (Cifu et al., 2014). In one academic journal, Tal and colleagues (2015) even suggest there may be a link between mTBI and post-war disorders, and these symptoms keep re-occurring long after original signs of a brain injury. Concussions and mTBI injuries are very common and often go untreated and undiagnosed.

Statement of the Problem

Mild traumatic brain injuries (mTBI) are head injuries that can occur many different ways. No two injuries are the same, and head injuries are often difficult to diagnose. Often these injuries have excessive recovery times as well as recurring symptoms from injury (Cifu et al., 2014). Since injuries differ from patient to patient, severity and types of symptoms for each patient tend to vary as well. Symptoms can include, but are not limited to, headaches and migraines, difficulty concentrating, and short term memory loss (Harch, 2009).

Purpose of the Study

This paper describes a cumulative case study that aims to discover the relationship between one commonly-used concussion therapy and its effects on mTBI symptoms. The independent variable of this study is the use of Hyperbaric Oxygen Therapy (HBOT) and the number of treat-

ments per patient. The HBOT therapies took place in a reasonable timeframe with no sudden breaks mid-treatment plan, and all sudden difficulties or problems with treatments will be included in this study. The dependent variable of this study is the severity of mTBI symptoms in each patient, recorded objectively. The patients in this study were documented to have qualifying mTBI injuries and to have attended consistent HBOT treatments. The final study will be an analysis of the data gathered combined with findings from different individual studies and with different recovery rates compared visually in a chart.

Research Question and Hypothesis

The question that I aim to answer is as follows:

Research Question: What is the relationship between HBOT and the severity of post-mTBI symptoms?

Subquestion: What Post-Concussion Syndrome (PCS) symptom is most affected through HBOT?

According to the research question, my hypothesis is the following:

Research Hypothesis: The use of HBOT will positively affect post-mTBI symptoms and will lessen their effects on a patient which will be measured on two separate questionnaires.

Subquestion Hypothesis: The symptoms that will be the most positively affected by the use of HBOT are chronic migraines or consistent headaches.

Significance of the Study

If an mTBI patient is released too quickly, the effects of an injury will have amplified problems that hinder recovery from lasting post-mTBI symptoms (Catherine Quatman-Yates et al, 2016). The expected outcome of this study is to learn new information about mTBI treatments and the rate of their effectiveness for future patients. Concussions are serious injuries, which if incorrectly treated, can cause serious harm to the brain and affect many different areas of daily life. If this study presents significant evidence proving the connection between HBOT and reduced mTBI symptoms, then HBOT will be proven as a tool to treat the cognitive symptoms of brain injuries, rather than only the physical signs of brain trauma.

Definitions of Key Terms

mTBI (Mild Traumatic Brain Injury): MTBIs are types of brain injuries resulting from a blow to the head and causing a change in cognitive status

no longer than thirty minutes. A change in mental status can include disorientation, loss of memory, and loss of consciousness (Kimble et al., 2011).

Concussion: A concussion is an interchangeable synonym for an mTBI injury or a mild brain injury.

HBOT/HBO2 (Hyperbaric Oxygen Therapy): HBOT is a form of therapy that treats a variety of injuries including infections, decompression sickness, and brain trauma. It works by increasing the atmospheric pressure in a controlled environment, while filtering the air within the chamber to be pure oxygen (New Life Medical Group, 2016).

Symptom: A symptom is a physical or mental condition of a disease that is subjective to the patient. Examples can include headaches, mood swings, and anxiety.

Sign: A sign is a physical effect of a medical condition that is objective and found by medical personnel. Examples can include fever, rash, and high blood pressure.

Post-Blast Injury: A post-blast injury is a type of injury that is characteristic of military veterans who have come into direct or indirect contact with an explosion.

PCS (Post-Concussion Syndrome): PCS is a disorder that doctors characterize by the different symptoms that are commonly associated with a brain injury including chronic headaches, trouble sleeping, and disorientation.

MVA (Motor Vehicle Accident): A MVA is an interchangeable synonym for a car or motorcycle crash, where often a person's momentum changes instantaneously and violently.

Summary

Hyperbaric Oxygen Therapy is currently a well-established form of treatment for a variety of injuries, including the physical signs of mTBIs (New Life Medical Group, 2016). However, little research exists on how HBOT can affect the symptoms of a brain injury, which can last much longer than the physical signs of an mTBI. The purpose of this study is to make new conclusions of how HBOT can affect different, prevalent symptoms in mTBI patients and to make HBOT more widely-accepted as a treatment for post-concussion symptoms as well. HBOT works to accelerate the healing process in a wide variety of cases, and this research study aims to prove that HBOT is a reliable form of treatment for cognitive symptoms connected to mild brain injuries.

Section 2: Literature Review

Hyperbaric Oxygen Therapy (HBOT or HBO2) is a treatment that utilizes oxygen in order to help promote healing (Tal et al., 2015). At the start of a therapy session, a patient is sterilized and placed within a clear, airtight tank. This treat-

ment occurs in the tank when the atmospheric pressure decreases so that the air the patient breathes is filtered to be one hundred percent oxygen. This process promotes oxygenation of the blood and therefore healing to any internal or external wounds (Miller et al., 2015). This review will discuss literature and previous studies that explore the effectiveness of this treatment specifically on lasting symptoms of mild traumatic brain injuries. The literature discusses the different patients that benefit from HBOT, specifically veterans and younger sports athletes. The sources also delve into the effects of HBOT on basic functions, symptoms of mTBIs, and intracellular processes. The purpose of this review is to discuss what the existing literature and previous studies have proved on the effectiveness of recovery rates in correlation to the use of HBOT.

Limitations of HBOT

While HBOT has many positive benefits, limitations can vary from patient to patient. It is a very individualized therapy, and many benefits depend on how "deep" a patient is able to go in a treatment session. This phrasing indicates how the change in pressure mimics traveling below sea level, like a scuba diver diving underwater (Singh & Gambert, 2014). The depth that a person is able to reach includes different variables like type of injury, how well a patient adapts to pressure changes, and personal preferences.

Veterans and mTBI Symptoms

In his army medical report, Chairman of the Traumatic Brain Injury Task Force B. D. Bradshaw (2008) explains that the most common injury in current military personnel from the Operation Iraqi Freedom and Operation Enduring Freedom was an mTBI, with 22–29% of all wounded soldiers experiencing at least one brain injury. The frequency of mTBI injuries in military personnel goes overlooked and undiagnosed (Kimble et al., 2011). In one study, Cifu and colleagues (2014) discuss experimental data showing how veterans with post-blast brain injuries can suffer from lasting neurological effects. This study shows that ninety-nine percent of patients with an mTBI are suffering from an additional condition including PTSD or chronic pain. The relationship of PTSD and concussions demonstrates that mTBIs frequently connect to other neurological disorders. Specifically, there is a link between PTSD and blast-induced mTBI injuries.

CRNP Mary Polito along with two other doctors (2010) determine that at the current rate of HBOT's growing acceptance, this form of treatment is likely to be one of the fastest growing and most promising treatments for veterans recovering from a recent mTBI injury and lingering PCS symp-

toms. In agreement with Polito and her colleagues' claims concerning HBOT, CRNA Donald Kimbler (2011) follows a twenty-five-year-old veteran who suffered a blast-injury while on duty and later was suffering from post-mTBI symptoms, as well as PTSD. This study follows a single patient and his results, showing how as blood flow increased in the brain as a result of HBOTs, the patient simultaneously saw cognitive improvements. Kimbler's study is one example verifying Polito's claims about the effectiveness of HBOT.

Dr. Paul Harch (2013) published in an academic journal a different study that utilized veterans as participants. All patients had varying levels of mTBI injuries, and only a few participants were diagnosed with PTSD. This study does not prove or disprove the relationship between mTBI and PTSD, but there is mention of a possible connection between the disorders. One similarity between PTSD and mTBIs is that they can both go undiagnosed, causing the patient to suffer in silence and not get necessary help. These two brain disorders are shown to be closely connected in cases with veterans with blast-injuries.

Athletes and mTBIs

Concussions and mTBI injuries are also very common in athletes, especially in contact-sports. McCrory and colleagues (2005) show that contact sports, football in particular, are dangerous because, despite whether or not an athlete loses consciousness during the injury, there is often functional brain damage that does not show up in normal neuroimaging. Because of this lack of physical indications of a serious injury, athletes often continue playing their sport despite major brain damage, and thus they are at a higher risk to be reinjured (Kimbler et al., 2011). Athletes tend to put the completion of a game above their health, causing lasting brain damage. In 2011, Kimbler and colleagues provide a discussion about this topic and report that a football linebacker will have at least one concussion on average throughout their football career. In another medical journal, Guskiewicz and colleagues (2003) found that after a first injury, athletes showed a much higher risk of then receiving a second concussion along with cerebral dysfunction. Many of these athletes did not show signs of mTBI injuries when the impact first happened, but the symptoms became more evident later in life. Athletes typically need to recover as soon as possible, which makes athletes ideal candidates for HBOT treatment.

Intracellular Effects of HBOT

When receiving HBOT as a result of a brain injury, there are observable changes to the body of a patient. On an intracellular level, oxygen is

utilized for cellular respiration to produce usable energy for a cell. Maximum cellular respiration is especially useful in the regeneration of damaged tissue, including that of the brain. HBOT takes advantage of this natural process by allowing a patient to breathe pure oxygen rather than the diluted air to which humans have adapted (McInnes, 2017). Cifu and colleagues (2014) provide experimental data to observe that HBOT promotes mitochondrial recovery in brain-injured rodents and decreases cellular death of nerve cells, which leads to cognitive recovery. This connection helps to demonstrate how HBOT can aid in repairing different damaged cells, and this beneficial process leads to cognitive recovery starting at the intracellular level.

The enhancement of processes in both mitochondria and cellular respiration due to the increase in oxygen leads to more energy within the cell to perform other vital processes. More specifically, in humans, the extra oxygen from HBOT stimulates the metabolism and helps to repair the Brain Blood Barrier (BBB). The BBB obtains severe damage in a violent impact that leads to such injuries like concussions, and blood flow to this region is essential for the healing process (Quian, Li, & Shi, 2017). Oxygen also prolongs cell death or apoptosis, while helping to decrease swelling in the brain following an mTBI (Tal et al., 2015). HBOT attempts to create an ideal pressure and a sufficient amount of oxygen. Therefore, oxygen is more easily absorbed through the respiratory system and travels faster through the blood, increasing circulation and vital cellular processes (McInnes, 2017).

Symptoms of mTBI Injuries

While receiving HBOT has been proven to help improve signs of an mTBI, it has not yet been proven to lessen symptoms that will persist after a minor brain injury. These different symptoms can be one or more of the following defined in a case report by Dr. Harch (2009): constant headaches, irritability, tunnel vision, dizziness, bilateral tinnitus pain, sleep disruption, left eye blurred vision, irritability, depression, social withdrawal, fatigue, decreased hearing, imbalance, cognitive problems such as memory, attention, decreased speed of thinking, back pain, and bilateral knee pain. These symptoms are different for each patient and have been listed above in what Harch believes to be their order of how often these symptoms appear (2009). Through the use of HBOT on qualifying patients, most PCS symptoms, like those mentioned by Dr. Harch, will improve within three months after the initial injury, and nearly half of individuals with similar injuries demonstrate long-term cognitive improvement (Quian et al., 2017).

Summary

A common assertion found over all of the literature in this review is that HBOT increases blood flow with the use of oxygen (Tal et al., 2015). Statistics show that increased oxygen levels combined with the increasing of pressure (the effect of HBOT) improve blood flow as well as reduce mTBI symptoms and vital signs (McInnes, 2017). HBOT is a form of therapy that benefits all ages and types of patients by attempting to utilize basic cellular respiration and natural processes in the human body (Harch, 2009). This oxygen therapy is becoming more popular around the world, for all kinds of injuries (Polito et al., 2010). However, the most popular and important use of this therapy is neurological, as an attempt to promote natural healing in a recently injured or a long term suffering brain (McCrorry et al., 2005).

Section 3: Research Method

Currently, there is published information and reliability to support HBOT as a verified treatment for signs of a brain injury, as discussed in Section 2. However, there is a significant lack in studies discussing how HBOT affects PCS symptoms. The goal of this study is to use a combination of acquired, archived data from previous studies to observe the direct effects of HBOT on these different symptoms over a large population of patients in addition to a conducted survey of mTBI patients in Medici Medical Clinic in Kennesaw, GA. Patients from published studies were either categorized as control or HBOT treated, and they were compared to each other based off of individual scores on the Rivermead Post-Concussion Symptoms questionnaire (RPQ) to show the effect of HBOT on PCS. To further generalize these results amongst a larger diversity of patients, I combine this archived study with a personally-conducted survey in which patients ranked the severity as well as the frequency of their symptoms on a scale similar to the RPQ questionnaire. Both forms of data collection were used to answer the following question: what is the relationship between HBOT and post-mTBI symptoms? I also had a subquestion asking what symptom was the most affected throughout treatment? The following section will discuss further my research design as well as procedure.

Research Design and Method

I conducted a cumulative case study as my research design, meaning I analyzed several different sources that all pertain to a single relationship in order to make generalized conclusions from the patterns and effects found in previous patients (University of Florida, 2017). Some advantages of this study include the ability to utilize existing information without having to spend the

cost and time it would take to perform new, repetitive studies (Davey, 1991). Using this method, this study will utilize retrospective analysis in order to find new relationships in previous cases. This study also includes an original survey created to observe the relationship between mTBI patients from the Medici Medical Institute to compare to the case study findings. My survey took place in twelve weeks, and this gathered data is compared to public archives. Another advantage of utilizing outside studies includes the foresight to see how symptoms have changed throughout the treatment and if the effects of HBOT last for a patient.

Population and Sample

The population for this study includes patients with lasting symptoms from both recent as well as previous mTBI injuries. At least 1.7 million persons each year sustain an mTBI injury including veterans, athletes, car crash victims, and some unclassified patients (Center for Disease Control, 2006). All of the patients chose to try HBOT in order to help alleviate some of these symptoms, and they continuously and consistently attended therapy sessions (Harch, 2009).

The sample selection is according to the completeness of patient data and the relevance of data pertaining to my study as well. The sample is chosen to have a variety of patients, from veterans to athletes to miscellaneous patients all suffering from PCS symptoms following an mTBI. Therefore, the sample of this study is a convenience sample, relying on the data of patients used in previous, related studies. In my survey, patients who choose to participate meet the following criteria: sustained an mTBI injury, completed consistent HBOT as therapy, have a clear memory of what symptoms were prevalent following the injury compared to the severity of symptoms after treatment, as well as agreed to participate anonymously in my study. The surveyed sample is also one of convenience, as a result of limited qualifying patients willing to take part in this study.

Data Collection, Processing, and Analysis

I began the search for archived data by relevance to my topic. I then analyzed all archived sources by qualifications of the authors, completeness of the study, and the thoroughness of symptom description of those patients involved. All studies and patients included in this study have RPQ scores from before HBOT therapy as well as after treatment as a measure of the severity of their cognitive symptoms. I searched for patients who received some sort of quantitative symptom analysis before HBOT as well as after treatment. If a patient fit all needed criteria, then I chose to include their data in the study. If a patient did not receive the standard forty sessions of HBOT

or had any long breaks or ceasing of treatments, I excluded them from the archived portion of this study.

For the original survey that I conducted, I selected patients who received HBOT as a treatment for mTBI injuries at Medici Medical Institute in Kennesaw, GA. These patients provided qualitative data as the result of ranking both the frequency and the severity of isolated symptoms on a scale of zero to three, zero meaning they do not experience the symptom and three being the highest frequency or severity of the symptom possible (see Appendix A). I conducted the survey after a cycle of approximately forty treatments and asked patients to recall the severity of their symptoms before the treatment and compare this to the intensity of their symptoms immediately following their therapy cycle. The symptoms that I chose to include on the survey are as follows: chronic headaches, nausea, balance problems, dizziness, fatigue, difficulty remembering, and depression. I chose these symptoms because they are easy to explain to a patient and are among the most common symptoms of mTBI patients (Harch, 2009).

Through the questions from the personal survey, as well as the two scores from the RPQ questionnaire gathered from archived data, I was able to run three separate t-tests. The independent variable of my study is HBOT treatment given on average forty times to every patient. The dependent variable of this study was either a patient's score on the RPQ representing the severity of his or her symptoms or a patient's score on my survey that represents both symptom severity and frequency. I combined both of these results to compare PCS symptoms before and after HBOT.

After data collection was complete, I performed three paired t-tests. One t-test compared the RPQ scores of my control archived population taken before and after a three-month time period, representing the amount of time the experimental population underwent HBOT. On the RPQ test, a doctor asks a patient about sixteen different symptoms, and the patient ranks these symptoms on a scale of zero to four, with zero meaning the symptom is not experienced and four meaning the symptom is extremely severe. Therefore, the maximum possible score on the RPQ test is a sixty-four, and the lowest is zero. A lower score on the RPQ is more desirable because it implies that either fewer symptoms are experienced, or the symptoms are less severe. The second t-test measures again the difference in RQP scores, but for a group of patients treated by forty sessions of HBOT within the three-month study period. The last t-test is conducted on patients participating in my survey, and the test compares the symptom severity score separated by the symptoms before versus after HBOT.

I chose these tests because I compared

the before and after survey results on essentially two separate surveys: my survey and the RPQ. Both surveys assessed patients ranking their symptoms on a numerical scale before and after HBOT, and on both surveys, it was desirable to have a decrease in the base patient score. These different tests had high validity, as it compared the true means of pre and post symptom severity and potential frequency levels.

My null and alternative hypotheses for the first paired t-test for the change in RPQ score for the archived control group were:

H_o . The mean difference between the average RPQ score before the three-month experimental time period compared to after the wait period is zero.

H_a . The mean difference between the average RPQ score before the three-month experimental time period compared to after the wait period is not zero.

My null and alternative hypotheses for the first paired t-test for the change in RPQ score for the archived experimental (receiving HBOT) group were:

H_o . The mean difference between the average RPQ score before the three-month experimental therapy period compared to after the HBOT treatment cycle is zero.

H_a . The mean difference between the average RPQ score before the three-month experimental therapy period compared to after the HBOT treatment cycle is not zero.

My null and alternative hypotheses for the paired t-test for my original survey were:

H_o . The mean difference between the ranking scales of severity of symptoms for mTBI patients before HBOT compared to the ranking of severity of PCS symptoms for patients after HBOT is zero.

H_a . The mean difference between the ranking scales of severity of symptoms for mTBI patients before HBOT compared to the ranking of severity of PCS symptoms for patients after HBOT is not zero.

Delimitations

The patients who were excluded from the study in either archived data or excluded from the questionnaire sampling were patients who took significant breaks during their HBOT treatment plan. In order to get accurate data, HBOT sessions were conducted continuously without a hiatus because the therapy works best with consistent treatment (McInnes, 2017). Any significant breaks in treatment could potentially result in the HBOT therapy not having its maximum effect on a patient.

Ethical Assurances

All of the patients whose data I use in this

project are anonymous and only descriptions of age and injury are used. There is no paperwork needed to collect the archived data because it exists online with patient anonymity. However, a Kennesaw Mountain Institutional Review Board (IRB) form will be required before taking any survey.

Summary

In this study, my goal is to utilize many sources to come to a general conclusion about HBOT and its relationship to PCS symptoms. Symptoms of mTBI patients can be chronic and intrude on simple, daily tasks (Harch, 2009). The question that this study approaches is whether or not these symptoms relate to consistent HBOT treatments. This study aims to answer this question through the use of current observed relationships found through a survey, as well as archived data of previously documented cases. The entire study conducted is a cumulative case study in order to make an overall conclusion about two variables without the need to waste resources to conduct a brand, new study.

Section 4: Findings

Results

The question that drove my research study was as follows: What effects does HBOT have on PCS? This question was answered by combining the descriptions of different symptoms that an mTBI patient experiences and comparing the intensity of these symptoms before and after their treatment cycle. This archived data is in the form of measurements of a patient's cognitive ability as well as the recurrence rate of PCS symptoms before and after the oxygen therapy. All patients chosen to be included in this study received at least forty HBOT sessions in a maximum of three months without interruption. The standard HBOT treatment was performed at 1.5 ATA (1.5 times the average atmospheric pressure exerted at sea level) for sixty minutes. Through archived data, I gathered 164 patients who received HBOT according to these base standards and compared their RPQ scores to a control group of sixty-eight patients.

The HBOT treated experimental group received all forty treatments within the span of three months, and the control group had a waiting period of three months to keep time consistent between the two groups and to see how symptoms were affected without HBOT. A base RPQ examination was given to both the experimental and control group before the study began.

Then, another RPQ test was administered after a three-month period to both groups. The average base score for the control group on the RPQ was 33.70, and the average score after a three-month period was 32.32 (Appendix C). The average base score for the HBOT group on the RPQ was 33.00, and the average score for this same group after a basic HBOT therapy cycle was 29.48 (Appendix C). This means that the scores of the HBOT treated group, on average, saw nearly twice as much recovery of PCS symptoms compared to the control group as measured on the RPQ. The results of my archived data are shown in Figure 1 below.

Figure 1

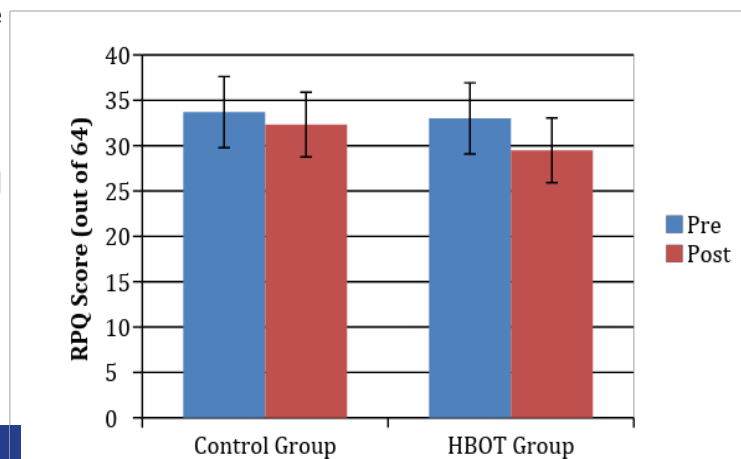


Figure 1 (above): The change in RPQ score (out of 64) before and after 40 sessions of HBOT throughout a 3-month period.

Both of the patient groups showed a decrease overall in average RPQ score after three months. The control group saw on average a -1.39 change in RPQ score throughout the study. The experimental group received HBOT throughout the three-month study period and saw an average change of -3.53 on the RPQ survey (Appendix C). On the RPQ test, a score that is closer to 64 represents a patient that is experiencing more severe symptoms. Thus, there was a notable decrease in symptom severity for both groups, as shown by the negative change in score.

A greater decrease in score throughout treatment is considered ideal. Patients of this study who received HBOT saw, on average, a greater decrease in their symptoms in an identical period. I also had a research subquestion: What symptoms were the most affected throughout treatment? Through the use of survey, I was able to answer this subquestion by observing what symptoms were present over multiple different ex-

periences. This survey was modeled after the RPQ questionnaire by asking patients to rate their symptoms on zero to three subjective scales, describing the severity of the most common symptoms associated with PCS. However, this survey differed from the RPQ by also asking the patients to describe the frequency of their experienced symptoms. This addition to the survey was included in order to help answer my subquestion. I collected sixteen responses from patients, who within the last five years had undergone a complete treatment cycle for an mTBI injury. Chronic headaches were experienced by 93.75 percent of the study population, proving to be the most common symptom with an average change in score of 1.5. The results of the survey are represented in Table 1 and Figure 2 below.

Table 1: Frequency of PCS Symptom in Surveyed Population

	Headache	Nausea	Balance Problems	Dizziness	Fatigue	Difficulty Remembering	Depression
Percent of patients who experience the symptom	93.75	56.25	50	87.5	87.5	56.25	43.75

As shown in Table 1, chronic headaches were most commonly experienced by a patient who has suffered from an mTBI injury. The next most common symptoms experienced were dizziness and fatigue; both symptoms being experienced by 87.5 percent of the population. The least frequent symptom experienced by the patients from this survey was a problem with balance, a symptom found in only fifty percent of the survey sample.

Figure 2

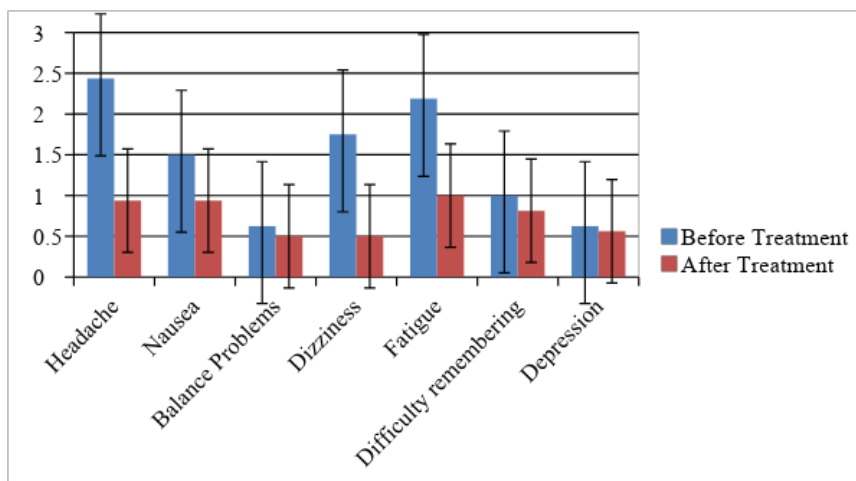


Figure 2 (above): This table shows the rates at which each symptom was affected by HBOT in the surveyed patient population.

As shown in Table 1’s display of the survey results above, headaches had the largest change in severity. Much like the survey results, there was a fairly consistent variation, which is to be expected when the only possible responses were between zero and three. Headaches are shown not only to be the most frequent symptom (Table 1), but also the symptom most impacted by HBOT in this survey (Figure 2). On the opposite end of the spectrum, issues with balance were the least frequent symptom found in the surveyed population (Table 1) and were then the least impacted by HBOT (Figure 2).

I used my first t-test to evaluate the difference in RPQ scores of patients who did not receive HBOT before and after a three-month period. The reason I chose to conduct this t-test was to see the effect that time might have on a patient’s RPQ score, and this control group would be comparable to the group of patients who received HBOT. My null hypothesis was that there would be no correlation between the base RPQ scores and the RPQ scores measured after the study period. Furthermore, my alternative hypothesis is that there will be a slight difference in RPQ scores in the control group of the study before and after the trial period. The average base RPQ score for the control group was 33.70 (out of sixty-four), and after three months, the average score was 32.32 (Appendix C). I conducted a paired t-test and found my p-value to be 0.0085 (Appendix D). My alpha p-value is 0.05, which is greater than my experimental p-value. Since the alpha p-value is greater than my experimental value, I reject the null hypothesis and accept my alternative hypothesis that there is a difference in RPQ scores in the control group of the study before and after the trial period.

I conducted a second t-test, again on archived patients to test the change of RPQ scores of HBOT treated patients before and after treatment. My null hypothesis was that there would be no differ-

ence between the base RPQ scores and the RPQ scores measured after the HBOT treatment cycle. Furthermore, my alternative hypothesis was that there will be a slight difference in RPQ scores in the HBOT treated group of the study before and after the experimental period. The average base RPQ score for the control group was 33.00, and after three months, the average score was 29.48 (Appendix C). I conducted a paired t-test and found my p-value to be 1.44×10^{-13} (Appendix D). My alpha p-value is 0.05, which is greater than my experimental p-value, showing that this data is not due to random chance. Since the alpha p-value is greater than my experimental value, I reject the null hypothesis and accept my alternative hypothesis that there is a difference in RPQ scores in the HBOT group of the study before and after the treatment period.

I conducted one final t-test observing the results of my survey. This test measured the difference between the scores of symptom severity before versus after HBOT. My null hypothesis was that there would be no correlation between the base RPQ scores and the RPQ scores measured after the HBOT treatment period. Furthermore, my alternative hypothesis was that there will be a slight difference in RPQ scores in the participants of the survey before and after the treatment period. The average severity score per PCS symptom was 1.45, and after the average HBOT treatment plan, the average PCS symptom severity score was 0.75 (Appendix D). I conducted a paired t-test and found my p-value to be 0.023 (Appendix D). My alpha p-value is 0.05, which is greater than my experimental p-value. Since the alpha p-value is greater than my experimental value, I reject the null hypothesis and accept my alternative hypothesis that there is a difference in PCS symptom severity ratings in participants of my survey before and after the HBOT treatment cycle.

Evaluation of Findings

With the patient population found in the archived data, a majority of the patients consisted of male veterans suffering from blast injuries. This unequal sample presents gender bias within the data as well as some possible limitations because a sample consisting of primarily blast injuries does not fully represent the entire population of patients obtaining mTBIs. The results of the original survey conducted had a 62.5 percent male population consisting of eleven student-athletes, as well as five MVA patients.

The results of the archived data collected as well as data collected from the survey agree that patients who received HBOT showed a higher rate of cognitive improvement compared to the control group measured by scores on the RPQ. Although the sample size of the survey was much smaller than the sample of patients found

through archived data, both forms of data collection showed similar results. These findings are to be expected based off the literature provided in Section 2, which presents HBOT as an established treatment of mTBI symptoms and suggests that HBOT can affect PCS symptoms in several patients.

Summary

Both forms of data collection showed that HBOT affected PCS symptoms positively, and compared to a control group, patients who received HBOT saw their symptoms decrease at nearly double the rate of the control group. Also, all patients who participated in the survey claimed that HBOT had a significant impact on at least one of their post-mTBI symptoms. Chronic headaches were both the most frequent symptom experienced in the surveyed population, as well as the symptom that was most affected by HBOT.

Section 5: Implications, Recommendations, and Conclusions

The goal of this study was to utilize several different methods of data collection in order to discover the possible relationship between HBOT and PCS symptoms. The purpose of this cumulative case study is ultimately to provide another potential treatment for the lasting symptoms of an mTBI. I utilized both professionally published data as well as a personal survey to evaluate the effects of this therapy in the current mTBI population. These two categories of data help present a more generalized conclusion of whether HBOT is a valid treatment for prevalent PCS symptoms.

Implications

For the first paired t-test, I compared the base RPQ scores to the scores of the control patients after three months who did not receive HBOT treatment. My p-value was 0.0085 (Appendix D) which is less than the alpha value of 0.05. I accept my alternative hypothesis, meaning that there was a significant decrease in RPQ scores throughout this timeframe in the control sample. These results imply that without any extra treatment at all, it is expected for a patient recovering from an mTBI injury to improve their RPQ score slightly over a three-month period. Therefore, there is a possibility that some PCS symptoms can heal, if given a long enough healing period. However, the decrease in symptom severity was minimal, proving the background literature is correct that PCS symptoms are long lasting (Hatch, 2009). However, it was not expected that the control group receiving no treatment would see any improvement in symptoms over time.

For the second paired t-test, I evaluat-

ed the data collected from archived sample of treatments who received HBOT over the same three-month period. My p-value was 1.44×10^{-13} (Appendix D) which is less than the alpha value of 0.05. There was a significant decrease in RPQ scores throughout this timeframe in the population treated with HBOT. There was also a statistically significant decrease in RPQ for the control sample as well, but comparatively, HBOT had a greater average change in symptoms before and after treatment. These findings imply that HBOT increases the cognitive recovery of the brain from PCS symptoms in my sample.

For the third paired t-test, I evaluated the data collected from the survey sample of patients who received HBOT after an mTBI. My p-value was 0.023 (Appendix D) which is less than the alpha value of 0.05. Therefore, I saw a significant decrease in symptom severity in the population after they were treated with HBOT. This negative correlation implies that HBOT can decrease symptom severity in a variety of PCS symptoms for a population consisting of athletes and patients involved in MVAs. These results were expected according to the second t-test as well as previous literature that suggested that HBOT would increase blood flow and cognitive recovery to the brain (Kimbler et al., 2011).

Both forms of data collection supported my research hypothesis that HBOT would positively affect PCS symptoms. Archived data indicated that hyperbaric treatment led to a greater decrease in post-mTBI symptoms compared to a control group, measured by a score on the RPQ. The data from the survey I conducted indicated that all seven symptoms associated with PCS that I chose were, on average, less severe after HBOT than before. Although there is a decent margin of variation shown on the figures of both forms of data collection, this is likely due to the difference in symptoms experienced by each patient.

My conducted survey supported my subquestion hypothesis that chronic headaches would be most affected by HBOT. Dr. Hatch described that headaches are the most common PCS symptom (2009), and this statement was represented in the 93.75 percent of surveyed patients who claimed to experience this symptom (Table 1). Since this symptom was both the most frequent as well as the most severe (Figure 2), it rationally follows that it was the most impacted by HBOT. Patients who experienced chronic headaches saw on average a decrease in severity of the symptom by 1.5 points (out of three).

The final implication of this study is that HBOT decreases severity of cognitive symptoms, measured by the scores on the RPQ test as well as survey results. However, a few of the patients who received HBOT treatment sample saw no real improvement in their overall cognitive score

compared to the control group. This shows that a large segment of this data is anecdotal, with HBOT working in different ways from patient to patient. From my study comparing a variety of mTBI patients, HBOT is not a universal therapy that is guaranteed to increase cognitive recovery. However, for most patients it can nearly double the rate of recovery from PCS symptoms. As a result of this data, I would recommend HBOT to patients suffering from chronic headaches after a concussion over a patient suffering from balance problems.

Recommendations

I would also recommend that further studies be done to test the relationship between the frequency of PCS symptoms and the effectiveness of HBOT. If RPQ scores and frequency of symptoms were analyzed together, it could help to discover what PCS symptoms are most affected by HBOT. I would also recommend that further studies include veterans, MVA victims, and athletes all in a single study to be better representative of the overarching population of patients suffering from an mTBI. I would recommend to future researchers on this topic to test both genders in their studies, because in the literature, I found there was significantly less data on female participants compared to males. Lastly, I would recommend that a study would last longer than just an average of forty HBOT treatments in order to see even more clearly if the results of HBOT are long lasting or temporary.

Conclusions

HBOT has been shown to have benefits for a variety of patients on a wide selection of injuries (Singh & Gambert, 2014). The purpose of this treatment is to maximize oxygen absorption, and this oxygen is carried throughout the body to produce more energy, to promote healing, and to repair tissue. HBOT is proven as a viable treatment for the signs of an mTBI injury, but the validity of HBOT's benefits to the symptoms following concussion injury is difficult to prove. This paper provided a cumulative case study that used two types of data collection: archived data and an original survey. The purpose of using two different forms of data collection was to diversify the patient population and to have more control over how the study was conducted.

Through three separate paired t-tests, I evaluated my research question inquiring "what are the effects of HBOT on PCS symptoms?" as well as my research subquestion asking "what symptom is most impacted through HBOT?" The first test showed that over a three-month time period post-injury, a patient should see some recovery in the severity of PCS symptoms. The

second t-test proved that a patient receiving forty HBOT treatments for sixty minutes each session at 1.5 ATA during this same time interval should see a greater recovery of these same symptoms. Lastly, in a slightly different population, the third t-test proved that there is a difference in severity of PCS symptoms before and after a given treatment cycle. All of these tests were found to be statistically significant, and the survey showed that the symptom that was both the most common and showed the greatest change in severity score was chronic headaches.

This study concluded that in a variety of patients HBOT can help increase the recovery rate and decrease the frequency that specific symptoms are experienced. Further studies using a more controlled and diverse group of patients should be done to solidify these results. HBOT essentially utilizes the natural processes in the human body, such as cellular respiration and blood oxygenation, and creates an ideal environment where a patient's body can better heal itself. HBOT is truly a revolutionary type of therapy, and its uses in the brain are only the beginning of its impact.

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Appendix A: Pre and Post HBOT mTBI Symptoms Survey

Approximately how long ago was your injury? _____

Approximately how long did you attend HBOT (length of treatment plan)? _____

Rank the severity of the following post- mTBI symptoms from before HBOT and after. Use the number system as shown and complete the given chart.

0. No pain/symptom not experienced

1. Mild

2. Moderate

3. Severe

TYPE OF SYMPTOM	FREQUENCY OF SYMPTOM: (rarely, during specific movements, frequent, etc.)	SEVERITY PRE-TREATMENT	SEVERITY POST-TREATMENT
Headache			
Nausea			
Balance Problems			
Dizziness			
Fatigue			
Difficulty remembering			
Depression			

Additional comments:

Appendix B: Letter of Informed Consent

Survey Participants:

The survey you are agreeing to complete is intended to evaluate the effectiveness of Hyperbaric Oxygen Therapy (HBOT) as a treatment for symptoms of brain injuries. The survey will ask a series of questions regarding the severity of different symptoms before and after HBOT therapy. This survey will provide data for a research project on the effectiveness of HBOT in addressing mTBI symptoms that is being conducted by a senior in the Magnet Program at Kennesaw Mountain High School. You are invited to complete this survey as you are a qualifying patient who has completed the correct number of HBOT sessions.

This survey is anonymous, and you are not putting yourself at risk whether you choose to complete the survey or not. You are not required to put your name anywhere on the survey, and answers cannot be traced back to you. You may receive the completed results of all the submissions of this survey in my final research paper if you choose.

There will be no penalty if you choose not to take part in this survey. It is intended as a way for the readers to gain more insight about how HBOT can affect cognitive symptoms. Should you choose to fill out this survey, be aware that it must be taken after HBOT treatment plan, but should take only 5 minutes. If at any point you change your mind about completing the survey, you have complete freedom to withdraw from the study.

Please sign below if you agree to fill out this survey.

Signature: _____ Date: _____

If you would like a final copy of the research paper, please provide your email address below.

The researcher will keep this form of consent for at least one year after the end of the study.

Appendix C: Archived Data Summary

	Control Group	HBOT Treated Group
Number of Patients	68	164
RPQ Analysis (0-64)		
Base Score	33.70264706	33.00294479
Change in Score (after 3 months of treatment)	-1.385735294	-3.525092025
Average Score after Treatment	32.31691176	29.47785276

Appendix D: T-Test Results

t-Test: Paired Two Sample for Means		
HBOT RPQ Scores Analysis		
	<i>RPQ Score before HBOT</i>	<i>RPQ score after HBOT</i>
Mean	33.00294	29.47785
Variance	12.83779	19.34799
Observations	163	163
Pearson Correlation	0.035903	
Hypothesized Mean Difference	0	
df	162	
t Stat	8.076158	
P(T<=t) one-tail	7.21E-14	
t Critical one-tail	1.654314	
P(T<=t) two-tail	1.44E-13	
t Critical two-tail	1.974716	
t-Test: Paired Two Sample for Means		
Control RPQ Scores Analysis		
	<i>RPQ Score before 3 months</i>	<i>RPQ Score after 3 months</i>
Mean	33.70265	32.31691
Variance	15.59176	12.34048
Observations	68	68
Pearson Correlation	0.367029	
Hypothesized Mean Difference	0	
df	67	
t Stat	2.712288	
P(T<=t) one-tail	0.004242	
t Critical one-tail	1.667916	
P(T<=t) two-tail	0.008483	
t Critical two-tail	1.996008	
t-Test: Paired Two Sample for Means		
Symptoms on Survey Before and After HBOT		
	<i>Score before HBOT</i>	<i>Score after HBOT</i>
Mean	1.446429	0.75
Variance	0.529204	0.049479

Observations	7	7
Pearson Correlation	0.655803	
Hypothesized Mean Difference	0	
df	6	
t Stat	3.043842	
P(T<=t) one-tail	0.011345	
t Critical one-tail	1.94318	
P(T<=t) two-tail	0.022691	
t Critical two-tail	2.446912	

Appendix E: RPQ Scores of Control Group

Control Group-Base Score n. 68	Control Group-post
33.6	33.05
33.6	33
33.6	30.85
33.6	33.5
33.6	33.05
39.7	35
32.5	40
37	33.05
48	39.07
45	33
25	27
33.6	37.6
40	33.05
33.6	29.87
40.8	33.05
32	20
32	33.05
35.6	32
28	20
33.98	34
35	33.05
30	33.8
42	33.05
40	34.9
39	33.05
39	33.05
39	40
33.6	33.05
33.6	27
33.6	33.05
33.6	28.8
33.6	33.05
33.6	30.6
33.6	33.05
33.6	33.05
33.6	33.05
33.6	29.6
32	33.05
32	33.05
32	28.9
32	33.05

32	33.05
32	37.3
33.6	29
33.6	40.6
30	33.05
30	33
30	33.05
30	29
30	33.05
33.6	34.8
33.6	33.05
27	29.1
33.6	33.05
33.6	28.9
33.6	29
33.6	33.05
33.6	30.1
33.6	29
33.6	31.01
33.6	33.05
33.6	29
26	33.05
33.6	34.7
30	33.05
33.6	33.05
29	30
29	33.05

Appendix F: RPQ Scores of HBOT Group

HBOT- Base Score n. 164	HBOT- Post 3 month HBOT pe- riod
43	29.3
34.3	32.02
42	32.45
34.3	28.77
41	32.02
30	29.87
31.43	32.02
35.7	20
37	30.42
38.3	32.02
34.3	31.9
29.6	20
37.9	29.55
27.01	32.02
29	27.9
34.3	26
28.74	32.02
34.3	35.1
27.5	39
34.3	32.02
20	26.9
29	20
34.3	30.44
30	32.02
33	20
34.3	32.02
28.8	30.2
25.8	32.02
34.3	28.4
36	20
34.3	29.58
24	32.02
34.3	29
29.8	32.02
25	20
34.3	32.02
26.1	34.55
34.3	32.02
28.9	30.01
34.3	32.02
41	31.05

34.3	20
31	32.11
34.3	32.02
34.3	20
34.3	32.88
31	32.02
34.3	20
30	32.02
34.3	27.66
34.3	20.9
34.3	28.97
22	32.02
34.3	29
34.3	32.02
30.9	30.09
34.3	32.02
29.7	31.14
34.3	32.02
34.3	21.9
27.8	32.02
34.3	31.09
27	20
34.3	31.78
34.3	32.02
34.3	30.22
34.3	32.02
33	34.6
33	32.02
33	30
34.3	32.02
34.3	30
34.3	32.02
33	31
34.3	32.02
34.3	31
34.3	32.02
33	31
34.3	32.02
34.3	32
34.3	32.02
34.3	20
34.3	32.02
27	20
27	32.02
34.3	20
34.3	32.02
37	20

34.3	32.02
34.3	20
34.3	32.02
34.3	22
22	32.02
34.3	23.5
34.3	32.02
33	23.6
34.3	32.02
34.3	20.98
34.3	32.02
34.3	28.8
34.3	32.02
34	20.66
34	32.02
34	29.6
34.3	20.12
34.3	29.6
37	32.02
34.3	20.6
34.3	30
36	32.02
34.3	32.02
34.3	32.02
34.3	31.5
37	32.02
34.3	31.1
28	32.02
34.3	32.02
34.3	31.1
22	32.02
34.3	32.1
34.3	32.02
30	33.4
34.3	32.02
34.3	33
44	32.02
34.3	33
34.3	32.02
34.3	30
33	32.02
35.3	32.02
42	34.3
34.3	32.02
41	31.5
34.3	23.4
34.3	34

30	22.14
34.3	32.02
30	20.75
34.3	32.02
30	25.09
34.3	33
34.3	32.02
30	21.44
34.3	20.87
30	27
34.3	24.52
34.3	28.7
34.3	32.02
29	31.4
34.3	32.02
29	29.9
34.3	32.02
34.3	31
28	32.02
27	33.7
34.3	32.02
27	30.8
34.3	32.02
33	28.9
33	32.02
34.3	29.71
33	32.02
34.3	31

Appendix G: Tables and Figures

Table
 Frequency of PCS Symptom in Surveyed Population

	Headache	Nausea	Balance Problems	Dizziness	Fatigue	Difficulty Remembering	Depression
Percentage of patients who experience the symptom before treatment	93.75	56.25	50	87.5	87.5	56.25	43.75

Figure 1: RPQ Score Before and After HBOT

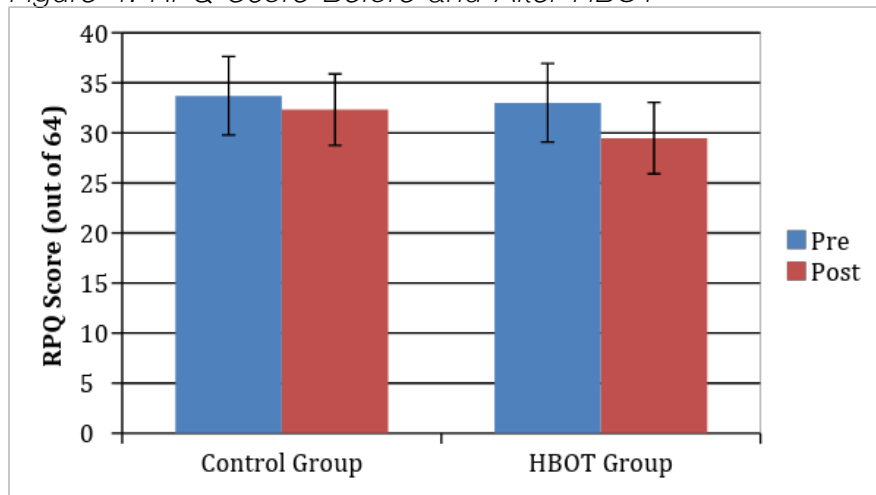
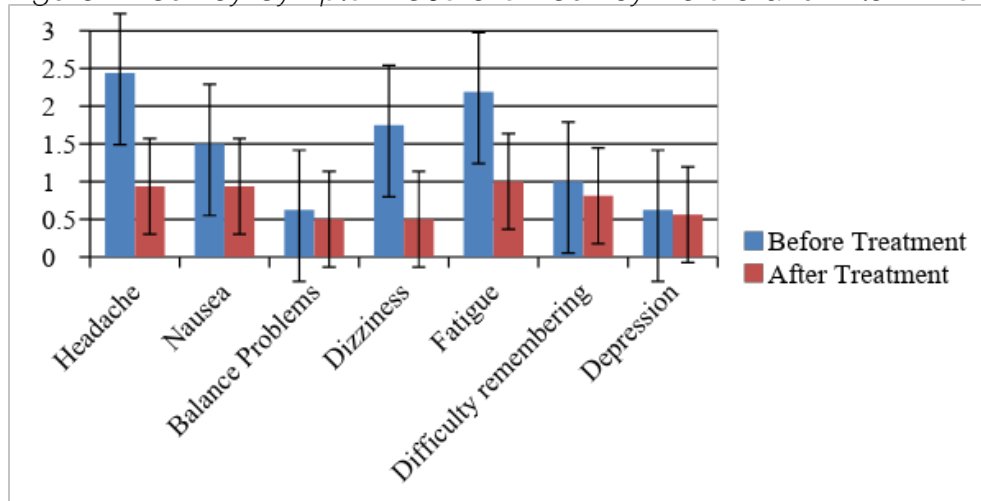


Figure 2: Survey Symptom Score on Survey Before and After HBOT



Leah Spurgeon is in the class of '22 within the Academy of Arts and Sciences at Samford. She is pursuing a Biology major with a minor in Business and plans to attend medical school after graduation. She grew up in Marietta, Georgia with ambitions of becoming a Medical Doctor with an emphasis on research. On campus, Leah is an Ambassador for the College of Arts and Sciences, also serving as Secretary for the same organization. She is also involved in the philanthropy committee for Phi Mu Fraternity, Dean's list for fall 2018, and is becoming involved in research at Samford in the Biology department. The motivation for this project is from her athletic background and experience with multiple sports-related injuries. This project is a byproduct of an internship at the Medici Medical Clinic/Addison's Sports Chiropractic Clinic under the guidance of several medical professionals.

Social Sciences

Algorithms of Mass Destruction:

The Weaponization of Social
Media in the Resurgence of
European Right-Wing Nationalism

Jake Easter

The last two decades have witnessed a sharp rise in radical, Right-Wing nationalist movements in Europe. This thesis evaluates the role that media influence on individual cultural orientation has on this political change, with particular regard to social media as a catalyst since its introduction. Specifically, this study improves upon Eckstein's "A Culturalist Theory of Political Change" by contending that social media has become a potent political change agent through the widespread use of mass media-fear framing within its various platforms. The research used in this paper focuses on the cases of the Pegida movement in Germany and the Lega party in Italy as supporting evidence. This thesis discusses the relevant backgrounds of nationalism and fascism in Italy and Germany and then adds the histories of Pegida and the Lega for comparison. Through the analysis of these cases, the study concludes that the weaponization of social media from a grassroots level and a top-down level through mass media-fear framing is both a causal factor as well as a catalyst in the modern rise of Right-Wing nationalism in Europe. The aim of this study is to highlight that the negative externalities that widespread and decentralized use of social media has precipitated have a verifiable, consequential impact on modern political change and as such should be closely monitored and regulated to prevent the spread of radical, fringe-group ideologies.

Definitions

This section is dedicated to outlining several concepts that are key to understanding the results of this study.

- **mass media-fear framing** – Defined as a strategy wherein information about current events is manipulated into sensational and provocative signals for the purposes of mobilization through preying on collective fears of a chosen people group.
- **nationalism** – Defined by Merriam-Webster and used for the purposes of this study as “a sense of national consciousness exalting one nation above all others and placing primary emphasis on promotion of its culture and interests as opposed to those of other nations or supranational groups.”
- **social media** – Defined as the collective online platforms of the various websites and mobile applications built for the purpose of sharing content, original or otherwise, for the purpose of social interaction and information sharing. Highlighted examples within the study include Facebook and Twitter.
- **xenophobia** – Defined by Merriam-Webster and used for the purposes of this study as “fear and hatred of strangers or foreigners or of anything that is strange or foreign.”

Introduction

“A squirrel dying in your front yard may be more relevant to your interests right now than people dying in Africa...” These are the words of Mark Zuckerberg, founder of Facebook, Inc., in talking about the impetus behind Facebook’s News Feed relevance algorithm in 2011.¹ Zuckerberg created a series of software algorithms for the newly christened social networking platform Facebook that forever changed the way the world interacted online. Depending upon a vast number of factors, Facebook curates a News Feed that caters to users’ interests in an effort to maximize their time engaging with the platform. An idealist at heart, Zuckerberg desires for the globe to shrink in such a way that it brings different people into contact with one another in hopes of mitigating and eventually eliminating hate and ignorance through exposure and connection.

The idea was brilliant, and its present manifestation is objectively impressive. However, the original mission of social media platforms like Facebook and Twitter seems to have missed the mark in practice due to the parameters of the al-

gorithms that constitute such platforms. This thesis will demonstrate social media’s failure to function as a socially adhesive cultural force, as has been suggested more generally by a burgeoning body of literature, and it will assess social media’s role in the current resurgence of Right-Wing Nationalism in Europe.

The coupled rise of social media platforms and refugee emigration to Europe have recently fomented virulent online debate and even translated that debate into physical political participation. Over the last decade, the European community has reached an inflection point in terms of socio-political stability as the number of refugees and asylum seekers from Syria, the Middle East, and Northern Africa have increased exponentially. Several countries throughout Europe have experienced corresponding reactionary political movements, giving rise to a resurgence in Right-Wing Nationalism and a tangible xenophobia against such stateless individuals. Italy is caught in the middle of a delicate immigration tension as their ports of entry have dealt with an intense spike in refugee arrivals since 2015. The primary actor in this anti-immigration movement is Matteo Salvini, the deputy Prime Minister of Italy. Salvini is known for his incendiary and pleonastic use of social media as a vehicle for expressing his views and building an influential following. Unfortunately, refugee asylum denial has become a patent pillar of Salvini’s platform in Italy as head of the Lega party. Similarly, in 2014 a concerned citizen of Dresden, Germany went from starting a Facebook page about the cessation and removal of immigrants in Germany, specifically of Muslim religious beliefs and Arab origin, to becoming the progenitor of a potent political movement in Saxony that expanded at an exponential rate.² Lutz Bachmann’s Pegida party is now a political force with seats in the German Bundestag. Contrary to the beliefs of political movements like Lega and anti-immigration discussion on social media, immigrants and refugees bring immense cultural diversity and human capital to the countries they call home. Diversity brings a richness to culture that homogeneity tends to lack. Thus, this research is devoted to understanding the fundamental nature of social media’s relationship to these political movements across Germany and Italy and tracing its role within existing political theory.

Theories of political change are vital to laying the groundwork of this study. Dr. Harry Eckstein, a professor of Political Science at University

1. Pariser, Eli. “When the Internet Thinks It Knows You.” *The New York Times*. May 22, 2011. Accessed December 04, 2018.

2. Druxes, Helga. 2016. “‘Montag Ist Wieder Pegida-Tag!’: Pegida’s Community Building and Discursive Strategies.” *German Politics and Society*, no. 4: 17.

of California Irvine and Princeton University, wrote “A Culturalist Theory of Political Change” in 1988. His academic contribution is by far the most influential to this study’s theoretical framework. Eckstein’s theory of political change dictates that within the causal relationship of events and individual reactions, there is an intermediary phenomenon, a lens-filter, that refracts the information that individuals absorb into what truly informs their reaction.³ Expanding upon Eckstein’s theory, this study is also manifestly interested in investigating further what contributes the most to this cultural orientation for the average citizen, specifically in Germany or Italy. Moreover, this study is interested in investigating why political actors like Lutz Bachmann or Minister Matteo Salvini chose social media as their medium of influence, and how prevalent the concept of mass media-fear framing is within these countries.

Literature Review

The theoretical basis of this study is founded upon a fundamental theory of political transformation. Eckstein’s “A Culturalist Theory of Political Change” posited that people themselves do not primarily instigate political change. Rather, political change occurs chiefly through “orientations” culturally inculcated in the people within political systems.⁴ A cultural orientation is a lens through which people view phenomena then attempt to make sense of it. This idea is significant politically because it suggests the existence of an intermediary phenomenon that shapes, informs, and directly influences constituent action taken in the political realm. Sara De Master and Michael K. Le Roy, in their *Comparative Politics* journal article “Xenophobia and the European Union”, demonstrate that the more xenophobic media that Europeans consume, the less likely that they will support refugee emigration to the European community.⁵ Predicated on the existence of this phenomenon that De Master and Le Roy bring forward, it is then rational to infer that the more a person buys into the xenophobic message promulgated by an intermediary filter like social media, the less likely they will support immigration.⁶ For the majority of the 20th century, this framing force was believed to be the political

party as an institution. Political science scholars Ami Pedahzur and Leonard Weinberg posit that to say that the political party is the sole framing force overly simplifies the relationship between the political actor and its exogenous influences and ignores what they dub “uncivilized society,” or the sector of society that is on the fringe of the political spectrum and whose views are self-perceived as being marginalized.⁷ Pedahzur and Weinberg’s findings are consistent with this study, but as there are innumerable factors involved in the ideological formation of both political parties and fringe groups, more scholarship is required to identify these factors. Additionally, looking only at mainstream political parties overlooks the increased role of the news media, which, by the introduction of the internet and the rise of social media, has record levels of market penetration and thus has more opportunity to manipulate the collective intermediary filters of either mainstream political parties or fringe groups. Regardless, the political order becomes endangered when these radical out-groups are given the tools to step into an intermediary role in influencing the greater public due to their disruptive nature.

The body of literature surrounding social media’s effects on xenophobia, neoconservatism, populism, and anti-immigration sentiment is inherently young. However, an equally informative and well-established body of literature exists surrounding the more general role of the mass media in framing political and cultural events in the context of pervasive radical fears within the cultural consciousness. Oftentimes, the mass media focuses on only one aspect of an event and proceeds to commit ecological fallacy, severely misrepresenting such events for the purposes of sensationalism. Political science scholars J. Olaf Kleist, Dorothee Arlt and Jens Wolling, and Swen Seebach et al. in their respective journal articles all look at the case of Germany and provide substantial evidence that the conventional mass media’s hostility towards immigrants originates from similar sensationalist practices like ecological fallacy and has directly framed and influenced the orientation of the German public on immigration and asylum seekers as a result.⁸ This mass media-fear framing is a dangerous phenomenon that is evidenced as

3. Harry Eckstein, “A Culturalist Theory of Political Change,” *The American Political Science Review*, 790 (1988).

4. Ibid.

5. Sara De Master, Michael K. Le Roy, “Xenophobia and the European Union,” *Comparative Politics*, 421 (2000).

6. Ibid.

7. Ami Pedahzur, Leonard Weinberg, “Modern European Democracy and Its Enemies: The Threat of the Extreme Right,” *Totalitarian Movements and Political Religions*, (2001).

8. J. Olaf Kleist, “Germany: Two Faces of Refugee Reporting.” *World Policy Journal*, (2017); Dorothee Arlt, Jens Wolling, “The Refugees: Threatening or Beneficial? Exploring the Effects of Positive and Negative Attitudes and Communication on Hostile Media Perceptions.” *Global Media Journal: German Edition*, (2016); Swen Seebach et al., “Fear of and Anger against the Other – the Strange, the Sick and the Imaginary Struggle for Survival,” *DIGITHUM*, (2016).

being largely responsible for informing society's interpretation of sensitive and divisive subjects like immigration.

Mass media fear-framing is a formidable mobilization tool alone, but the recent addition of social media as a platform for this tool has catalyzed its penetration within the public. In 2018, it is much easier to disseminate information than it was even a decade ago. This trend poses a significant question of how to use such power responsibly, but in several cases, the edifying studies of scholars such as Gichuhi Kimotho and Njeri Nyaga, Bozag and Smets, and Muller and Schwarz have identified that social media platforms like Facebook and Twitter have been used not only as vehicles for distributing existing material that perpetuate mass media fear-framing but also as vehicles for the transmission of hate speech and mobilization against undesired minority groups.⁹

The Alternative Right Wing, or Alt-Right, movement in the United States and elsewhere is a salient example of the institutionalized implementation of mass media fear-framing. Of particular interest within this example is literature surrounding what is considered the Trump Effect. Communications scholar and professor at Texas Tech University, Dr. Brian Ott effectively shows the politically motivated and superfluously aggressive rhetoric within President Donald Trump's Twitter account. Ott accurately demonstrates through his case study that "Twitter privileges discourse that is simple, impulsive, and uncivil."¹⁰ Twitter, while hamstrung from its inception due to its microblogging role, has been redirected by ideological forces like the Alt-Right and other marginalized political groups and accelerated by magnanimous figures and demagogues like Ayatollah Ali Khamenei, Supreme Leader Kim Jong-un, and President Donald Trump, hence the appellation of the "Trump Effect".¹¹ An essential component of this phenomenon is echo-chambering, the idea that social media through its coded algorithms allows human tribalistic behavior to run unfettered in its compartmentalization and polarization.¹² Echo-chambering has lodged itself in United States political discourse and in hate-crime concerning Muslim immigra-

tion to the U.S. on Twitter, according to Muller and Schwarz. These scholars found specifically that "Trump's Tweets on Islam-related topics are highly correlated with anti-Muslim hate crime after, but not before the start of his presidential campaign, and are uncorrelated with other types of hate crimes." Thus, Muller and Schwarz demonstrate that the Trump Effect and echo-chambering work in tandem to affect tangible action like hate-crime in the U.S.¹³ However, while these phenomena do not comprise the entire picture of what precipitates nationalism-fueled xenophobia and hate-crime in Europe, it is a relatively easy logical leap that these same mechanics are at play in Europe during the current Mediterranean Refugee Crisis.

Several ideological fringe movements have gained significant traction within Europe specifically in 2018. Political parties and grassroots movements in several socially liberal nations have cropped up, further fueling the effectiveness of mass media fear-framing. Groups like Pegida in Germany and Italy's Lega party have gained influence in their respective political environments and both have taken a shift towards populism and anti-refugee sentiment over the last year.¹⁴ Some scholars have attributed this shift to the economic instability in Europe following the 2008 global financial crisis and the social unrest that followed. While this explains some of the xenophobia present, it does not fully explain why a large majority of these movements are populated by young Europeans when there already exists a strong correlation between advanced age and xenophobia.¹⁵ This study will continue rectifying the dearth in research surrounding fringe political movements by exploring what role of social media usage by fringe groups specifically contributes to the rise of these radical movements. It will do so through tracing the growth and usage of social media in the history of these movements. I intend to show that these same xenophobic, hyper-nationalist movements are mobilizing European youth to take action, either on social media or in their daily life, in expressing hate against immigrants to Europe from the Mediterranean Refugee Crisis. Moreover, I intend to demonstrate that social media

9. Stephen Gichuhi Kimotho, Rahab Njeri Nyaga, "Digitized Ethnic Hate Speech: Understanding Effects of Digital Media Hate Speech on Citizen Journalism in Kenya," *Advances in Language and Literary Studies*, (2016); Cigdem Bozdog, Kevin Smets, "Understanding the Images of Alan Kurdi With 'Small Data': A Qualitative, Comparative Analysis of Tweets About Refugees in Turkey and Flanders (Belgium)," *International Journal of Communication*, (2017); Karsten Muller, Carlo Schwarz, "Fanning the Flames of Hate: Social Media and Hate Crime," *SSRN*, (2017).

10. Brian L. Ott, "The Age of Twitter: Donald J. Trump and the Politics of Debasement," *Critical Studies in Media Communication*, (2017).

11. *Ibid.*

12. Andrew Jakubowicz, "Alt Right White Lite: Trolling, Hate Speech and Cyber Racism on Social Media," *Cosmopolitan Civil Societies: An Interdisciplinary Journal*.

13. Karsten Muller, Carlo Schwarz, "Making America Hate Again? Twitter and Hate Crime Under Trump," *SSRN*, (2018).

14. Jan Hanzelka, Ina Schmidt, "Dynamics of Cyber Hate in Social Media: A Comparative Analysis of Anti-Muslim Movements in the Czech Republic and Germany," *International Journal of Cyber Criminology*, (2017).

15. Amy Lifland, "Right Wing Rising," *Harvard International Review*, (2013).

is a significant catalyst for such activity and thus should be closely monitored by proper authorities and watchdog organizations to protect the human rights of at-risk people who have sought refuge in Europe as a temporary home in times of life-threatening crisis. These movements combined with the free flow of information coalesce to produce the orientation that the public filters world events through a media-informed lens and thus are the initiating factors for political and social action, evident in recent political events in Germany and Italy.

Research Questions

This study aims to answer several questions, some of which have been identified in earlier stages of the production of this thesis and others at later points. This investigation focuses on the following questions: What political mobilization agency does social media like Twitter and Facebook have in the European public square? To what extent does echo-chambering affect cultural orientation? What factors contribute to the transformation of countries like Germany and Italy into inhospitable cultural environments to refugees? To what extent are the respective political cultures of Germany and Italy discontinuous? What role do Twitter and Facebook specifically have in this resurgence of Nationalism and other compatible ideological stances with particular respect to the topic of the Mediterranean Refugee Crisis? What is the relationship between social media like Twitter and Facebook and real-world action against refugees? What role should the EU have in regulating social media usage in response to hate-speech? Looking to the future, to what extent can social media help refugees and citizens better coexist?

Going slightly deeper, these are the questions that are central to this study: What are the root causes of the current resurgence of Right-Wing Nationalism in Europe? What role does social media play in framing public opinion? What is the nature of the relationship between social media usage and political culture formation? To what extent does social media aid human social cohesion? This study seeks to understand the underlying factors that have fomented a rise in Right-Wing Nationalism in the European Union, but specifically in the cases of Germany and Italy. I am investigating if and how social media platforms have been a major factor in this phenomenon and thus hope to discern the extent to which social

media promotes social cohesion and connection more generally. These are the questions and objectives that this thesis seeks to answer and achieve through a qualitative approach to a case study.

Methodology

In order to operationalize this study, I utilize largely qualitative analysis. The qualitative aspect of this study traces the origin of various factors that have been identified as causes of this resurgence in Right-Wing Nationalism and their validity. Within the qualitative aspect of this study, I will use what Stephen Van Evera has called a “process-tracing” approach to theory testing. Van Evera, a professor of Political Science at MIT, emphasizes that using such a method to test a theory results in an effective analysis of how the factors and “chain of events” surrounding events metamorphose into “case outcomes.”¹⁶ Process-tracing is highly advantageous to this study due to its ability to explore the various causal chains and then come to a conclusion on the most likely primary factors. This method of investigation is complementary to the use of a controlled comparison.

In addition to a process-tracing approach, I will also use a controlled comparison to explore qualitatively and quantitatively the implications of the data gathered from process-tracing. Controlled comparison is an effective investigative method due to its ability to isolate and eliminate exogenous influencing factors, and if quality cases are chosen, then controlled comparisons also are effective at eliminating strictly dominated alternative theories.¹⁷ For this study, I compare the 20th century contexts and the development of the modern nationalist movements of Germany and Italy, using the cases of Pegida and the Lega, respectively.

Within this study, I trace the factors that have precipitated the resurgence in Right-Wing Nationalist movements in European countries, with specific regard to how social media has contributed to this phenomenon in the context of the Mediterranean Refugee Crisis. Specifically, I look at the cases of Germany and Italy over the periods of the 20th century and the last decade, as they both have experienced such nationalism in these time periods. I apply the conclusions drawn from the 20th century contexts of both cases to the process-tracing aspect of the study on modern nationalist movements in Germany and Italy. I then compare those conclusions to evaluate the contri-

16. Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca: Cornell University Press, 1997), 67.

17. D. Slater & D. Ziblatt, “The enduring indispensability of the controlled comparison,” *Comparative Political Studies*, 1301 (2013).

bution of social media to the current social upheaval in Europe. The results fall within my modification of Eckstein's "Culturalist Theory of Political Change" and my introduction of the term mass media-fear framing to the theory.

In regards to case selection, I have chosen the cases of Germany and Italy for several different reasons supported by Van Evera.¹⁸ Italy is a data-rich case, having been in the spotlight as of late due to Matteo Salvini's media exposure. It is also rich in asylum-seeker data, having been Europe's most trafficked port of entry for refugees over the last eight years by several orders of magnitude in comparison. It has a prominent and vocal Nationalistic party, The League, which makes it a case whose background conditions resemble conditions of current policy problems.¹⁹ Lastly, Italy has a dense population of Twitter users from which to infer conclusions. I have also chosen Germany for its current newsworthiness and salience, as it has been roundly touted as Europe's ideal refugee destination.²⁰ Prime Minister Merkel has pursued a very generous refugee policy by comparison to the rest of Europe, yet severe reactionary movements boil just beneath the surface of Germany's fragile facade. In order to better understand these movements' origins, it is important to look backwards into regional history for answers.

The Cases of Germany and Italy

20th Century Radical Nationalism in Europe: A Family History of Cultural Entropy

Before delving into the modern cases of this study, it is important to address Europe's general socio-political development in the 20th century more to demonstrate the ideological context that Germany and Italy find themselves in today. The period from 1900-1999 in Europe saw more technological, social, and political change than ever before, at a scale previously unseen. Socially, Europe experienced the general decline of densely concentrated aristocracy and the rise of the middle-class with better access to education, marginally better social mobility, and longer life-expectancy.

These changes did not result from peaceful negotiations with the ruling elite or benefits precipitating from seamless transitions of hierarchical power. The crucible of war and revolution forged

the socio-political shifts in 20th-century Europe, occurring at the peaks of both in-group insulation and out-group destruction. The terrors of World War I, the Bolshevik Revolution, the Spanish Civil War, and World War II in Europe were all deeply rooted in ideological movements spawning from late Enlightenment philosophical exploration. Innovation in science, the exploration of evolution, and the rise of secularism all contributed to a relatively violent rejection of the status quo.

Power and opportunity were concentrated tightly within the grip of the imperial and inherently elitist establishments. There were twelve extant empires in Europe, and by the end of the 20th century, all ceased to exist, relinquishing not only their vast holdings to democratic self-determination but also their own political systems to the pluralism of democracy. World War I proved to be the primary blow to the aristocratic paradigm. The confounding level of destruction brought upon Europe by several countries tripping over entangled, antiquated alliances caused the entire continent to reel and experience an identity crisis. Germany and Italy both underwent dramatic socio-political shifts during this period. These shocks to the citizenry of war-torn European countries largely disintegrated the past filters through which the citizens viewed politics. There was a major change in what Eckstein would call cultural socialization factors.²¹ The actors that stepped in the rift created by World War I in Germany and Italy began to socialize the political culture in new, radical ways. However, these transformations precipitated violent upheavals and mass, grassroots mobilization with ideological zealotry. One such potent ideological movement and new cultural socialization filter at this time was Fascism.

While Fascism, as outlined by the Encyclopedia Britannica, assumed numerous iterations over the century, all such iterations were characterized by "extreme militaristic nationalism, contempt for electoral democracy and political and cultural liberalism, a belief in natural social hierarchy and the rule of elites, and the desire to create a... 'people's community', in which individual interests would be subordinated to the good of the nation."²² This definition bears striking resemblance to the characteristics of several established political movements within Europe today. Benito Mussolini is credited with coining the term, naming his political party the "Partito Nazionale Fascista". From a

18. Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca: Cornell University Press, 1997), 77.

19. Ibid.

20. "How Germany Is Integrating Its Refugees." *The Economist*. September 16, 2017. Accessed 2018. <https://www.economist.com/europe/2017/09/16/how-germany-is-integrating-its-refugees>.

21. Harry Eckstein, "A Culturalist Theory of Political Change," *The American Political Science Review*, 790 (1988).

22. *Britannica Academic*, s.v. "Fascism," accessed November 4, 2018.

culturalist political change theory perspective, Italy started the Fascist movement as a response to the apparent death of the aristocratic, imperial paradigm that led to World War I. The void of stability and structure needed to be filled, and Mussolini sought to do so by tapping into Italy's cumulative socialization of deference to a powerful authority figure, akin to the Roman emperors.

Italy had not seen absolute hegemony as a nation since the Roman Empire. Mussolini recognized this, and thus crafted a mythology that could capture and manipulate the country's conscience to believe that through Fascism, this Roman hegemonic power could be reinstated and could be superior than any democratic state.²³ Romke Visser, in his "Fascist Doctrine and the Cult of the Romanita", that Fascism in Italy at the time became like a "religion", with "doctrine" and a cult following, which formed through a meticulously crafted propaganda machine.²⁴ This top-down usage of media outlets as an avenue to engender a certain worldview immensely affected the Italian populous. While there were certainly critics of Mussolini's regime, the Italian government would silence opposition with a secret police force. Without vocal opposition, the average citizen began to see the world in terms of what was good for the Italian state, at any cost.²⁵ Mussolini was thus able to control his home-front through strictly enforced obedience to the media. Italian Fascism's tight control over such media mechanisms serves as proof of Eckstein's claim that political change is influenced by a culture-borne filter.

Germany, during the same period, experienced a similar level of cultural entropy. The defeat and abolition of the German Empire in World War I caused the previously extant political culture to become what Eckstein would call entropic, formless, and discontinuous.²⁶ This entropy, akin to that in Italy, sought similar resolution in a strong, mobilizing figure, as entropy is never total in a state of cultural discontinuity.²⁷ Adolf Hitler's expedient transition from the Reichstag to the authoritarian and fascist Third Reich regime was attractive to German citizens. It restored a sense of political culture at a near-viral level of popularity, a stability condition that, like equilibrium to economics, is axiomatic for political change dynamics. However, continuity of change is the only constant when speaking of the political change continuum. *Ceteris paribus*, the Third Reich would come and go in

due time, as all political regimes do. Hitler knew this, and he thus attempted to put mechanisms in place to ensure that his Reich would last as long as possible. In an effort to maintain his power and to prevent political change from occurring prematurely, Hitler poured astronomical amounts of money into the propaganda division of his Reich, the National Ministry for Public Enlightenment and Propaganda. Under Joseph Goebbels, the Reich disseminated propaganda not just in the news cycle, but in nearly every aspect of civilian life in an effort to indoctrinate their population. Unfortunately, it worked for twelve years to devastating effect, as ordinary German citizens found themselves committing unthinkable atrocities in the Holocaust. The Second World War and the defeat of the National Socialists wiped the slate clean for the German political culture, and what grew in the Reich's stead blossomed into modern Germany.

In summary, the conditions for change in both scenarios were such that a traumatic, filter-stripping event occurred, and political cultural entropy ensued. Furthermore, an opportunistic, fear-mongering leader dominated the cultural consciousness and then proceeded to alter the decision-making heuristics of citizens by using mass-media fear framing. This generalized analysis does not rule out the agency of citizens in the formation of their specific filters, however. The level of ubiquitous acceptance of radical nationalistic political change is directly dependent on the extent of effective use of the media to alter consciously and unconsciously the frame through which citizens view events. Significant variability of outcome exists on an individual basis within this equation, with the nature of a citizen's cumulative socialization, level of exposure to any form of information dissemination affected by mass media-fear framing, and socioeconomic stability.

Information dissemination has experienced an exponential increase in complexity over the last century. The mainstream media's arsenal of dissemination tools in the early-to-mid 20th century consisted of physical posters, newspapers, pamphlets, public advertisement, radio, and eventually television, all of which had market penetration enough to indoctrinate successfully their respective nations. However, the introduction of the internet changed the dissemination of information drastically. As networks formed, exponentially more people could interact with one another and spread ideas

23. Visser, Romke. "Fascist Doctrine and the Cult of the Romanita." *Journal of Contemporary History* 27, no. 1 (1992): 5-22.

24. *Ibid.*

25. Visser, "Fascist Doctrine and the Cult of the Romanita," 20.

26. Harry Eckstein, "A Culturalist Theory of Political Change," *The American Political Science Review*, 790 (1988).

27. *Ibid.*

swiftly. The first digital news source went online in 1980, thus creating a landmark in media corporations' abilities to disseminate ideas to consumers.²⁸ It is within this context that the Syrian Civil War was poised to instigate political turmoil within the EU through unprecedented mass migration.

The Case of Germany

This section contains the empirical evidence supporting Eckstein's "Culturalist Theory of Political Change" and the existence of mass media-fear framing in the case of Germany. In this section, I utilize the process-tracing method to follow the development of Right-Wing nationalist group Pegida with respect to the Mediterranean Refugee Crisis to show that social platforms like Twitter have fueled the growth of Pegida and contributed to real-life violence against immigrants in Germany

Pegida: Attempting to Reclaim Germany

Germany, as has been outlined within the context of the 20th century, is not a stranger to radical nationalism. However, October 2014 saw the birth of a political movement that has today become inseparable from current events in Europe and an example of the resurgence of Right-Wing nationalism enabled by social media. This movement is Dresden-born "Pegida," or "Patriotische Europaer Gegen die Islamisierung des Abendlandes" which translates to English as "Patriotic Europeans against the Islamization of the West".²⁹ An analysis of Pegida's online presence demonstrates that its platform bears striking resemblance to the National Socialist German Workers' Party: they detest the perceived dissolution of German identity in a more globalized world, they desire only Judeo-Christian Germans in order to create a pure German culture and an isolationist foreign policy that counters globalization, and they will do nearly anything to make those conditions a reality.³⁰

The curious aspect of Pegida is that it started as a Facebook page. Approximately 26 million Germans consistently use Pegida's Facebook page today, which denotes a significantly

trafficked webpage.³¹ Lutz Bachmann created the page on October 10th, 2014, and just two months later, the page garnered over 133,000 likes, with the movement's demonstrations reaching an estimated 18,000 demonstrators.³²

As suggested by its name, the meteoric rise of this movement is primarily fueled by the inherently xenophobic desire of many white, Judeo-Christian Germans to exclude foreign-born residents of Germany on the basis of their Islamic religion or ethnicity. The impetus of such sentiment is traceable to the Syrian Civil War. The Syrian Civil War has displaced 5,646,298 as of July 2018, several thousands of which went to Germany after crossing into Europe in search of a more stable life.³³ This major influx of people all at once alarmed news networks in Germany. Media outlets not only immediately ran incendiary pieces but also spread such messages virally on social media with the widespread use of platforms like Twitter and Facebook well-established in the country. By 2014, people like Bachmann saw this mass media-fear framing as an avid social media user, assimilated it into their pre-existing political beliefs, and formed a new cultural orientation, one where all Muslim or Middle-Eastern-born refugees must be expelled from Germany. This new lens drove Bachmann to take action, and that action was the creation of Pegida.

Consequently, Bachmann's new frame through which he viewed current events precipitated real-life action in creating the nationalist movement. Pegida then became its own mass media-fear framing force that further reached and modified more and more susceptible Germans. Accordingly, Eckstein's "Culturalist Theory of Political Change" suggests that the frame through which individuals view current events is highly transferable, as the average individual is rationally ignorant to formulating an entirely unique cultural orientation due to the human desire to feel part of a group.

This new cultural orientation turned into action, as Pegida began to have demonstrations every Monday in its place of origin: Dresden. These demonstrations grew rapidly in attendance and popularity due to the algorithms within Twitter and

28. Shedden, David. "New Media Timeline (1980)." Poynter. February 27, 2017. Accessed November 05, 2018.

29. Jackson, Allison. "This Timeline Shows the Rise of the Group Organizing Anti-Islam Rallies in Germany." Public Radio International. January 12, 2015. Accessed 2018. <https://www.pri.org/stories/2015-01-12/timeline-shows-rise-group-organizing-anti-islam-rallies-germany>.

30. Ibid.

31. Druexes, Helga. 2016. "'Montag Ist Wieder Pegida-Tag!': Pegida's Community Building and Discursive Strategies." *German Politics and Society*, no. 4: 17.

32. Ibid.

33. UNHCR. (2018, November 12). Refugee Situations: Syria Regional Refugee Response. Retrieved November 13, 2018, from <https://data2.unhcr.org/en/situations/syria>

Facebook which favor sensational posts.³⁴ More and more people began to interact with Pegida social media pages, and a significant proportion of them found ways to spread the movement offline, peacefully or otherwise. As early as December 2014, action turned to violence. Pegida scholar Helga Druxes wrote that “by December 2014, several journalists who exposed Pegida’s anti-immigrant racism, for example, Olaf Sundermeyer and Peter Bandermaier, had received death threats and were targeted by attacks on their homes.”³⁵

Unfortunately, Pegida-borne violence escalated further in October 2015. During a mayoral race for the city of Cologne, a Pegida-motivated, Right-Wing nationalist Frank S. attacked independent mayoral candidate Henriette Reker, who was in charge of refugee housing for Cologne.³⁶ The assailant wounded Reker in the neck and proceeded to attack others in the crowd.³⁷ This blatant and brutal act of xenophobic violence in what Frank S. himself said was in the effort of “protecting you all... because she betrayed our country” is precisely what mass media-fear framing can enable.³⁸

Pegida, regardless of true intention, has become a modern nationalistic force that has aligned itself closely with the dangerously populist Alternative for Germany (Alternative für Deutschland, AfD) party, which saw a record jump in support in the Bundestag as of 2017.³⁹ The AfD, although less radical in views compared to Pegida, is now the third largest in terms of representation in the German parliament.⁴⁰ The AfD “mobilizes popular unease about the European project and specifically the nature and composition of the Eurozone and Germany’s role as its political anchor and paymaster” and would complement to Pegida as a coalitional force moving forward.⁴¹ Born out of latent discontent with post-World War II and post-Cold War German policy, incensed by the influx of refugees in the Mediterranean Refugee Crisis, and armed by the information dissemination and mass media-fear framing power provided by social media, Pegida has placed itself at the forefront of Europe’s resurrection of radical, Right-Wing nationalism.

The Case of Italy

This section discusses and lays out evidence that buttresses Eckstein’s “A Culturalist Theory of Political Change” and demonstrates the phenomenon of mass media-fear framing in the case of Italy. I employ the process-tracing method to track the development of Right-Wing nationalist group Lega Nord, or Lega, with respect to the Mediterranean Refugee Crisis to prove that social media like Facebook and Twitter have fueled the growth of Lega and contributed to real-life violence and racially motivated discriminatory actions against immigrants.

Lega Nord: Rebranding Racism

Right-Wing nationalism has had a face in Italy since 1991.⁴² That face is Lega Nord, or “Lega Nord per l’Indipendenza della Padania”, the Right-Wing nationalist party based out of Milan. Lega Nord formed out of a coalition of smaller political parties led by Umberto Bossi in the Northwest of Italy, a region whose geography and culture is visibly different compared to other parts of Italy.

34. Rose-Stockwell, Tobias. “This Is How Your Fear and Outrage Are Being Sold for Profit.” Quartz. July 28, 2017. Accessed 2018. <https://qz.com/1039910/how-facebooks-news-feed-algorithm-sells-our-fear-and-outrage-for-profit/>.

35. Druxes, Helga. 2016. “Montag Ist Wieder Pegida-Tag!": Pegida’s Community Building and Discursive Strategies.” *German Politics and Society*, no. 4: 17.

36. Ibid.

37. Ibid.

38. Ibid.

39. Charles Lee. 2018. “The ‘Alternative for Germany’: The Rise of Right-Wing Populism at the Heart of Europe.” *Politics* 38 (3): 295–310.

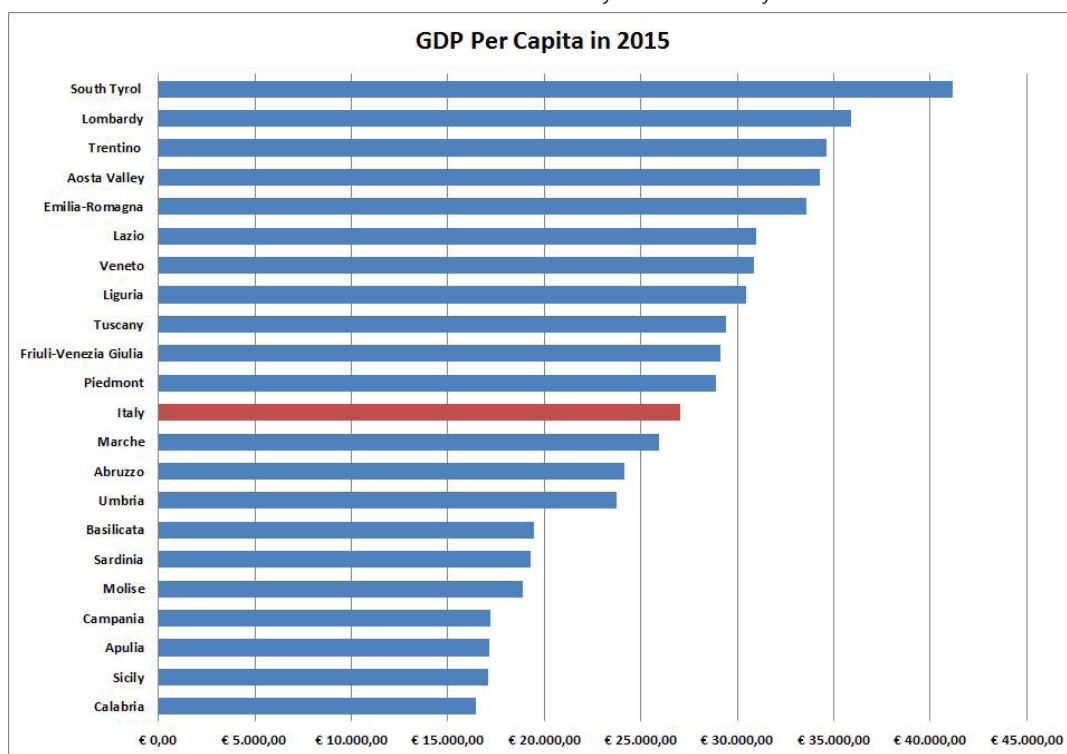
40. Ibid., 299.

41. Ibid.

42. Euan Hague, Benito Giordano, and Edward H. Sebesta. 2005. “Whiteness, Multiculturalism and Nationalist Appropriation of Celtic Culture: The Case of the League of the South and the Lega Nord.” *Cultural Geographies*, no. 2: 151.

Figure 1. GDP Per Capita by Region in Italy in 2015 in Euros

Source: OECD Country Profile: Italy



The party coalesced as a response to a perceived misuse of Northern Italians' tax dollars by the federal government in Rome.⁴³ As Figure 1 above suggests, Northern regions in Italy had significantly higher GDP per capita than the South in 2015, and when viewed historically, this disparity has been roundly true since the formation of Lega Nord. The fledgling party recognized this trend and used it to garner support in the Northern regions of Italy, most notably in Lombardy and Veneto. Latching onto this perceived injustice and difference in culture, geography, and even ethnicity, Lega Nord had its first major electoral victory in 1992. That particular election year witnessed a far-reaching bribery scandal within several branches of the Italian government that the Italian media called *Tangentopoli*, translated "Bribesville", where over half of the Italian parliament was indicted on basis of corruption.⁴⁴ This major blow to the incumbent government's credibility caused a major shock to the voter base, who then opted for the new and relatively unscathed Lega Nord as a substitute. The 1992 general election saw Lega Nord receive three million votes, equating to about 8.7 percent of the vote, a massive indicator that the party was quickly gaining clout rapidly.⁴⁵ This made the fledgling Lega Nord the fourth largest party in Italian Parliament.

Being located closer to the Swiss Alps and central Europe than the rest of Italy, Lega Nord contended that the culture of the macro-region it represented, named Padania by the party, was inherently different and superior to that of the rest of Italy. This dangerously zealous claim, combined with the party's view that Rome was misappropriating tax revenue from Padania, set the stage for the party to shift its focus and lobby in earnest for secession from Italy starting after electoral success in 1996.⁴⁶ Padania would include Lombardy, Veneto, Piemonte, Liguria, and Emilia-Romagna, nearly all of northern Italy, a sizeable and productive region of the country. Although it experienced some initial success in starting a legitimate movement towards secession, Lega Nord experienced losses both at the polls and within party leadership in 1998 and 1999 that hamstrung its expansion.⁴⁷

With such a predicament at hand, Lega Nord leadership needed to pivot in the 21st century from its secessionist agenda towards a platform characterized by Italian nationalism, a desire for more federalism and regional power, and tighter border control.⁴⁸ In doing so, the party found general suc-

43. Hague, Giordano, and Sebesta. "Whiteness, Multiculturalism and Nationalist Appropriation of Celtic Culture: The Case of the League of the South and the Lega Nord." 12.

44. Ibid., 12.

45. Ibid., 13.

46. Ibid., 14.

47. Ibid., 14.

48. Richardson, John E., and Monica Colombo. 2013. "Continuity and Change in Anti-Immigrant Discourse in Italy: An Analysis of the Visual Propaganda of the Lega Nord." *Journal of Language & Politics* 12 (2): 184.

cess in several coalition governments throughout the first decade of the 21st century, aligning itself with Silvio Berlusconi and the People of Freedom (PdL) coalition.

December 2013 saw the rise of Matteo Salvini, a career politician and Lega Nord hardliner. Salvini succeeded Bossi as chairman of the party in an internal party election. Following his election, Salvini steered the party further away from European Union and Eurozone support and towards emphasizing Italian nationalism and border control. Salvini's direction for the party polarized support of his policies, so much so that even his predecessors, including Bossi, spoke out against it. The Mediterranean Refugee Crisis hit a fever pitch in 2015 and consequently put severe stress on Italy's refugee asylum protocols. In line with the nationalistic tune of the party, Salvini began taking racist, xenophobic stances on migration but in the context of border integrity preservation.

In an effort to bolster support for Lega Nord and for his immigration policies as chairman, Salvini initiated a dedicated team for social media propaganda led by Luca Morisi, an expert social media strategist with similar savvy to Donald Trump's Steve Bannon.⁴⁹ This initiative is significant because Salvini, who himself is a product of mass media-fear framing, decided to weaponize social media like Facebook and Twitter to gather support through utilizing mass media-fear framing. This propaganda machine, known affectionately as "the Beast", churns out average of 10 posts a day to Facebook and disseminates party propaganda across YouTube, Twitter, and Instagram around the clock.⁵⁰ For Salvini, this weaponization of social media has been successful. By September 2018, Salvini's Facebook page alone achieved 28 million unique views, and the Lega polled at 34 percent, up from 3 percent in 2014. Unique views are a preferred metric of online market penetration compared to total views because total views allow for repeat visits to skew the data. Salvini's online reach becomes all the more impressive taking this into account.

In June 2018, the *Aquarius*, a refugee rescue vessel operated by SOS Méditerranée that carried over 600 refugees to Catania for previously authorized disembarkation, was prohibited from disembarking by Salvini's executive order.⁵¹ Salvini's control over his followers' cultural orientations is so complete that he gained approval in the polls in spite of a violation of the human right

to free movement across borders.⁵² The action was broadcast nonstop on his social media as a victory for his party and for his country, and it only bolstered his position within Italy.

By analyzing the development of the Lega Nord party in Italy, I have demonstrated that before the use of social media as a cultural orientation modifier by Salvini, the party struggled to gain extensive ground. With Salvini currently at the helm, and "the Beast" in constant operation, the Lega is poised to gain further ground in the near future, spreading its message of radical nationalism, hatred of refugees and migrants, and Italian exceptionalism.

Conclusions and Implications

In looking at how the historical political contexts of Germany and Italy have informed the current resurgence of Right-Wing nationalism and placing both the past and present within the framework of Culturalist Political Change Theory, I conclude that while the political culture entropy caused by the 20th century's political shocks was filled by opportunistic nationalist leaders such as Mussolini or Hitler, the current tremors to these countries' political cultures are being similarly assuaged by radical political movements like Pegida and Lega Nord. I also deduce that the decentralization of media dissemination power wrought by the advent of the internet and specifically social media platforms like Twitter and Facebook have heavily contributed to the rise of these radical movements. I have demonstrated that these movements, like individuals themselves, also fall under the same influence of cultural political change.

The comparison of Pegida & Lega Nord was illuminating, as the former is a fringe political movement and not an actual voting political party in Germany, while the latter maintains political sway with one of their party members as a deputy prime minister. This contrast demonstrates that social media can be used by recognized political parties and radical fringe movements alike, out in the open, and for all to see for the successful and express purpose of cultivating a cultural orientation of xenophobia and radical nationalism through mass media-fear framing.

Furthermore, I have shown that social media, while similar in mechanics to more conventional media, can be used far more effectively for propaganda and mass-media fear framing

49. Scherer, Steve. "Chestnuts, Swagger and Good Grammar: How Italy's 'Captain' Builds..." Reuters. October 18, 2018. Accessed 2018.

50. Ibid.

51. Stone, Mark. "Malta and Spain Offer Safe Port to Stranded Migrant Ship." Sky News. June 11, 2018. Accessed 2018.

52. Ibid.

than its predecessors. This revelation suggests that while it enables radical groups to rapidly coalesce on a microcosmic level, social media does not supplement human social cohesion on a societal level. Social media functions as a primary influencing factor in constructing individuals' cultural orientations through political actors' use of mass media-fear framing to virally alter individual perceptions of current events.

Having conducted the study along these lines, I believe that it will inform the body of literature on the dangers of political culture entropy, social media's relative elasticity towards becoming a very negative political change influencer, and how dangerous nationalistic sentiment is on social media and how easily such sentiment translates to uninhibited, viral tribalism. Additionally, this study provides a modern, additive application of Eckstein's "Culturalist Theory of Political Change" through the introduction of mass media-fear framing.

While this study focused largely on qualitatively tracing factors of political change and social media's misuse for radicalization in Europe, there is still great opportunity for further research on the subject. Specifically, sentiment analysis of social media posts by leaders and influencers of nationalist groups like Pegida and the Lega would allow for insight into how these actors are able to attract such a viral following. Also, further research into other movements and their use of social media within Europe would further confirm the theories evaluated by this study. Hungary, Sweden, and France come to mind. Finally, more research must be done on the effects of Donald Trump's brand of American nationalism used in his election campaign on the electoral campaigns of similar-leaning leaders in Europe, as there are several analogs.

This study's findings have wide-ranging applications, both for further regulation of social media outlets in Europe, as well as other locations in the world where media is being abused to propagate hate and fear. This study has important implications for social media platforms, as Facebook and Twitter have done a poor job of policing who can say what and how on their platforms. As these platforms are inherently under the direct control of the companies that created them, this study's findings should motivate these platforms to take concrete action against actors that spread xenophobic ideologies and toxic nationalist agendas. Most importantly, this study will make the general populous abundantly aware of the fragile and fluctuating state of Europe's socio-political cli-

mate and can give context within which to identify proper safeguards against viral, unchecked nationalism and, at its extreme, a very real possibility of a resurgence of Fascism.

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