

The Pulse

Undergraduate Journal of Baylor University

VOLUME 16 NUMBER 1 Fall 2018



Scientia Crescat

Honors College
Baylor University
Waco, Texas

The Pulse
2018-2019

PRESIDENT
Grayson Jackson

EDITOR-IN-CHIEF
Micheal Munson

EDITORIAL BOARD
Joelle Kim
Grace Vollmers
Jamie Wheeler

PUBLIC RELATIONS STAFF
Kyla Fergason

TECHNICAL DIRECTOR
Kyla Fergason

FACULTY SPONSOR
Dr. Jeff Hunt
Dr. Mike Whintonten

Copyright © 2019
Baylor University.
All rights reserved.

Letter From the Editors

Dear Reader,

*We are pleased to present the Fall 2018 edition of *The Pulse*, the undergraduate scholarly publication of the Baylor University Honors College! *The Pulse*, which is typically published biannually, is the forum for the University's top research across all academic disciplines.*

*Our motto, *Scientia Crescat*, testifies to our belief that the university is preeminently a place where knowledge grows—through research in library and laboratory, through formal and informal dialogue, and especially through the rich connections of traditional knowledge and emergent discovery. This project of growing knowledge is not the exclusive province of professors. Students make significant contributions to knowledge; this journal seeks to recognize and promote those contributions of Baylor students.*

In this spirit of scholarly recognition, the Fall 2018 issue is dedicated to the research and writing by undergraduates in the Baylor Interdisciplinary Core (BIC), one of the four programs in the Honors College. BIC students undertake a rigorous program that combines the traditional coursework of the University in an integrated and challenging liberal arts curriculum. Among the many skills that the BIC program cultivates in its students, writing and critical analysis rank highly, and BIC students produce a high volume of well-crafted papers each year. The papers published herein represent some of the best the BIC program has to offer, and we can think of no better way to underscore our appreciation of multidisciplinary scholarship than to feature these works and their authors.

Sincerely yours,

The Pulse Editorial Board

CONTENTS

A Clash of Cultures: A Cultural Explanation of What Causes Terrorism6

JACK WALL

The September 11th terrorist attacks on the World Trade Center remind us that nowhere is safe from terrorism. In order to attain greater counterterrorism measures, one must enhance one's understanding of terrorism; specifically, in regard to what causes terrorism. Empirical studies in both developed and developing regions suggest that high levels of cultural degradation in a region lead to high levels of terrorism. Cultural degradation is a group's collective feeling that its native and/or long-standing culture is being changed, corrupted, or perverted by external forces. The presence of an unwelcome, threatening foreign influence often triggers this reactionary sentiment.

The Moral Implications of Commercial Meat Production: Do we Have a Right? 20

EVA MORRISON

The Moral Implications of Commercial Meat Production is an exploration into the morality issues surrounding factory farming in the United States. Society exploits its consumption animals to an inexcusable level, and this paper uses Christian teachings and scholarly evidence to explain why this is ethically unacceptable. As moral agents, humans have an endowed responsibility to care for and acknowledge the livelihood and inherent rights of all animals. In a world distanced from agriculture, many Americans are simply unaware of the horrific conditions on farms and in slaughterhouses, and this paper attempts to bring some of these issues to light. This essay argues for the humane treatment of consumption animals. It is not a cry for vegetarianism, but an exploration of the duty humanity has to treat the animals we eat with kindness and respect for their shared existence. Moral agency comes with a responsibility, and this paper explores how this plays out in our relationships with the animals we consume.

Bunyan on the Christian Mind: Good Company and the Formation of Intellectual Virtue in The Pilgrim's Progress 32

WILL TARNASKY

*In this paper, I challenge the conventional narrative that establishes John Bunyan as a central figure in the movement toward radical Protestant individualism. I argue that Bunyan's vision of the Christian life is one that is thoroughly dependent on good company, particularly in the acquisition of intellectual virtue. I first provide a case for why Bunyan is a figure we ought to engage with the broader virtue ethics tradition. The rest of the paper is dedicated to a close reading of *The Pilgrim's Progress*, paying special attention to the role of company in the formation of intellectual virtue.*

Researching the Effects of Music Training on Second Language Vocabulary Acquisition in an International American School in Kuwait..... 50

TEJI WANG

The study's purpose is to determine whether there is a correlation between advancing music skills and second language acquisition ability. Firstly, groups of students studying AFL (Arabic for Foreign Learners) in the American School of Kuwait were divided into those who were learning music and those without musical experience. Then, they went through examinations that determined their skills in retaining receptive and productive vocabulary according to their level. Through data analysis, it is concluded that exposure to music education correlated with better performance in understanding vocabulary when simultaneously listening to and reading the word and using vocabulary during verbal communication.

About the Authors..... 84

The September 11th terrorist attacks on the World Trade Center remind us that nowhere is safe from terrorism. In order to attain greater counterterrorism measures, one must enhance one's understanding of terrorism; specifically, in regard to what causes terrorism. Empirical studies in both developed and developing regions suggest that high levels of cultural degradation in a region lead to high levels of terrorism. Cultural degradation is a group's collective feeling that its native and/or long-standing culture is being changed, corrupted, or perverted by external forces. The presence of an unwelcome, threatening foreign influence often triggers this reactionary sentiment.

A Clash of Cultures: A Cultural Explanation of What Causes Terrorism

Jack Wall

One might ask oneself, “Could I ever become the victim of a terrorist attack?” Living in a developed country such as the United States, it might seem hard to imagine. However, the haunting memory of September 11th, 2001 reminds us that nowhere is safe from terrorism. We must face the grim reality that no country's counterterrorism measures are impenetrable and that terrorist attacks can happen anywhere, anytime. However, a country's counterterrorism measures can always be improved through the development of a greater understanding of terrorism. In order to achieve a greater understanding of terrorism, we must tackle the age-old question: what causes terrorism? I argue that high levels of cultural degradation in a region lead to high levels of terrorism. Empirical studies conducted in regions with historically high levels of terrorist activity, such as Northern Ireland and the Middle East, suggest that this argument applies to both developed and developing regions.

I will first conduct a literature review exploring the central reasoning of opposing arguments. Next, I will explain my argument's key variables (terrorism and cultural degradation). I will then list the contributions that opposing arguments have made to our understanding of what

causes terrorism and explore and address the shortcomings of these arguments. Afterwards, this paper will explain how my argument is to be tested and describe the conditions that must be present in order for my argument to be validated. I will review two case studies that prove the validity of my argument's causal mechanism as it applies to both developing and developed regions of the world. Each case study will contain historical empirical evidence and an analysis that further demonstrates and proves my argument. A conclusion will follow and will reassert my argument and its key points.

Many scholars contend that state failure causes terrorism by creating conditions that are desperate enough to make people see extremist measures as the only effective ways to respond to a political establishment that has failed them.¹ Tim Krieger and Daniel Meierrieks describe state failure as a phenomenon in which a country suffers from persistent political instability and severe poverty.² Cases such as Islamic State fighters handing out snacks and drinks to children and adults on the streets of Raqqa, Syria in an effort to portray themselves as “liberators,” and “men of God,” illustrate this assertion well.³ Other scholars contend that banking crises cause terrorism by rendering governments incapable of providing effective security measures due to dire economic straits. Research findings suggest that banking crises lead to statistically higher levels of domestic terrorism in developing countries.⁴ However, this paper defends the argument that high levels of cultural degradation in a region lead to high levels of terrorism in the region.

First, we must define terrorism. There is much debate within the scholarly community regarding the exact definition of terrorism, but we can loosely define it as the use of violence by individuals or organizations to create fear and intimidation among civilians and governments with the goal of achieving a social and/or political objective.⁵ Terrorists use tactics such as bombings in public places, beheadings, hit-and-run attacks, and mass shootings to create this atmosphere of fear and intimidation. The extreme nature of terrorist organizations' views prevents them from working within the political system to achieve their objectives, so they opt to use violence.⁶ Terrorism in a region can be measured by examining the frequency and number of terrorist attacks, the number of active terrorist organizations, and the nature of the attacks in the region. Regions with high levels of terrorism are characterized by

many regularly occurring terrorist attacks committed by different terrorist organizations. On the other hand, regions with low levels of terrorism have few to no terrorist organizations and attacks.

Before defining the next variable of my argument, cultural degradation, we must first define “culture.” Culture is defined as the history, language, food, beliefs, values, laws, customs, and habits shared by members of a particular society in a particular region. The culture that one is born and raised in has great influence over how one lives one’s life because culture molds identity, values, and the perception of right and wrong and how the world works.⁷ This understanding of culture provides us with a framework to understand cultural degradation.

Cultural degradation is a group’s collective feeling that its native and/or long-standing culture is being changed, corrupted, or perverted by external forces. The presence of an unwelcome, threatening foreign influence often triggers this reactionary sentiment.⁸ In this context, “foreign influence” refers to the military, economic, and/or social presence of an outside force in a region that is grounded in a different or even contradictory culture. Because culture shapes one’s worldview and way of life, the presence of a foreign influence can lead members of the native culture to feel that their way of life is under attack by invaders who sponsor or encourage the adoption of cultural values different from their own.⁹ This perceived threat may make the rhetoric of extremists who vow to protect the native and long-standing culture seem appealing.¹⁰ Therefore, cultural degradation can be catalyzed by the presence of a foreign influence in a culturally dissimilar region.

Foreign influence can manifest in many different ways. It can manifest as the establishment of foreign military bases in a culturally dissimilar country. Another form of foreign influence appears when a foreign power establishes a new government based on principles reflecting the cultural values of the foreign power rather than those of the native culture. High levels of cultural degradation are characterized by the presence of a foreign influence that breeds a desire among a significant number of people in the region to reclaim or defend their shared native culture from being perverted by the foreign influence.

One of the most prominent arguments among scholars regarding causes of terrorism is that high degrees of state failure cause high levels of terrorism in a region. Tiffany Howard of the University of Nevada articulates this argument well in her work *Failed States and the Origins of Violence: A Comparative Analysis of State Failure as a Root Cause of*

Terrorism and Political Violence. She argues that weak and failed states provide the most fertile environments for terrorism, because the living conditions of such states are so desperate that they push people toward extremes. In such dire conditions, it is easy for desperate people to be convinced by extremists' explanations as to why they suffer so much. Terrorist organizations can easily take advantage of this widespread disenfranchisement and suffering by telling the people that they can alleviate the suffering of and attain justice for them. As a result, people will increasingly see terrorism as the only way to change the existing political order and obtain the basic necessities of a reasonably good life.

Howard's biggest contributions to the understanding of what causes terrorism are the observations that the cause of terrorism is multi-factorial, and that the scholarly community believes that terrorists are shaped by their environment.¹² These observations are essential to understanding the causes of terrorism because they provide a framework on which to base further research.

However, the argument that state failure causes terrorism mistakenly assumes a causal relationship between state failure and terrorism, when in fact there is only a correlative relationship. There is not much empirical evidence to suggest a causal relationship between state failure and terrorism.¹³ Countries such as Haiti, Guinea, and Zimbabwe, which suffer from state failure due to their widespread impoverishment and governmental inefficiency, pose no increased threat of terrorism.¹⁴ While the argument addressing the economics behind terrorism improperly assumes causality, it contributes supporting information to help indicate what may cause terrorism.

Some scholars claim that banking crises cause high levels of terrorism in a region, as well as increased unemployment and poor macroeconomic conditions, thus creating socioeconomic grievances that can become dire enough to elicit a terroristic response. Banking crises also harm the financial capabilities of governments by driving them to focus their resources on monetary and fiscal policy rather than security.¹⁵ For a government with few resources to spare in the first place, this inattention to internal security combined with socioeconomic grievances provides ripe conditions for terrorist activity.¹⁶ This argument is important in making us aware that government policy, or the lack of it, can create conditions favorable to terrorism by allowing an economic collapse.¹⁷ However, there is a gap that the banking-crises and state-failure arguments fail to sufficiently address.

From these two arguments we learn that terrorism is shaped by the environment and that government policy (or lack of government policy) can lead to an economic collapse that in turn creates conditions favorable to terrorism. Beyond what is presented in these scholarly works, terrorism's strongest appeals can be further explored. Terrorist organizations must seem appealing to survive.¹⁸ They need strong support bases of members and sympathizers who will give them haven and places to base their operations.¹⁹ To win support, a terrorist organization must create a sense of family and a strong set of ties among members of the particular culture it claims to be fighting for.²⁰ A terrorist organization can exploit the fear that a shared culture is under attack to generate support for its activities.²¹ Therefore, there is a causal link between high levels of cultural degradation in a region and high levels of terrorism in the region.

This causal link is proven though a testing mechanism that establishes it. The first step in linking high levels of terrorism to high levels of cultural degradation is to examine a region that is notable for its terrorist activity, then find out the number of terrorist organizations active in that region and how many terrorist attacks the region has seen within the last few decades. I rely on the Global Terrorism Database, an open-source database with statistical information on the history of terrorist events around the world, to complete this step. Next, if the Global Terrorism Database indicates that a majority or significant number of these terrorist attacks were perpetrated by organizations with the stated goal of reclaiming or defending the region's native or long-standing culture against a threatening foreign influence, we can conclude that terrorism in the region is motivated by cultural degradation. However, this presents another question: how exactly do we determine that a terrorist attack was motivated by a desire to reclaim or defend the region's native culture against a foreign influence?

There are two ways to make this determination. After a terrorist attack has occurred, the terrorist organization responsible might claim responsibility and list its reasons for the attack. If the explanations suggest a desire to liberate a region from a foreign influence, respond to mistreatment of a region's local population, and/or fulfill a religious calling, then we can safely assume that the attack was motivated by cultural degradation.²² However, sometimes after a terrorist attack has occurred, the terrorist organization responsible might neither claim responsibility nor provide justifications for it. In such a case, after the ter-

rorist organization responsible for the attack has been discovered (or at least deemed to be responsible by the relevant authorities), we can often discover the motivation for the attack by examining the terrorist organization's stated ideology. Now that the test design has been explained, we will test the causal mechanism of my argument by first examining the case of a developing region that is widely-known for its terrorist activity: the Middle East, North Africa, and Pakistan region.

The United States Department of State's official list of Foreign Terrorist Organizations records 28 terrorist organizations currently active in the Middle East, North Africa, and Pakistan. (The list actually includes 30, but for the sake of simplicity this paper will not consider splinter groups of larger "umbrella" organizations.)²³ Of these 28 active terrorist organizations, 27 of them foster ideologies of anti-imperialism, anti-Westernization, anti-Americanization, and/or anti-Zionism, which indicates that all of these groups feel that Western powers and their Zionist allies are trying to destroy their region's culture by promoting unwanted values. Their terrorist activities are motivated by a desire to respond to cultural degradation in the region, particularly the degradation believed to be the fault of the United States and/or its "agents" such as Israel. Terrorists and their supporters also believe they are fulfilling an Islamic religious calling to expel these foreign influences. (Islam is the predominant religion of the region and has a deep-rooted history as a central defining characteristic of the native cultures.)²⁴

The Global Terrorism Database reveals that between 1979 and 2016, there were 11,234 terrorist attacks in the Middle East, North Africa, and Pakistan region. 9,240 of these 11,234 were perpetrated by these twenty-seven culturally motivated terrorist groups (82%).²⁵ An overwhelming majority of the terrorist attacks in the Middle East, North Africa, and Pakistan are caused by high levels of cultural degradation in these regions. Historical evidence also illustrates this causal mechanism between cultural degradation and terrorism coming out of the region. Cultural degradation fueled the 2001 terrorist attacks on the World Trade Center and Pentagon. The 2001 terrorist attacks were orchestrated by Osama bin Laden, a wealthy Saudi and the leader of the terrorist organization al-Qaeda. He said his hatred for the United States began with its "crimes against Islam" in Palestine.²⁶ When a war broke out between Iraq and Kuwait in 1990, the U.S. government sent troops to Saudi Arabia, bin Laden's homeland, to deter Saddam Hussein, the dictator of Iraq, from attacking the country. Osama bin Laden's hatred

for the United States intensified as he saw American influence in Saudi Arabia push progressives in the country to call for an end to many of its traditional Islamic cultural practices, such as the informal ban on female driving and discrimination based on tribal affiliation.²⁷ Osama bin Laden saw this foreign American influence as perverting his homeland's traditional Islamic culture with Western secular values.²⁸ This led him to create the terrorist organization al-Qaeda ("The Base" in Arabic) with the goal of getting the United States out of the Middle East and reasserting Islamic cultural values in the region. The appeal of bin Laden's message was strong enough to motivate some to fly themselves into buildings on a suicide mission to fight foreign influence in their homelands.²⁹ Much of the current terrorist activity throughout the Middle East, North Africa, and Pakistan can be traced to the same sense of cultural degradation felt by Osama bin Laden.³⁰

However, high levels of cultural degradation in any region, including developed regions, cause high levels of terrorism. No developed region demonstrates this better than Northern Ireland, a territory of the United Kingdom which has been plagued by Irish separatist violence ever since the Anglo-Irish treaty of 1921, which gave the United Kingdom official control over the northern half of Ireland.³¹ The United States Department of State's official list of Foreign Terrorist Organizations records two terrorist organizations currently active in Northern Ireland, the Continuity IRA and the Real IRA.³²

Both of these Irish nationalist, anti-imperialist terrorist organizations claim that the motive for their terrorist attacks is the history of tyranny and oppression at the hands of the British. The people of Ireland were introduced to Roman Catholicism in the fifth century and for much of its history Catholicism has been a dominant aspect of Irish culture.³³ Oliver Cromwell, who hated the Irish and did not believe that they deserved to be treated civilly, led a British conquest of Ireland.^{34,35} The British conquerors believed that the British were culturally superior to the Irish and led a campaign of cultural nationalism by severely persecuting Irish Catholics.³⁶ Cromwell and his men massacred them and purposely destroyed their crops in order to starve them, resulting in 600,000 Irish deaths.³⁷ Today, the British still control the northern part of Ireland, and some Irish see this as continuing foreign influence, oppression, and cultural degradation of the people of Ireland.³⁸ Terrorist organizations like the Continuity IRA and the Real IRA seek to expel the British completely from Ireland, dissolve Northern Ireland, and unite the

country under one Irish flag.³⁹ The appeal of such a message in Ireland is still strong today because a significant number of Irish nationals still feel a direct connection to the events of British cultural oppression in their country.⁴⁰ This appeal has contributed to the Continuity IRA and the Real IRA's ability to sustain their campaigns of terror against the British, which are illustrated below.⁴¹

Between 1979 and 2016, 3,960 terrorist attacks have been carried out in the United Kingdom as a whole, including Northern Ireland. 1,853 (46%) of these attacks were perpetrated by the Continuity IRA or the Real IRA.⁴² Although this means that the Continuity IRA and Real IRA were not responsible for the majority of all terrorist attacks that the United Kingdom suffered between 1979 and 2016, it is still significant that 46% of all terrorist attacks in the entire United Kingdom can be attributed to just two terrorist organizations. In Northern Ireland, I suspect the percentages to be much higher because that's where the majority of IRA attacks against the United Kingdom occur, but the Global Terrorism Database does not provide data for Northern Ireland itself, only for the United Kingdom as a whole. Nevertheless, the causal mechanism between high levels of cultural degradation in a developed region and high levels of terrorism in the region are confirmed by cases like Northern Ireland.

In conclusion, high levels of cultural degradation in a region lead to high levels of terrorism in both developed and developing regions of the world. People will become very defensive of their culture when they feel that a foreign influence directly or indirectly compels the adoption of cultural values different from or even contradictory to native cultural values. Extremists who claim to protect and/or defend the native culture become appealing to someone who wants to sustain the cultural status quo. High levels of terrorism result. Further research could examine the levels of terrorism in other parts of the world, such as Latin America, Asia, Africa, etc., to see whether the same causal relationship between cultural degradation and terrorism applies to these regions as well.

NOTES

- 1 Krieger and Meierrieks, "What Causes Terrorism?"
- 2 Ibid.
- 3 Hawramy and Shaheen, "Life under Isis Rule in Raqqa and Mosul: 'We're Living in a Giant Prison.'"
- 4 Canuto, Otaviano, and Giugale, *The Day After Tomorrow: A Handbook on the Future of Economic Policy in the Developing World*.
- 5 Enders and Sandler, *The Political Economy of Terrorism*.
- 6 Sandler, "Terrorism and Counterterrorism: An Overview."
- 7 Tylor, *Primitive Culture: Researches Into the Development of Mythology, Philosophy, Religion, Art, and Custom*.
- 8 Rice and Benson, "Hungering for Revenge: The Irish Famine, the Troubles and Shame-Rage Cycles, and Their Role in Group Therapy in Northern Ireland."
- 9 Perlinger and Pedahzur, "Counter Cultures, Group Dynamics and Religious Terrorism."
- 10 Cottee and Hayward, "Terrorist (E)Motives: The Existential Attractions of Terrorism."
- 11 Howard, *Failed States and the Origins of Violence: A Comparative Analysis of State Failure as a Root Cause of Terrorism and Political Violence*.
- 12 Howard, *Failed States and the Origins of Violence: A Comparative Analysis of State Failure as a Root Cause of Terrorism and Political Violence*.
- 13 Patrick, *Weak Links: Fragile States, Global Threats, and International Security - Oxford Scholarship*.
- 14 Coggins, "Does State Failure Cause Terrorism? An Empirical Analysis (1999–2008)."
- 15 Canuto and Giugale, *The Day After Tomorrow: A Handbook on the Future of Economic Policy in the Developing World*.
- 16 Campos and Martin, "International Terrorism, Domestic Political Instability, and the Escalation Effect."
- 17 Gries and Meierrieks, "Do Banking Crises Cause Terrorism?"
- 18 Jordan, "Attacking the Leader, Missing the Mark: Why Terrorist Groups Survive Decapitation Strikes."
- 19 Cottee and Hayward, "Terrorist (E)Motives: The Existential Attractions of Terrorism."
- 20 Ibid.

- 21 Perliger and Pedahzur, "Counter Cultures, Group Dynamics and Religious Terrorism."
- 22 Perliger and Pedahzur, "Counter Cultures, Group Dynamics and Religious Terrorism."
- 23 "Foreign Terrorist Organizations."
- 24 Moghadam, "Motives for Martyrdom: Al-Qaida, Salafi Jihad, and the Spread of Suicide Attacks."
- 25 "Global Terrorism Database."
- 26 Wright, *The Looming Tower: Al-Qaeda and the Road to 9/11*.
- 27 *Ibid*, at 181.
- 28 *Ibid*, at 182-183.
- 29 *Ibid*, at 99.
- 30 *Ibid*, at 180.
- 31 Fair, "The Anglo-Irish Treaty of 1921: Unionist Aspects of the Peace."
- 32 "Foreign Terrorist Organizations."
- 33 De Cléir, *Popular Catholicism in 20th-Century Ireland: Locality, Identity and Culture*.
- 34 Lenihan, *Consolidating Conquest: Ireland*.
- 35 Keen, "The Political Economy of War."
- 36 Brewer and Higgins, *Anti-Catholicism in Northern Ireland, 1600-1998 : The Mote and the Beam*.
- 37 Keen, "The Political Economy of War."
- 38 Kowalski, "The Role of Sectarianism in the Provisional IRA Campaign, 1969–1997."
- 39 Currie, "The Irish Republican Army: A Closer Look."
- 40 Rice and Benson, "Hungering for Revenge: The Irish Famine, the Troubles and Shame-Rage Cycles, and Their Role in Group Therapy in Northern Ireland."
- 41 Bosi, "Explaining Pathways to Armed Activism in the Provisional Irish Republican Army, 1969–1972."
- 42 "Global Terrorism Database."

BIBLIOGRAPHY

- Bosi, Lorenzo. 2012. "Explaining Pathways to Armed Activism in the Provisional Irish Republican Army, 1969–1972." *Social Science History* 36 (3): 347–90. <https://muse-jhu-edu.ezproxy.baylor.edu/article/483469>.
- Brewer, J. D. and Higgins, G. I. 1998. *Anti-Catholicism in Northern Ireland, 1600-1998 : The Mote and the Beam*. New York: Palgrave Macmillan. Available at: <http://ezproxy.baylor.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=426&site=ehost-live&scope=site> (Accessed: 11 December 2018).
- Campos, Nauro F, and Gassebner Martin. 2013. "International Terrorism, Domestic Political Instability, and the Escalation Effect." *Economics & Politics* 25 (1): 27–47. <https://doi.org/10.1111/ecpo.12002>.
- Canuto, Otaviano, and Marcelo Giugale. 2010. *The Day After Tomorrow: A Handbook on the Future of Economic Policy in the Developing World*. World Bank Publications.
- Coggins, Bridget L. 2015. "Does State Failure Cause Terrorism? An Empirical Analysis (1999–2008)." *Journal of Conflict Resolution* 59 (3): 455–83. <https://doi.org/10.1177/0022002713515403>.
- Cottee, Simon, and Keith Hayward. 2011. "Terrorist (E)Motives: The Existential Attractions of Terrorism." *Studies in Conflict & Terrorism* 34 (12): 963–86. <https://doi.org/10.1080/1057610X.2011.621116>.
- Currie, Robin. 1994. "The Irish Republican Army: A Closer Look." *The Journal of Social, Political, and Economic Studies*; Washington, D.C. 19 (3): 287–298. <https://search-proquest-com.ezproxy.baylor.edu/docview/1303764550/citation/2D188C8F60044C0BPQ/1>.
- De Cléir, Síle. 2017 *Popular Catholicism in 20th-Century Ireland : Locality, Identity and Culture*. Bloomsbury Publishing

- PLC, London. Available from: ProQuest Ebook Central. [11 December 2018].
- Enders, Walter, and Todd Sandler. 2011. *The Political Economy of Terrorism*. New York, UNITED STATES: Cambridge University Press. <http://ebookcentral.proquest.com/lib/bayloru/detail.action?docID=807319>.
- Fair, John D. 1972. "The Anglo-Irish Treaty of 1921: Unionist Aspects of the Peace." *Journal of British Studies* 12 (1): 132–49. <http://www.jstor.org/stable/175331>.
- "Foreign Terrorist Organizations." n.d. U.S. Department of State. Accessed April 15, 2018. <http://www.state.gov/j/ct/rls/other/des/123085.htm>.
- "Global Terrorism Database." n.d. Accessed April 15, 2018. <https://www.start.umd.edu/gtd/>.
- Gries, Thomas, and Daniel Meierrieks. 2013. "Do Banking Crises Cause Terrorism?" *Economics Letters* 119 (3): 321–24. <https://doi.org/10.1016/j.econlet.2013.03.009>.
- Hawramy, Fazel, and Kareem Shaheen. 2015. "Life under Isis Rule in Raqqa and Mosul: 'We're Living in a Giant Prison.'" *The Guardian*. December 9, 2015. <http://www.theguardian.com/world/2015/dec/09/life-under-isis-raqqa-mosul-giant-prison-syria-iraq>.
- Howard, Tiffany. 2014. *Failed States and the Origins of Violence: A Comparative Analysis of State Failure as a Root Cause of Terrorism and Political Violence*. Farnham, UK: Taylor & Francis Group. <http://ebookcentral.proquest.com/lib/bayloru/detail.action?docID=1590687>.
- Jordan, Jenna. 2014. "Attacking the Leader, Missing the Mark: Why Terrorist Groups Survive Decapitation Strikes." *International Security* 38 (4): 7–38. <https://muse-jhu-edu.ezproxy.baylor.edu/article/545066>.

- Keen, David. 2011. "The Political Economy of War." In *War and Underdevelopment: Volume 1: The Economic and Social Consequences of Conflict*, by Stewart, Frances, and Valpy Fitzgerald, eds., edited by Frances Stewart, and Valpy Fitzgerald. Oxford: Oxford University Press, 2000. Oxford Scholarship Online. doi: 10.1093/acprof:oso/9780199241866.003.0003.
- Kowalski, Rachel Caroline. 2016. "The Role of Sectarianism in the Provisional IRA Campaign, 1969–1997." *Terrorism and Political Violence* 0 (0): 1–26. <https://doi.org/10.1080/09546553.2016.1205979>.
- Krieger, Tim, and Daniel Meierrieks. 2011. "What Causes Terrorism?" *Public Choice* 147 (1/2): 3–27. <http://www.jstor.org/stable/41483643>.
- Lenihan, P 2007, *Consolidating Conquest : Ireland 1603-1727*, Routledge, London. Available from: ProQuest Ebook Central. [11 December 2018].
- Moghadam, Assaf. 2009. "Motives for Martyrdom: Al-Qaida, Salafi Jihad, and the Spread of Suicide Attacks." *International Security* 33 (3): 46–78. <https://doi.org/10.1162/isec.2009.33.3.46>.
- Patrick, Stewart. 2011. *Weak Links: Fragile States, Global Threats, and International Security* - Oxford Scholarship. <http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199751501.001.0001/acprof-9780199751501>.
- Perliger, Arie, and Ami Pedahzur. 2016. "Counter Cultures, Group Dynamics and Religious Terrorism." *Political Studies* 64 (2): 297–314. <https://doi.org/10.1111/1467-9248.12182>.
- Rice, Cecil A., and Jarlath F. Benson. 2005. "Hungering for Revenge: The Irish Famine, the Troubles and Shame-Rage Cycles, and Their Role in Group Therapy in Northern Ireland." *Group Analysis* 38 (2): 219–35. <https://doi.org/>

org/10.1177/0533316405052380.

Sandler, Todd. 2015. "Terrorism and Counterterrorism: An Overview." *Oxford Economic Papers* 67 (1): 1–20. <https://doi.org/10.1093/oep/gpu039>.

Tylor, Edward Burnett. 1871. *Primitive Culture: Researches Into the Development of Mythology, Philosophy, Religion, Art, and Custom*. J. Murray.

Wright, Lawrence. 2006. *The Looming Tower: Al-Qaeda and the Road to 9/11*. Knopf.

The Moral Implications of Commercial Meat Production is an exploration into the morality issues surrounding factory farming in the United States. Society exploits its consumption animals to an inexcusable level, and this paper uses Christian teachings and scholarly evidence to explain why this is ethically unacceptable. As moral agents, humans have an endowed responsibility to care for and acknowledge the livelihood and inherent rights of all animals. In a world distanced from agriculture, many Americans are simply unaware of the horrific conditions on farms and in slaughterhouses, and this paper attempts to bring some of these issues to light. This essay argues for the humane treatment of consumption animals. It is not a cry for vegetarianism, but an exploration of the duty humanity has to treat the animals we eat with kindness and respect for their shared existence. Moral agency comes with a responsibility, and this paper explores how this plays out in our relationships with the animals we consume.

The Moral Implications of Commercial Meat Production: Do we Have a Right?

Eva Morrison

“Factory farming isn’t just killing. It is negation, a complete denial of the animal as a living being with his or her own needs and nature. It is not the worst evil we can do, but it is the worst evil we can do to them.” These words are taken from Matthew Scully’s *Dominion: The Power of Man, the Suffering of Animals, and the Call to Mercy*, a powerful work that explores society’s exploitation of animals and uses Christian teachings to back up why humanity has the responsibility to acknowledge the livelihood of, properly care for, and treat all beings with dignity and respect. The horrors that go on behind the scenes of commercialized meat production are unthinkable, and largely unbeknownst to the American public. Since the industrial revolution, we have distanced ourselves from agriculture, and most U.S. citizens have never experienced a farm at all, much less a family farm where animals are permitted to live

as they were intended to. In this essay, I will argue for the humane treatment and slaughter of meat animals. I will be exploring the question of whether or not we have moral responsibilities to treat the animals we consume with a certain degree of respect, and whether it is our duty to acknowledge their interests and their livelihood. I will argue that we do, as mature, cognitively advanced human beings and as such full moral agents, have a responsibility to the animals we consume to put forth a valid effort to avoid manners of slaughter that clearly inflict a great deal of stress and pain on the animal.

There are strong arguments that animals, particularly social mammals with higher cognitive function, do indeed possess characteristics like empathy and have a certain level of moral agency, and I will argue that we have a responsibility to care for and respect their livelihood. Animals are intelligent creatures with a complex nature, that much is clear. They live their lives with joy and despair, regardless of what we allow them to experience. I am not arguing for vegetarianism, but rather am assuming that the reader agrees that eating meat is a morally and philosophically defensible action. But if we are going to do so, then we have a responsibility to only slaughter our meat animals in ways that are largely stress-free, painless, dignified, and humane.

In 2015, the United States Department of Agriculture reported a total of 9.2 billion animals slaughtered on factory farms in America. This figure does not include fish, rabbits or crustaceans. The Cambridge dictionary definition of factory farming is “a system of producing meat and other animal products quickly and cheaply by keeping animals in small, closed areas to maximize production at minimal cost.” Factory farming is an industrial system of mass producing livestock for human use, largely at the expense of the animal’s well-being. A paper published in the *UCLA Law Review Journal* argues that while there are many state and federal laws in place that supposedly protect livestock, they are rarely followed and almost never enforced¹. Most factory farm animals suffer the entirety of their lives, both on the farms and in the slaughterhouses. The abuse these animals experience is heartbreaking, and they are treated as nothing more than economic entities without emotions or the capacity to feel pain. Their interests and livelihood are rarely considered, much less their happiness, and this horror begins at birth and lasts to the moment the animals are slaughtered.

Commercial pork production is a good example of the shocking mistreatment and sorrowful cycle of life for animals on factory farms. Sows, or female hogs used for reproduction, account for about six million of the pigs in the United States farming industry². Their lives are spent in gestation crates, which are typically two feet wide and seven feet long. When piglets are born, it is not uncommon for them to be crushed to death between their mother and the side of the crate. The average sow on a commercial farm never turns around, and life for her consists of repeated cycles of impregnation and farrowing until she dies or is figured unfit for production and sent to slaughter. Piglets are taken from their mother at as young as ten days old and thrown into communal “pens” where an estimated ten percent become too sick or hurt to even stand on their own³. During the transport process, pigs are loaded into eighteen wheelers so tightly that one former transporter told a PETA interviewer that “their guts actually pop out of their rectums”⁴. The animals die from heat exhaustion, freeze to the sides of trailers, suffocate, and die of heart attacks, and if they do survive transport are stunned and dropped off a ramp into a scalding tank, often still alive. This is just one example of animal abuse that takes place in commercial farming. Research has shown that hogs are more cognitively advanced than dogs as well as young children and show incredible levels of sophisticated social behavior, such as optimistic biases in decision making and reward-based behavior⁵, so there is no excuse for treating them in a way that so clearly violates moral principles.

Tom Regan provides a solid moral argument against commercial meat production in his paper entitled *The Case for Animal Rights*. For him, the problem does not stem from the way the animals are treated, but rather from the viewpoint that allows us to justify treating them so abhorrently; the belief that they exist not as their own separate, living entities that feel joy and pain, but simply as a resource that we can exploit for our own benefit without consequence. “Indirect duty view,” as he calls it, is the idea that humans can have duties concerning animals, but not to them. We can indeed do wrong acts that involve animals, but the problem with factory farming is we do not believe we have any responsibility to care for animals in any way that might be a bit more inconvenient or costly for us⁶. All our duties surrounding animals are really ones surrounding ourselves, because we view animals as property or collateral belonging to us that we can do with what we please. Society

has almost entirely erased any sense we once had of animal lives, interests, and autonomy, and we have reduced animals, particularly those who benefit us, to nothing more than economic entities.

One specific way Regan expands on his belief that the ways we treat animals have moral implications is comparing animals with young or mentally retarded humans. He argues against contractarianism, or the philosophy that morality is a written set of rules that individuals sign a contract stating they will abide by the laws in exchange for the rights and protection of the community. In this system, animals have no rights because they cannot understand or sign a contract. The problem with this view is it also negates the rights of young children and the mentally ill. It is certain, in Regan's mind and in the mind of any reasonable, compassionate person that if we torture children or retarded people, that we are causing them harm; we are wronging them and violating their rights. But in contractarianism, they have none of these rights because they have not signed the morality contract. The same applies to animals, and this is where Regan runs into a problem. If it is not morally acceptable to pack children and the mentally disabled into trucks by the tons and ship them across the country without food or water for multiple days, then how can we justify doing the same to animals? Blinded by our desperation for economic streamlining and the need for mass production, we ignore the fact that animals, just like us, are living, breathing subjects of life, and all animals, including the ones we use for food, have an intrinsic worth all their own. Cruelty, Regan writes, is a tragic human failing, a besmirch on our entire race.

In addition to Regan's reasoning, philosophy professor Beth Dixon provides another solid argument for the morality behind the humane treatment of consumption animals in her book *Animals Emotion and Morality: Marking the Boundary*. Dixon constructs the Moral Kinship hypothesis, which states in part that humans and animals share our emotional states and have the same capacity for morality⁷. For us to understand the Moral Kinship hypothesis, however, we must first understand the difference between moral patients and moral agents. Moral agents are individuals with sophisticated cognitive capacities to understand impartial moral principles. Full moral agents can reason through complicated moral problems, be aware of potential short and long-term consequences, and choose how to act based on this deliberation. Animals are not capable of this, so moral agency is limited to mature, normal human beings. Moral patients, on the other hand, are

still experiencing subjects of life with levels of intentional action⁸. They have interests that can be thwarted and livelihoods that can be harmed or destroyed. Dixon argues that on the spectrum of morality, animals like the ones we use for consumption fall somewhere in between moral patients and moral agents. Young children also fall into this category, and we all have the same level of moral capacity, just to varying degrees of complexity. Since we share certain morally-laden emotions such as grief, compassion, and love with these animals, the Moral Kinship hypothesis states in part that humans, as full moral agents, have a responsibility to moral patients and all others that fall below us on the spectrum to recognize their livelihood and avoid acting in ways that thwart their natural interests. I believe that Dixon's point provides another excellent argument for the humane treatment of animals used for meat. Pigs, cattle, chickens, and other animals raised for meat are social animals with obvious capacity for emotions. As moral agents, we are the only ones whose actions can be classified as right or wrong⁹. Even if the others belong to different species, they are moral patients and we humans have a responsibility to moral patients and certainly to animals, and commercial meat production is an atrocious abuse of the power we have as the more sophisticated beings. The moral depravity of the situation is serious, shows a complete lack of respect for animal life of any kind, and the implications are more than just a moral issue.

While the most important moral problem is the mistreatment of the animals themselves, factory farming as it stands today also presents problems regarding public and consumer health, as well as environmental dilemmas. There is a direct correlation between meat quality and the manner in which the animals are raised and slaughtered. Dr. Temple Grandin is a renowned researcher and professor on animal science and livestock behavior at Colorado State University. She is one of the world's leading experts on humane meat production and handling, and Dr. Grandin is best known for her development of handling facilities and methods of humane transport and slaughter. She takes a practical approach to animal welfare, primarily writing to emphasize the importance of proper handling to ensure high meat quality and minimize losses during transport. In a 2015 article, she points out that most farm animals have an area in the brain known as the panic and separation center which is activated easily in stressful situations, even when animals are handled in a non-painful way¹⁰. Loud, unusual noises activate this panic center very easily. Animals are incredibly sensitive to sound, and

the high noise levels both in transport and in slaughterhouses cause an incredible amount of stress, which releases epinephrine and cortisol into the animal's bloodstream. Both of these are stress hormones that increase activity of the sympathetic nervous system, which corresponds to the 'fight or flight' portion of the mammalian brain. Research shows that elevated levels of these compounds being released shortly before the animal is slaughtered directly results in tougher, more acidic meat¹¹ since the pH levels are altered. Another problem stemming from this is the accretion of fat that occurs at the expense of muscle proteins. This phenomenon is a direct physiological response to elevated cortisol levels and continues even after death of the animal.

Aside from noise, other factors that cause skewed hormone levels in the animals are dehydration from transport, pain, poor restraint techniques, and uncleanness. Slaughter plants are rarely sanitary, and Dr. Grandin reports that livestock can smell or lick a blood splash from another animal with high levels of stress hormones and panic, causing a chain reaction of balking, or refusal to enter chutes, which often results in plant workers resorting to prod use which then again increases the animals' cortisol levels and starts the cycle all over. Grandin's research indicates that the animals do not even have to taste blood; they can smell cortisol from several feet away. Cortisol is a time-dependent hormone, not reaching peak plasma levels until twenty minutes have passed, and animals who are stressed or restrained for only a few seconds typically do not cause other animals to panic¹². It is important that slaughterhouse employees understand the implications of creating unnecessary stress, and proper training of workers is important.

To expand on this, Temple Grandin states that the single most important factor in determining whether a plant has good or bad animal welfare practices is the attitude of the manager¹³. Until a manager or director is fully convinced that humane treatment of involved animals is actually financially advantageous, most will not follow day-to-day procedures closely. Dr. Grandin also stresses the importance that managers and employees both understand that animals do actually suffer, and explains that concern about the welfare of animals is contingent on people believing that animals, if improperly cared for or mistreated, can indeed experience pain and suffering¹⁴. This is a parallel to Tom Regan's belief that the problem lies in the lack of realization that animals are more than something for us to exploit.

According to another paper published on the moral importance of humane livestock slaughter, proper ethics require that we “must assess what harm is done to the animals, how bad each harm is in terms of its intensity and duration, what methods are available or can be developed to minimize each harm, and the relative effectiveness of those methods of harm minimization”¹⁵. One thing I would like to focus on is how we can minimize the harm inflicted on the animals in each stage of the process. Transportation is often a horrible chain of events for animals being sent to slaughter. They are crammed into a tractor trailer by rough stock handlers whose only job is to get the animals loaded as fast and as tightly as possible. They are electrocuted to force movement and cattle often have their tails twisted to the point of breakage. Once on the truck, they go multiple hours and even days without food or water, and conditions are so cramped that the estimated number of animals that come off the trucks uninjured is around 21 percent¹⁶. Animals also lose massive amounts of weights during transportation. One possible solution to the transport problem is being explored in the United Kingdom, where cattle farmers are transporting their own stock instead of using commercial hauling companies. This has proved to be highly cost-effective, allowing the farmers flexibility to haul at their discretion and the animal outcomes are exponentially better.¹⁷ Research has also shown that meat from cattle who have been transported by private farmers has drastically fewer cases of *E. Coli* infection.¹⁸ There are risks associated at the plants, too. Because of the general uncleanliness and rapid pace of slaughter and packaging that occurs in commercial plants, fecal matter often gets mixed in with the meat and frequently carries strains of the *E. coli* bacterium¹⁹. These health risks start on the farms themselves, where dirty, crowded conditions provide excellent breeding conditions for all kinds of disease-vectoring pathogens.

Perhaps the bigger moral issue is the suffering of the animals dispatched at these plants. With all the modern equipment advances, the biggest problem at the slaughter plants today is the handling techniques and the attitude of plant workers towards the animals. Even the best equipment causes stress and pain when used incorrectly or when animals are roughly restrained by plant workers and jabbed with electric prods²⁰. Temple Grandin suggests several mechanisms for improving logistics at slaughterhouses, including solid sides of restraint areas, hidden flight zones, and non-slip surfaces to prevent falling²¹. Another

important principle already stated is worker behavior. Since animals are so sensitive to noise and shadows, avoiding loud or sudden movements goes a long way in reducing stress.

Even more than these temporary fixes, however, is raising public awareness of the problem and supporting local family farms that raise animals naturally. There are still small farms all across the U.S. who emphasize the importance of meat animal welfare, and the best way to combat commercial abuse is to purchase meat products from these local businesses rather than from big-box meat companies whose only concern is mass production. The health benefits from doing so are numerous, and meat from grass-fed, humanely slaughtered animals has time and again been proven by health-oriented research to be far superior to meat from animals raised on factory farms²². Grass-fed, free range beef has a significantly lower saturated fat content, more omega 3 fatty acids, more linoleic acid, and almost double the antioxidants found in meat from factory raised, grain fed cattle²³. Meat from animals who are humanely slaughtered and not raised in factory farm conditions is healthier for human consumption.

In addition to the simple health deficits of factory-produced meat, the practices that take place on the farms present more acute substantial human health risks, and if the Department of Agriculture required factory farmers to treat their livestock with humane standards of care, the overcrowding, unhealthy feed and use of antibiotics, confinement, mistreatment of animal waste, and overuse of growth hormone would all likely be prohibited²⁴. As a result, disease transmission rates would go down and the health benefits of the meat overall would be much improved as well as the standard of care for the animals involved. The Animal Welfare Act passed by Congress back in 1966 specifically exempts “farm animals,” even though this group makes up ninety eight percent of animals in the U.S.²⁵ The only laws the USDA must follow pertain to sanitation in slaughterhouses and the time just before slaughter to ensure so-called quality of the meat, and there are essentially no laws that pertain to treatment of or conditions pertaining to animals on the farms themselves²⁶. This is absurd, and by allowing these practices to continue, we are producing meat detrimental to our own health.

As mature human beings, we have a moral obligation to lower animals to treat them with respect and dignity, especially ones whose lives we take for food. We share the same emotions and experience life in similar ways, so what gives humanity the right to abuse and exploit

our fellow beings? We are moral agents, and as such can make decisions to act based on moral deliberation. Through awareness, and a little public effort on our part, the abuse that happens on factory farms and in commercial slaughterhouses can be stopped.

NOTES

- 1 Donna Mo, “Unhappy Cows and Unfair Competition: Using Unfair Competition Laws to Fight Farm Animal Abuse.”
- 2 United States Department of Agriculture, 2016 report
- 3 National Agriculture Statistics Service: Livestock Slaughter
- 4 PETA, “Pig Transport and Slaughter.”
- 5 Michael Mendl, Oliver HP Burman, and Elizabeth S. Paul, “An integrative and functional framework for the study of animal emotion and mood.”
- 6 Tom Regan, “The case for animal rights.”
- 7 Beth A. Dixon, *Animals, Emotion, and Morality: Marking the Boundary*, 18
- 8 Beth A. Dixon, *Animals, Emotion, and Morality: Marking the Boundary*, 20
- 9 Tom Regan, “The case for animal rights.”
- 10 Temple Grandin and Chelsey Shivley. “How farm animals react and perceive stressful situations such as handling, restraint, and transport.”
- 11 Aline Foury, Nicolas Devillers, Marie-Pierre Sanchez, H. Griffon, Pascale Le Roy, Pierre Mormède, “Stress hormones, carcass composition and meat quality in Large White × Duroc pigs.”
- 12 Temple Grandin, “Euthanasia and slaughter of livestock.”
- 13 Temple Grandin and Gary C. Smith, “Animal welfare and humane slaughter.”
- 14 Temple Grandin, “The effect of stress on livestock and meat quality prior to and during slaughter.”
- 15 D. J. Mellor, and K. E. Littin. “Using science to support ethical decisions promoting humane livestock slaughter and vertebrate pest control.” 127-132
- 16 N.G. Gregory, “Animal Welfare at Markets and during Transport and Slaughter”
- 17 N.G. Gregory, “Animal Welfare at Markets and during Transport and Slaughter”

- ¹⁸ N.G. Gregory, “Animal Welfare at Markets and during Transport and Slaughter”
- ¹⁹ Stathopoulos, Anastasia S., “You Are What Your Food Eats: How Regulation of Factory Farm Conditions Could Improve Human Health and Animal Welfare Alike.” 407
- ²⁰ Temple Grandin and Gary C. Smith, “Animal welfare and humane slaughter.”
- ²¹ Temple Grandin and Gary C. Smith, “Animal welfare and humane slaughter.”
- ²² Francisco Lopez-Jimenez, “Grass-fed beef: what are the heart-health benefits?”
- ²³ J.J. McCluskey, Wahl, T. I., Li, Q., & Wandschneider, P. R. “US grass-fed beef: marketing health benefits.”
- ²⁴ Stathopoulos, Anastasia S., “You Are What Your Food Eats: How Regulation of Factory Farm Conditions Could Improve Human Health and Animal Welfare Alike.” 407
- ²⁵ Stathopoulos, Anastasia S., “You Are What Your Food Eats: How Regulation of Factory Farm Conditions Could Improve Human Health and Animal Welfare Alike.” 407
- ²⁶ Stathopoulos, Anastasia S., “You Are What Your Food Eats: How Regulation of Factory Farm Conditions Could Improve Human Health and Animal Welfare Alike.” 407

BIBLIOGRAPHY

- Dixon, Beth A. *Animals, Emotion, and Morality: Marking the Boundary*. Prometheus Books, 2008.
- Foury, Aline A., Nicolas Devillers, Marie-Pierre Sanchez, H. Griffon, Pascale Le Roy, Pierre Mormède. “Stress hormones, carcass composition and meat quality in Large White × Duroc pigs.” *Meat Science* 69.4 (2005): 703-707.
- Grandin, Temple. “Euthanasia and slaughter of livestock.” *Journal of the American Veterinary Medicine Association*. 204 (1994): 1354-1354.
- Grandin, Temple. “The effect of stress on livestock and meat

- quality prior to and during slaughter.” (1980): 127-132.
- Grandin, Temple, and Gary C. Smith. “Animal welfare and humane slaughter.” (2004).
- Grandin, Temple, and Chelsey Shivley. “How farm animals react and perceive stressful situations such as handling, restraint, and transport.” *Animals* 5.4 (2015): 1233-1251.
- Gregory, N. G. “Animal Welfare at Markets and during Transport and Slaughter.” *Meat Science*, vol. 80, no. 1, 2008, pp. 2-11. SCOPUS, www.scopus.com, doi:10.1016/j.meatsci.2008.05.019.
- Lopez-Jimenez, Francisco. “Grass-fed beef: what are the heart-health benefits?” *The Mayo Clinic*. (2018).
- McCluskey, J. J., Wahl, T. I., Li, Q., & Wandschneider, P. R.. “US grass-fed beef: marketing health benefits.” *Journal of Food Distribution Research*, 36(3) (2005).
- Mellor, D. J., and K. E. Littin. “Using science to support ethical decisions promoting humane livestock slaughter and vertebrate pest control.” *Animal welfare* 13.1 (2004): 127-132.
- Mendl, Michael, Oliver HP Burman, and Elizabeth S. Paul. “An integrative and functional framework for the study of animal emotion and mood.” *Proceedings of the Royal Society of London B: Biological Sciences* 277.1696 (2010): 2895-2904.
- Mo, Donna. “Unhappy Cows and Unfair Competition: Using Unfair Competition Laws to Fight Farm Animal Abuse.” *UCLA L. Rev.* 52 (2004): 1313.
- National Agriculture Statistics Service: Livestock Slaughter. Website. www.nass.usda.gov
- Regan, Tom. “The case for animal rights.” *Advances in Animal Welfare Science* 1986/87. Springer, Dordrecht, 1987. 179-

189.

Scully, Matthew. *Dominion: The Power of Man, the Suffering of Animals, and the Call to Mercy*. Souvenir Press, 2011.

Stathopoulos, Anastasia S. "You Are What Your Food Eats: How Regulation of Factory Farm Conditions Could Improve Human Health and Animal Welfare Alike." *NYUJ Legis. & Pub. Pol'y* 13 (2010): 407.

"Pig Transport and Slaughter." PETA. www.peta.org/issues/animals-used-for-food/factory-farming/pigs/pig-transport-slaughter/.

United States Department of Agriculture reports and statistics. Website. www.usda.manlibb.cornell.edu

*In this paper, I challenge the conventional narrative that establishes John Bunyan as a central figure in the movement toward radical Protestant individualism. I argue that Bunyan's vision of the Christian life is one that is thoroughly dependent on good company, particularly in the acquisition of intellectual virtue. I first provide a case for why Bunyan is a figure we ought to engage with the broader virtue ethics tradition. The rest of the paper is dedicated to a close reading of *The Pilgrim's Progress*, paying special attention to the role of company in the formation of intellectual virtue.*

Bunyan on the Christian Mind: Good Company and the Formation of Intellectual Virtue in *The Pilgrim's Progress*

Will Tarnasky

John Bunyan's *The Pilgrim's Progress* is a book that needs little introduction. It was an instant success when it was first published in 1678 and is still regarded today as a classic in Christian literature. As one of the most widely read works in the history of English literature, *The Pilgrim's Progress* has been the object of serious literary, historical, theological, and even psychological analysis. While scholars have noted Bunyan's influence in several areas, he is often chiefly identified as a key figure in the development of early-modern individualism—particularly as offering an individualistic vision of the Christian life.¹ This conventional reading of Bunyan has been challenged recently by Galen K. Johnson. Johnson does not deny that Bunyan participated in the trend toward individualism, but he does seriously qualify this interpretation. Johnson provides a thorough survey of Bunyan's writings to demonstrate how Bunyan was, in fact, “on the alert against subjectivist trends in his century.”² Johnson dedicates a chapter of this study to *The Pilgrim's Progress*, in which he discusses the importance of Christian's and primarily Christiana's desire for company. Johnson notes that the role of communal relationships in *The Pilgrim's Progress* is severely undertreated, even by the best Bunyan scholars.³ This chapter highlights Christian's desire for company in Part I, but

focuses primarily on Christiana in Part II. In this paper, I hope to further build on Johnson's observations by exploring the role of good company in the formation of the Christian mind. I argue that for Bunyan, good company is essential in the acquisition of intellectual virtue—particularly the virtue of prudence. I will begin by briefly demonstrating why Bunyan is a figure whom we can engage in the broader conversation of virtue ethics. I will then discuss the nature of prudence as it is historically understood in the virtue ethics tradition. Finally, I will conduct a close reading of Part I of *The Pilgrim's Progress*, paying close attention to Christian's friendship with Faithful and Hopeful, to establish the central role of company in the acquisition of intellectual virtue.⁴

Bunyan's *The Pilgrim's Progress* is often compared with other Christian pilgrim narratives such as Langland's *Piers Plowman* and Spenser's *The Faerie Queene*. Given the centrality of virtue, both moral and intellectual, in these other two allegories, it is surprising that the language of virtue is almost totally absent from Bunyan scholarship.⁵ Isabel Rivers notes that Bunyan, like some of his nonconformist contemporaries, disapproved of the vocabulary of moral virtue.⁶ This is mostly due to that fact that the language of virtue was associated with the Latitudinarians, whom Bunyan and his allies opposed.⁷ It is worth noting that virtue ethics does, in fact, have a prominent place in Reformed moral theology, from the time of the Reformation to the present.⁸ Despite Bunyan's hesitancy to use the language of virtue, there is evidence in his work that gives us reason to treat him within the virtue ethics tradition. While he viewed classical philosophy as heathenistic and suppressing to the gospel, Bunyan's work suggests that he was, perhaps, more absorbed in this tradition that he might have realized.⁹ Rivers hints at this in her observations. She notes that Richard Baxter employs a principle reminiscent of Aristotle's golden mean when he warns his readers to beware of extremes. She sees Bunyan's image of the narrow path that lies between the ditch and the mire as another instance of this Aristotelian doctrine. Interestingly, Rivers does not mention Christian's first two 'companions,' Pliable and Obstinate. These vices, which are the vicious extremes of the intellectual virtue, firmness, have a secure place in the virtue ethics tradition, tracing back to Aristotle's *Ethics*.¹⁰

Christian's visit to the Palace Beautiful, an allegorical representation of the Church, further suggests that Bunyan is operating from within the wider tradition of Christian virtue ethics. In *Palace Beautiful*, Christian meets three Damsels: Piety, Charity, and Prudence. Bunyan

was not careless in choosing these three figures. Charity and Prudence, above the other virtues, both have a special place in the virtue ethics tradition. Charity is understood in the Christian tradition to be the greatest of all the theological virtues. While faith, hope, and charity all have God as their object, faith and hope by their very nature imply a certain distance from their object; faith concerns what is not seen and hope what is not possessed. However, Aquinas notes, “the love of charity is about what is already possessed, for what is loved is in a certain way in the one who loves, and also the one who loves is drawn by affection to a union with what is loved.”¹¹ Whereas charity is distinct among the theological virtues, prudence is likewise distinct among the intellectual virtues. Wisdom is upheld by Aquinas to be the greatest of the intellectual virtues. However, while wisdom is not necessary for the acquisition of moral virtue, prudence is.¹² Prudence and charity are distinct for both are virtues on which other virtues depend. One cannot be morally virtuous without prudence; likewise, one cannot be morally virtuous without charity.¹³

It is not insignificant that Lady Piety accompanies Charity and Prudence, especially for John Bunyan, being a Puritan. While piety was considered one of the virtues for Aquinas, it had a more central role in Puritan moral theology.¹⁴ Jerald C. Bauer notes that for the Puritans, virtue and piety were not the same; piety was the source of virtue. Bauer writes that “piety as understood by the Puritans was a person’s essential religiousness which underlies all religious obedience, actions, and virtues.”¹⁵ Considering this observation, it is fitting that Piety not only accompanies Charity and Prudence, but is also the first to speak. Now that we have demonstrated that *The Pilgrim’s Progress* is a text that can be read from within the broader conversation of virtue ethics, we turn to discuss the nature of Prudence, the main object of our discussion.

For our discussion on prudence, we will be relying primarily on Roberts and Woods’ definitive, contemporary study on the intellectual virtues. Prudence, as stated above, has a privileged place in the array of virtues. Along with love of knowledge, prudence, or practical wisdom, serves as the prerequisite for the other virtues. It is also unique in that it is historically understood as a hybrid virtue, being counted as both an intellectual and a moral virtue. Specifically, “it is the intellectual dimension of the moral virtues.”¹⁶ Aristotle defines prudence as the means by which we deliberate well about what is good and expedient for the good life in general. Hence, Roberts and Woods establish prudence as

an “aiming virtue.” It is the ability to deliberate well about what actions ought to be taken in order to achieve a certain end. Because actions are always particulars, prudence is virtue that is concerned with the particulars in any given situation. Roberts and Woods note that because of the great variability of details in any given situation, there is no formula that can in itself determine what ought to be done. “Instead,” they write, “the determiner is the person of practical wisdom, the agent who interprets and applies the formulas (if such there be) and judges what is particularly to be done in these situations.”¹⁷ It is noted in this study that unlike courage, which is a particular intellectual virtue, prudence is, in a sense, the whole of intellectual virtue.¹⁸ Prudence is chiefly concerned with right action and therefore it always functions hand in hand with other intellectual virtues. For this reason, prudence cannot be spoken of completely divorced from other intellectual virtues such as firmness, humility, and generosity. It works alongside these virtues, in order to deliberate how these virtues are best practiced in particular circumstances to achieve a certain end. Therefore, in our discussion, although we are primarily concerned with prudence, we will speak of other intellectual virtues, for there is a certain extent to which all intellectual virtues are informed by prudence.

It is important to note the moral component of prudence. Insofar as it is also a moral virtue, prudence presupposes a morally good end. Someone who deliberates well how to achieve an evil end is not properly called prudent. For someone to act prudently, one must choose the right action, toward the right end, and with the right intention. Finally, prudence is a virtue that is acquired by experience.¹⁹ While Christian is first introduced to Prudence at Palace Beautiful, his own acquisition of the virtue, we shall see, is an ongoing process over the course of his pilgrimage.

Now that we have a grasp on the nature of prudence, we turn to our text. In Bunyan’s allegory, company is no minor theme. Pilgrim’s Progress is indeed about a pilgrimage from the City of Destruction to the Celestial City. However, it might just as well be called a pilgrimage from the city of bad company to the city of good company. When Christian asks Hopeful how he came to begin his pilgrimage, Hopeful replies that he had to escape from “not only my sins, but sinful company too.”²⁰ When Christian is asked by Prudence why he wants to go to Mount Zion, he replies,

“Why, there I hope to see him alive, that did hang dead on the Cross; and there I hope to be rid of all those things that to this day are in me, an annoyance to me; there they say there is no death, and there I shall dwell with such a Company as I like best...I would fain be where I shall die no more, and with this Company that shall continually cry *Holy, Holy, Holy!*”²¹

And again, when Christian and Hopeful approach the Celestial City, we read, “Here also they had the City itself in view, and they thought they heard all the Bells therein to ring, to welcome them thereto: but above all, the warm and joyful thoughts that they had about their dwelling there, with such company, and that for ever and ever.”²² This pilgrimage begins and ends with company, and the actual journey itself is full of shifting company. Christian is constantly graced with good company, while, at the same time, he is in ever-present peril of bad company.

We begin our close reading of key passages of intellectual formation in *The Pilgrim’s Progress*. Before we treat any particulars in the story, however, there is one important image that we must keep in mind. We know that the path to eternal life is narrow. For Bunyan, the way is narrow because pilgrims are constantly in danger of two perils: moral and doctrinal error.²³ These two dangers, for Bunyan, are equally deadly to the soul. The Christian on pilgrimage, therefore, must be on constant alert against these two perils. We mentioned above that prudence is an “aiming virtue.” It is the virtue of the mind which allows one to deliberate how to act in particular circumstances, in order to achieve a certain end. The end for Christian is safe arrival to the Celestial City. In order to reach this end, Christian and his companions must deliberate well how to protect their souls from the constant threats of moral and doctrinal error.

While there are many figures of good company in the course of Christian’s voyage, Faithful and Hopeful are his two most consistent companions, and will therefore be the chief objects of our study. It is not until after his stay at the Palace Beautiful that Christian has any permanent company. Up until his arrival at Palace Beautiful, Christian has been traveling alone, with the exception of a few brief interactions. It is important to note that it is in his solitude that Christian is led astray by Worldly Wiseman. Christian leaves Palace Beautiful with a sudden desire

for companionship.²⁴ He hears from the Porter that another Pilgrim called Faithful has passed by the Porter's house and Christian sets out to find him.

When Christian and Faithful meet, they immediately share with one another what they have experienced in their respective pilgrimages. Here we see one instance of how prudence is acquired amongst good company. If prudence, as we have noted, is acquired through experiencing different particularities, then the sharing of past experiences can result in mutual acquisition of prudence. In this exchange, Faithful tells Christian of his encounter with an old man, whom Christian identifies for Faithful as Moses. We know that Faithful passed by Palace Beautiful, without going into it. Christian tells Faithful, "But I wish you had called at the house; for they would have shewed you so many rarities."²⁵ These "rarities" that Christian speaks about are the lessons and stories from the Old Testament that Christian received at Palace Beautiful. Christian thus passes this wisdom along to Faithful for his own intellectual formation. Christian is demonstrating the virtue of intellectual generosity, but this virtue cannot be separated from prudence, since prudence directs the intentions and navigates the particularities of other intellectual virtues.²⁶

The clearest example of the intellectual formation in Christian and Hopeful's friendship comes with their encounter with Talkative. Talkative tells the two friends that he too is traveling to the Heavenly City and Faithful suggests the three enter into profitable discourse. Talkative replies that there is nothing more pleasant and profitable than discussing the things of God. He tells them that through such talk, one can arrive at the knowledge of the necessity of the new-birth, the insufficiency of works, the need for Christ's righteousness, the vanity of the world, and what it means to believe, pray, and repent.²⁷ Faithful is beguiled by Talkative's fair speech and his knowledge of spiritual things. He tells Christian, "what a brave companion have we got! Surely he will make a very excellent pilgrim."²⁸ Christian, however, is able to discern Talkative's falsehood. He tells Faithful that Talkative is all tongue; he has no place for religion in his heart. "For my part I am of the opinion, that he has, by his wicked life, caused many to stumble and fall; and will be, if God prevent not, the ruin of many more."²⁹ If it were not for Christian's discretion, Faithful would have been led astray by Talkative's fine speech.

After Christian explains Talkative's error to Faithful, Faithful is able to make his own Old Testament application. He recalls Moses (whom Christian has told him about) and likens Talkative to the unclean

animals in the Mosaic law. The clean animals are those which chew the cud and have a parted hoof. Talkative is like the hare—“he cheweth upon the Word, but he divedeth not the hoof, he parteth not with the way of sinners; but as the hare he remaineth the foot of a dog, or bear, and therefore is unclean.”³⁰ This demonstrates how Faithful’s intellect has been formed in company with Christian. Christian teaches Faithful the “rarities” that he learned at Palace Beautiful and now Faithful can prudently apply these lessons to avoid being led astray.

Faithful’s discourse with Talkative further establishes this scene as one of intellectual formation. Christian suspects Talkative of falsehood, but encourages Faithful to enter into discourse with Talkative to test him. This is itself a prudent maneuver on Christian’s part, for it displays his ability to deliberate what action to take in a particular situation. Faithful too displays discernment in his exchange with Talkative. Faithful, per the advice of Christian, presses Talkative, asking him how God’s grace is made known to the human heart. Faithful answers confidently, “where the grace of God is in the heart, it causeth there a great out-cry against sin.” While this answer appears orthodox on the surface, Faithful, having been warned by Christian, is able to detect the subtlety of the error. Faithful replies, “I think you should rather say, it shows itself by inclining the soul to abhor its sin.”³¹ Talkative does not see a difference between crying out against sin and abhorring sin. Faithful reminds him that there is a great difference. One can cry out against sin in the pulpit and yet abide with in the heart, home, and conversation.³² Faithful here uses another Old Testament application, Potiphar’s wife, who cried out against sin as if she was holy, and yet would have committed sin with Joseph. Finally, Faithful explains that a mother can cry out against her child one moment in an instant of frustration, and then in the next hold the child close again.³³ Hence we see significant intellectual formation as a result of the friendship between Christian and Faithful. Faithful learns the Old Testament and is able to prudently apply its teaching. He also goes from being almost deceived by Faithful, to discerning the subtleties of his errors and rebuking them.

To conclude our discussion on the companionship between Christian and Faithful, we will consider one of the most iconic scenes in the whole text—the visit to Vanity Fair. We will engage Augustine as a conversation partner in this section, to help with our analysis of intellectual formation. We are told that the fair was erected in the town, Vanity, in the ancient days. Its founders, Beelzebub, Apollyon, and

Legion, saw that all pilgrims must pass through Vanity on their way to the Celestial City and elected to build a fair. The fair would last all year long and therein would be sold “all sorts of Vanity.”³⁴ We are also told the variety of merchandise sold at the fair: houses, lands, honors, trades, whores, husbands, pleasures, children, bodies, souls, silver, and gold. As Christian and Faithful pass through the fair, they incite a great commotion among the people. There are three reasons that are said to have sparked the “hubbub.” First, for the townspeople, the pilgrims are very strange. They are clothed with a certain raiment that is sold nowhere in Vanity Fair. Secondly, their speech is unintelligible for the townspeople. Thirdly, the pilgrims walk through the fair, without paying attention to the things sold. When a merchant asks Christian and Faithful what they will buy, they reply, “We buy the Truth.”³⁵ Their response causes an uproar in the town, for now the townspeople have an occasion to despise them even more.

Christian and Faithful are arrested for their crime (causing the hubbub) and Faithful is given an opportunity at his trial to give an account. The formal accusation states: “That they were enemies to, and disturbers of their Trade; that they had made Commotions and Divisions in the Town, and had won a party to their own most dangerous Opinions, in contempt of the law of their Prince.”³⁶ To the accusations, Faithful replies, “[t]hat he had only set himself against that which had set itself against him that is higher [than] the highest.” Faithful claims that he made no such a disturbance, for he is a man of peace. In regards to the Prince of Vanity Fair (the devil), Faithful concedes that he must defy him and his angels, for this Prince is an enemy of the Lord. At the trial, Envy, Superstition, and Pickthank all testify against Faithful. It is Envy’s accusation and Faithful response that we will focus on. Envy testifies before the Judge,

My Lord, this man, notwithstanding his plausible name, is one of the vilest men in our Country; He neither regardeth Prince nor People, Law nor Custom; but doth all that he can to possess all men with certain of his disloyal notions, which he in general calls Principles of Faith and Holiness. And in Particular, I heard him once my self affirm, That Christianity, and the Customs of our Town of Vanity, were Diametrically opposite, and could not be reconciled. By which saying, my Lord, he doth at once, not only condemn all our laudable doings, but us in the doing of them.³⁷

Faithful is thus accused of rejecting all laws and customs of the town by setting them in stark opposition to his duties as a Christian. To answer this accusation from Envy, Faithful replies, “*I never said ought but this, That what Rule, or Laws, or Custom, or People, were flat against the Word of God, are diametrically opposed to Christianity.*”³⁸ This echoes back to Faithful’s initial defense—he does not oppose everything in the town, only that which has set itself against “him that is higher than the highest.”

This episode could be read as Bunyan’s own application of Augustine’s call in *De Doctrina Christiana* to “take the spoils of the Egyptians.” In this text, Augustine addresses the relationship between pagan and Christian wisdom. To advance his position, Augustine provides an allegorical interpretation of the Exodus story. When the Israelites fled Egypt, they were commanded by God to salvage from the Egyptians treasures all that could be claimed for good use. This meant that gold, silver, clothes, and various vessels could be taken from the Egyptians, this being done not under their own authority, but the authority of God.³⁹ Augustine uses this event to establish an analogous relationship between the treasures of Egypt and the wisdom of the pagans. In the Exodus account, the Israelites were commanded to take the treasures that could be salvaged for good use and to leave behind and shun those items that were used explicitly in pagan worship. Augustine exhorts Christians to a similar task: to search through the wisdom of the pagan world and claim for God what can be salvaged. If all truth is God’s truth, than Christians have, according to Augustine, the duty to find this truth (even if it be among pagans) and claim it for good use. This likewise means rejecting the teaching of the world that is directly contrary to the wisdom that comes through revelation. Augustine writes that the true claims found among the pagan philosophers are like treasure—“silver and gold, which they did not create but dug, as it were, from the mines of providence.” Much of this wisdom can be claimed by Christians and “applied to their true function, that of preaching the gospel.”⁴⁰

Faithful’s defense at his trial in Vanity Fair resonates with this teaching from Augustine. Faithful is clear that Christians do not reject all of the laws and customs of the world, only those are in direct contradiction to God’s will. There are significant implications here regarding the formation of the Christian mind. The Christian life, as we have seen, for Bunyan, is a pilgrimage along a narrow way between the two dangers—moral and doctrinal error. The Christian must therefore be prudent in

discerning this fine line. Faithful here provides Christian with invaluable wisdom. The laws, customs, and wisdom of the world can be both greatly beneficial and treacherous to the Christian. The Christian must therefore search and carefully consider what can be salvaged for good, and what ought to be rejected altogether. Faithful's trial at Vanity Fair is therefore yet another critical scene where we see the role of company in the formation of intellectual virtue.

Faithful and Christian's friendship comes to an unfortunate end when Faithful is martyred at Vanity Fair. Even this event, however, can be seen as instance of formation for Christian. Until Faithful's death, Christian, had not experienced the true cost of going on this pilgrimage. Faithful's martyrdom is, in a sense, the greatest act of prudence, for by becoming a martyr he makes the ultimate sacrifice to achieve his intended end. Christ tells his disciples to be "wise as serpents." In *De Doctrina Christiana*, Augustine helps us understand the meaning of this command.

The well-known fact about the snake, that it offers its whole body to assailants in place of its head, marvelously illustrates the meaning of the Lord's injunction to be wise as serpents, which means that in place of our head, which is Christ, we should offer our body to persecutors, so that the Christian faith is not as it were killed within us when we spare our body and deny God.⁴¹

Augustine shows us while martyrdom does indeed require the virtue of courage, it is also an act of prudence—practical wisdom. Faithful did not lose sight of his true aim and was, therefore, willing to die for it, lest his soul be lost by denying his faith. After Faithful's death, Christian is immediately introduced to Hopeful, who will be his companion throughout the rest of his pilgrimage. As our narrator remarks, "Thus one died to make testimony to the truth, and another rises out of his ashes to be a companion with Christian."⁴² We will turn to our attention to Christian and Hopeful's friendship and continue to consider the role of company in acquisition of intellectual virtue.

Christian and Hopeful's imprisonment by Giant Despair in Doubting Castle is perhaps the greatest scene of formation in *The Pilgrim's Progress*. Despair locks up the pilgrims for trespassing in his land. His wife, Diffidence, counsels Despair to have the pilgrims kill themselves. He brings the pilgrims a knife, a noose, and poison, and allows them to choose the manner in which they want to end themselves. "For why should you choose life, seeing it attended with so much bitterness?"

Christian asks Faithful, “Brother, what shall we do? The life that we now live is miserable: for my part, I know not whether [it] is best, to live or to die out of hand. My soul chooseth strangling rather than life, and the grave is more easy for me than this dungeon. Shall we be ruled by the Giant?”⁴⁴ Christian says his soul chooses death. We might therefore say that had he been alone, he would have killed himself.

Hopeful is able to “moderate the mind” of Christian. “Indeed our present condition is dreadful, and death would be far more welcome to me than thus for ever to abide: but let us consider the Lord of the Country to which we are going”⁴⁵ He reminds Faithful that they are commanded by their Lord not to murder, and that taking their own life would break that commandment. Hopeful also reminds him that the Lord is sovereign and he could cause either their release or the giant’s death. With these words, Christian makes it through the first night without taking his life.

Giant Despair returns to the cell the second night to see if the pilgrims have taken his counsel. When he sees that they are still living, he falls into a “grievous rage” which causes the pilgrims to tremble greatly. We are told that Christian again contemplates suicide, but Hopeful comforts him with his second reply. He beseeches Christian to remember his encounter with Apollyon, his passage through Vanity Fair, and the many other trials Christian has faced on his pilgrimage. He tells him too to remember that he is not alone but that Hopeful, who is far weaker than he, is with him. These promptings stir patience in Christian and he lives through the second night. The third night, the pilgrims spend in prayer and at the break of day Christian bursts out in passionate speech, “What a fool I am, thus to lie in a sinking dungeon, when I may as well walk at liberty? I have a key in my bosom, called Promise, that will (I am persuaded) open any lock in Doubting Castle.”⁴⁶ The key (God’s promises) does indeed open the lock and the pilgrims escape Doubting-Castle.

Vincent Newey sees Christian’s escape from Doubting Castle as a quintessentially individualist episode. The fact that Christian realizes that the key lies entirely within himself is, according to Newey, a testament to this individualism.⁴⁷ I argue that this is an unfair reading of this event. It does not take into account Hopeful’s critical role in the affair. In Hopeful’s first two speeches, his approach to counseling Christian is to prompt his memory. He reminds Christian of God’s law and his providence in the first speech and Christian’s past trials in the second speech. What is more, Christian and Hopeful are praying together when

Christian remembered the key he possesses. It should also be noted, that Christian was first shown the Promises by Help when he was rescued from the Slough of Despond.⁴⁸ We thus cannot ignore the importance of Hopeful prompting Christian's memory in Doubting Castle.

We must also say a brief word about the nature of memory as it relates to prudence. Aquinas writes, "memory, intelligence, and foresight, as well as caution, docility, and the like, are not virtues distinct from prudence but are in a certain way connected with prudence as integral parts, insofar as they are required for the perfection of prudence."⁴⁹ This scene is, therefore, a fitting example of prudence being formed in the context of good company. Without Hopeful's prompting, Christian would not have exercised his memory, which is what ultimately led to their rescue.

While there are many more passages we could treat, we will conclude our discussion by considering Christian and Hopeful's journey across the Enchanted Ground.⁵⁰ The pilgrims have been instructed by the shepherds to beware of flatterers and to take heed not to fall asleep on the Enchanted Ground. When Hopeful and Christian enter the Enchanted Ground, they are immediately overcome with drowsiness. Christian remembers the shepherds warning and suggests he and Hopeful "fall into good discourse" to keep themselves from falling asleep.

*When saints do sleepy grow, let them come hither,
And hear how these two pilgrims talk together:
Thus to keep ope their drowsie slumbring eyes.
Saints fellowship, if it be manag'd well.
Keeps them awake, and that in spite of hell.⁵¹*

There are two things to be noted from this episode. On the one hand, we see a clear display of Christian's prudence. Christian deliberates well as to which action should be taken to travel across the Enchanted Ground. He recognizes that by conversing with one another, the two pilgrims will be able to overcome their drowsiness. On the other hand, Bunyan is making a comment on the importance of Christian companionship. The nature of their discourse is also important to note. Among other things, Christian and Hopeful discuss with one another what the true fear of God consists in. The fear of God is called the beginning of wisdom. Christian and

Hopeful arrive at an understanding of this fear through discourse. This further establishes that for Bunyan, wisdom is not something acquired in solitude. Pilgrims acquire wisdom by deliberating with one another in discourse. It is precisely in these moments of discussing past experiences, and contemplating with one another about the things of God, that prudence is acquired. As demonstrated in the verse above, well-managed fellowship guards Christians against spiritual drowsiness. Spiritual drowsiness can lead to moral and doctrinal error. Company is therefore, for Bunyan, necessary for pilgrims who wish to guard themselves against these perils.

While Christian and Hopeful make it in the end to the Celestial City, it is safe to say that they would not have made it had it been for their good company. In this paper we have considered some scenes of key intellectual formation, in which virtues of mind, namely prudence, were acquired in and because of good company. Bunyan imagines the Christian life as a pilgrimage along a narrow path. This path is narrow for the pilgrims are constantly threatened with the peril of moral error on the one side, and doctrinal error on the other. The last thing we see in Part I of *The Pilgrim's Progress* is not Christian and Hopeful entering the City, but rather Ignorance, the one who prides himself on preferring to travel alone, being led away to hell. Bunyan's vision of the Christian life is far from solitary. For Bunyan, the life of Christian is a life of carefully navigating a fine line. The virtues of the mind that allow pilgrims to carefully navigate this fine line are acquired, cultivated, and practiced not in isolation, but rather in the presence of good company.

NOTES

¹ In his monumental study, *The New England Mind*, Perry Miller notes, “the figure of the pious and trembling individual closeted alone with this Bible, of the solitary walker with God, is often taken to be the true symbol of the Puritan Spirit.” Miller mentions Bunyan’s *Grace Abounding* in relation to this claim, as it “records the inward quest with no reference to the external and social scheme.” Perry Miller, *The New England Mind: The Seventeenth Century* (Eastford, CT: Martino Fine Books, 2014), 297.

² Galen K. Johnson, *Prisoner of Conscience* (Carlisle: Paternoster, 2006), 5.

³ *Ibid.*, 141-143.

⁴ The purpose of this paper is to examine the role of company in the formation of the Christian mind. We will therefore not only be focusing on Christian’s formation in the company of Faithful and Hopeful, but also Faithful and Hopeful’s formation in the company of Christian. Christian’s companions, as we shall see, receive just as much benefit from his company as he does from theirs. There is a certain tendency when reading *Pilgrim’s Progress* to solely identify with Christian. Faithful and Hopeful are, however, also Christians on pilgrimage, whom we are supposed to learn from. Faithful, for example, is meant to show us that some pilgrims will be killed for their faith—a reality that all Christians must accept.

⁵ Barry E. Horner provides a helpful overview of Bunyan scholarship in his book, *John Bunyan’s Pilgrim’s Progress: Themes and Issues*. He surveys the work of eight major Bunyan scholars. There is no reference to virtue in this overview. In his discussion of modern assessments of *The Pilgrim’s Progress*, the language of virtue is likewise absent. Horner summarizes twentieth-century Bunyan scholarship in the areas of literary criticism, historical investigation, psychological analysis, political and social theory, and theological appreciation. Bunyan’s moral theology and his understanding of Christian intellectual life is not addressed. Barry Horner, *John Bunyan’s Pilgrim’s Progress: Themes and Issues* (Darlington and Vestavia Hills, AL: Evangelical Press, 2003), 380-414.

⁶ Isabel Rivers, *Reason, Grace, and Sentiment: Volume 1, Whichcote to Wesley: A Study of the Language of Religion and Ethics in England 1660-1780* (Cambridge: Cambridge University Press, 2005), 141.

⁷ “The Latitudinarian view of morality... may be summarized as follows: men are by nature sociable and disposed to act well; sin is an unnatural deviation from this disposition; men naturally pursue happiness, though they often miscalculate the method of attaining it; happiness is achieved through holiness, and understood properly is in fact the same thing; the religious life is the most advantageous because religion enables men to act according to their true nature and in their best interest by choosing the path will make them holy and therefore happy.” N. H. Keeble, ed., *John Bunyan: Conventicle and Parnassus: Tercentenary Essays* (Oxford and New York: Oxford University Press, 1988), 51.

⁸ Pieter Vos, “Calvinists among the Virtues: Reformed Theological Contributions to Contemporary Virtue Ethics” in *Studies in Christian Ethics* 28.2 (2015): 201-212.

⁹ Rivers, Reason, Grace, and Sentiment, 111.

¹⁰ Aristotle, *The Nicomachean Ethics*, VII.7, VII.9. Also see Robert C. Roberts and W. Jay Wood, *Intellectual Virtues: An Essay in Regulative Epistemology* (Oxford: Oxford University Press, 2007).

¹¹ Aquinas, ST Question LXVI, Art. 6.

¹² “Since prudence is concerned with human affairs, and wisdom with the highest cause, it is impossible for prudence to be a greater virtue than wisdom,” ST Question LXVI, Art. 5. “Moral virtue can exist without some of the intellectual virtues, such as wisdom, science, and art, but not without the virtues of understanding and prudence,” ST Question LVIII, Art. 4.

¹³ Aquinas, ST LXV, Art. 2.

¹⁴ Brian Davies, *Thomas Aquinas’s Summa Theologiae: A Guide and Commentary* (London and New York: Oxford University Press, 2014), 264.

¹⁵ Jerald C. Brauer, “Types of Puritan Piety” in *Church History: Studies in Christianity and Culture* 56.1 (1987): 39-58, 39.

¹⁶ Roberts and Wood, *Intellectual Virtues*, 305.

¹⁷ *Ibid.*, 306.

¹⁸ *Ibid.*, 310.

¹⁹ See Aristotle, *Ethics* VI.8.

²⁰ John Bunyan, *The Pilgrim’s Progress*, ed. W. R. Owens, revised edition (Oxford and New York: Oxford University Press, 2003), 133.

²¹ *Ibid.*, 51. Emphasis in original.

²² *Ibid.*, 152.

- ²³ The danger of moral and doctrinal error is the allegorical interpretation of the Ditch and the Quag. *Ibid.*, 62-63.
- ²⁴ Stevenson notes that at Palace Beautiful, three privileges are disclosed to Christian. The solace and inspiration of Christian friendship is one of these three privileges. Robert Stevenson, *Exposition of The Pilgrim's Progress*, with Illustrative Quotations from Bunyan's Minor Works (Folcroft, PA: Folcroft Library Editions, 1977), 117.
- ²⁵ *Ibid.*, 70.
- ²⁶ For more on the relationship between intellectual generosity and prudence, see Roberts and Wood, 319.
- ²⁷ Bunyan, 75.
- ²⁸ *Ibid.*, 76.
- ²⁹ *Ibid.*, 77.
- ³⁰ *Ibid.*, 79.
- ³¹ *Ibid.*
- ³² "Conversation" as Bunyan uses it refers to behavior, not spoken conversation as it is commonly understood today.
- ³³ *Ibid.*, 80.
- ³⁴ *Ibid.*, 85-86. Emphasis in original.
- ³⁵ *Ibid.*, 87.
- ³⁶ *Ibid.*, 90. Emphasis in original.
- ³⁷ *Ibid.*, 91. Emphasis in original.
- ³⁸ *Ibid.*, 92.
- ³⁹ Augustine, *On Christian Teaching*, R. P. H. Green, trans. (Oxford and New York: Oxford University Press, 2008), II. 144-146.
- ⁴⁰ *Ibid.*, II.145.
- ⁴¹ *Ibid.*, II.59.
- ⁴² Bunyan, 97.
- ⁴³ *Ibid.*, 110.
- ⁴⁴ *Ibid.*, 112. Emphasis in original.
- ⁴⁵ *Ibid.*
- ⁴⁶ *Ibid.*, 114.
- ⁴⁷ Johnson, 142.
- ⁴⁸ Bunyan, 16.
- ⁴⁹ Aquinas, ST LVII Art. 6.
- ⁵⁰ Bunyan, 119.

⁵¹ Ibid., 131. Emphasis in original.

BIBLIOGRAPHY

- Aristotle. *The Nicomachean Ethics*. Edited by Lesley Brown. Translated by David Ross. Revised edition. New York: Oxford University Press, 2009.
- Aquinas, St. Thomas. *Treatise On the Virtues*. Notre Dame, IN: University of Notre Dame Press, 1992.
- Augustine, *On Christian Teaching*. Translated by R. P. H. Green. New York: Oxford University Press, 2008.
- Brauer, Jerald C. "Types of Puritan Piety." *Church History: Studies in Christianity and Culture* 56.1 (1987): 39-58.
- Bunyan, John. *The Pilgrim's Progress*. Edited by W. R. Owens. Revised edition. New York: Oxford University Press, 2003.
- Davies, Brian. *Thomas Aquinas's Summa Theologiae: A Guide and Commentary*. New York: Oxford University Press, 2014.
- Horner, Barry. *John Bunyan's Pilgrim's Progress: Themes and Issues*. Darlington; Vestavia Hills, AL: Evangelical Press, 2003.
- Johnson, Galen K. *Prisoner of Conscience*. Carlisle: Paternoster, 2006.
- Keeble, N. H., ed. *John Bunyan: Conventicle and Parnassus: Tercentenary Essays*. New York: Oxford University Press, 1988.
- Miller, Perry. *The New England Mind: The Seventeenth Century*. Eastford, CT: Martino Fine Books, 2014.
- Rivers, Isabel. *Reason, Grace, and Sentiment: Volume 1, Whichcote to Wesley: A Study of the Language of Religion and Ethics in England 1660-1780*. Cambridge: Cambridge University Press, 2005.

Roberts, Robert C., and W. Jay Wood. *Intellectual Virtues: An Essay in Regulative Epistemology*. Oxford: Oxford University Press, 2007.

Stevenson, Robert, 1861-1947. *Exposition of The Pilgrim's Progress, with Illustrative Quotations from Bunyan's Minor Works*. Folcroft, PA: Folcroft Library Editions, 1977.

Vos, Pieter. "Calvinists among the Virtues: Reformed Theological Contributions to Contemporary Virtue Ethics." *Studies in Christian Ethics* 28.2 (2015): 201-212.

The study's purpose is to determine whether there is a correlation between advancing music skills and second language acquisition ability. Firstly, groups of students studying AFL (Arabic for Foreign Learners) in the American School of Kuwait were divided into those who were learning music and those without musical experience. Then, they went through examinations that determined their skills in retaining receptive and productive vocabulary according to their level. Through data analysis, it is concluded that exposure to music education correlated with better performance in understanding vocabulary when simultaneously listening to and reading the word and using vocabulary during verbal communication.

Researching the Effects of Music Training on Second Language Vocabulary Acquisition in an International American School in Kuwait

Teji Wang

Abstract

Prior to initiating this study, I was interested in the intricate relationship between music, the universal language, and actual language itself. After reading relevant data, I realized that learning music plays a significant role in language acquisition, but there were underwhelming data obtained in areas outside of the United States and China. To compensate for this lack of holistic data, this exploratory study was conducted to explore the relationship between musical ability and second language acquisition in students residing within the Middle East. The overall question for this study is: to what extent does having instrumental musical training with sheet music benefit high school and middle school students learning Arabic as a second language in their receptive and productive vocabulary knowledge? Participants were organized into music and non-music groups, then data was collected through the participants' answers to language tests. It was discovered that the participants of the music group performed significantly better than the non-music group in the first parts of the receptive and productive tests. Additionally, an analysis of keywords revealed that the music group participants portrayed more confidence.

Keywords: musical ability, second language acquisition, receptive

knowledge, productive knowledge

Introduction

In recent years, many schools are decreasing the funding for music programs to save costs, which is reflected within *The State of Music in Secondary Schools: A Principal's Perspective*, a study that revealed only 34 percent of schools that responded to its survey required students to take music courses.¹ However, this process inhibits students from reaching their full potential. Specifically, numerous studies have shown that those who trained musically portrayed advanced auditory working memory, receptive and productive phonology, recollection of verbal prose, and linguistic encoding efficiency.² By advancing musicians' working memory, numerous other abilities pertaining to language-related areas are positively affected. These beneficial effects of learning music are not without reason. A possible explanation for these phenomena is that multiple areas of the brain, such as Broca's area and the basal ganglia, are stimulated by both language and music.³ Collectively, these evidence about music's effects on people's non-musical skills support the idea that music is an indispensable part of the education system.

As this problem of decreasing musical programs within schools may be the result of the lack of awareness surrounding the educational benefits linked to learning music, this study aimed to investigate the relationship between musical ability and second language acquisition in pre-teens and teenagers attending an international school by analyzing the participants' receptive and productive vocabulary knowledge. Through this, the extent of musical training's impact on students' ability to recall and use words they have learned in their foreign language class will be clarified for educators, students, and parents, which can influence them to have an informed stance on the issue. In this literature review, key terms will be defined, various research papers concerning music and language will be analyzed thematically to provide an overview of the current knowledge available, and the gaps within research will be illustrated.

Literature Review

Definition of Receptive Vocabulary Knowledge

Receptive vocabulary knowledge is the knowledge needed to

understand a vocabulary word while listening to or reading the word. Within this paper, this term will be used interchangeably with receptive skills.

Definition of Productive Vocabulary Knowledge

Productive vocabulary knowledge is defined as “what one needs to know about a word in order to use it while speaking or writing”.⁴ To clarify, productive skills will be used interchangeably with this term

Definition of Sheet Music

Sheet music is a specialized term used to limit the confounding variables in this investigation. In this study, sheet music refers to the usage of five-line staff notation. Thus, the participants within the music group will only include people who play instruments through reading Western style music notation, which excludes singers and other instrumentalists who read chords.

Music and Language Processing within and Music Training's Effects on Functioning of Brain

To understand the processes behind the relationship between language and music, resources that detail the relationship between music and language processing in the brain and music training's effects on brain functions need to be addressed. To start, “Why would Musical Training Benefit the Neural Encoding of Speech? The OPERA Hypothesis” specified enhanced brain plasticity through musical training as a possible reason why music positively affects the brain's function of processing speech.

Patel revealed that increased plasticity may be due to OPERA; the letter O represents overlap, as there are parts of the brain that process both music and language stimuli, and P represents precision, as “music places higher demands on these shared networks than does speech”. This theory implies that processing music and language are related functions within the brain, and that music enhances the performance of the shared neural networks, enabling the person to process speech with a greater efficiency.

Supporting Patel's theory, Brown's study used PET scans to portray and covariance analysis to compare the areas of the brain that were stimulated by musical and speech stimuli. Within the experiment, subjects were asked to improvise a continuation of each unfamiliar melody and each unfamiliar sentence that they're exposed to a phrase from. These tasks were performed separately, as subjects first listened to a series of melodies and their responses were recorded after each melody, and then they were exposed to the sentence fragments. Through analyzing the areas of the brain that were stimulated, the researchers concluded that music and speech processing overlapped in "the primary motor cortex, supplementary motor area, Broca's area, anterior insula, primary and secondary auditory cortices, temporal pole, basal ganglia, ventral thalamus, and posterior cerebellum".³ This supports Patel's OPERA hypothesis, specifically the overlapping part, as music and language phrases stimulate numerous common parts.

Continuing the discussion of language processing, Wong et al. analyzed data received from examining the frequency following response to pitch patterns of ten musicians and ten non-musicians. He/she concluded that "musicians show more robust and faithful encoding compared with nonmusicians", which means that musicians have a more efficient linguistic encoding system that enhances many auditory functions.⁶ This implies that musicians' brains are more capable of processing speech stimuli, which is essential to the advancement of learning a second language, as foreign language instructors often communicate verbally with students to facilitate acquisition.

Lastly, Strait et al. expanded upon Wong's research, aiming to discover whether perception and processing of speech were stronger within musically trained children of 7-13 years old. From analyzing the results, it was discovered that exposure to musical training is correlated with enhanced speech-in-noise perception, greater auditory working memory, and duration of attention.⁷ These findings suggest that musically trained children are better able to concentrate in class, even when the environment is noisy, and are able to integrate more auditory information into their memory, which are skills essential to success within a second language class. Furthermore, this source

supports the conclusion from Wong et al.'s 2007 paper, as advanced linguistic encoding results in more efficient integration of auditory information.⁶

Effects of Musical Training on Non-musical Skills

Other than relating to brain processing, music's effects can be found in the execution of non-musical skills, especially those related to language. First of all, Agnes Chan et al. exercised a fundamental influence within the music and language field. She compared how efficient Chinese university female musicians with more than six years of training and non-musicians with similar years of education and grade point averages verbally recalled spoken words through a one-tailed t-test. After analyzing the data, the researchers discovered that musicians performed significantly better than the non-musicians.⁸ This established the connection between musical training and better verbal second language vocabulary recall.

Exploring the same concept within a Canadian population while adding the objective of finding an indicator of the link between verbal memory and musical training, Jakobson et al. studied 60 freshmen in universities who were tested on their verbal recall skills through the usage of the Wechsler Memory Scale and on their auditory temporal order processing abilities through the Test on Basic Auditory Abilities after being divided into two groups (one received musical education, and the other did not receive musical education). The results showcased that musically trained participants consistently scored higher than their counterparts in their recall of verbal prose and in their temporal order processing abilities.⁹ The results concerning musicians' better recall of verbal prose are supported by Wong et al.'s "Musical experience shapes human brainstem encoding of linguistic pitch patterns", which showed that musicians had a more efficient linguistic encoding system.⁶ Additionally, musicians enhanced temporal order processing abilities can be explained by their usage of the temporal area, which is stimulated both when processing musical and linguistic stimuli.³

Expanding the research scope on language skills related to musical ability, Lamb studied 18 four and five year olds,

and tested on their reading skills using modified versions of Thomas Coram's 1998 reading test and Daniels and Diack's 1960 phonic reading test after being divided into two groups based on their pitch and timbre awareness scores (separated into children with greater musical skills and less musical skills). They showed that "pitch discrimination [an essential component of music] is significantly correlated with both reading tests" and that "phonemic awareness is significantly correlated with both reading tests and also with pitch discrimination".¹⁰ This means that greater musical skill is related to increased language skills such as phonemic awareness and reading skills, a component of expanding receptive skills. As phonemic awareness enables people to deconstruct words into their basic components, this skill is valuable in breaking down and learning a foreign language.

Now focusing on the connection of musical training with language phonology, Slevc aimed to discover whether musical abilities affected second language acquisition in various areas in an exploratory, non-experimental, and utilized a correlational analysis method. After checking the skills of 50 native Japanese speakers in their second language, English, it was concluded through finding the zero-order correlations and conducting hierarchical regression analyses that the musician participants of the study scored higher in their receptive and productive phonology tests.¹¹ Thus, a positive correlation was established between musical ability and acquisition of second language phonology, which supports and expands upon the positive relationship between music and foreign language proposed in Chan, Ho, and Cheung's article.⁸

Limitations and Gaps in Current Knowledge

Although research concerning the relationship between music and language has been ongoing for decades, there are still many limitations that highlight the need for newer and advanced studies. For instance, a major weakness of many of these studies is that the age of the participants was not constricted. Within Slevc and Miyake's research, the only age requirement was that participants "were not immersed in their L2 (English)

until after the age of 11”, resulting in an age range of 11-47.¹¹ This large variability meant that some of the participants had a longer contact time with the English language, and thus had an advantage over those who began studying their second language later on. To counter this limitation, this study will only recruit high schooler and middle schooler students, limiting the age range from 11 to 18 years of age.

Some other gaps in the current research include the fact that many studies are conducted within the United States, have mainly participants from an American population, and mostly use English as the second language. As an example, Slevc and Miyake’s 2006 study incorporated English as the second language and was conducted within the United States.¹¹ Due to the location of this study, research gaps are filled, as the study took place in an international school setting in Kuwait, and the designated second language is Arabic. Furthermore, there is a lack of knowledge of how music impacts receptive and productive vocabulary knowledge holistically, as studies such as Chan, Ho, and Cheung’s paper have only focused on one aspect of vocabulary knowledge such as verbal recall (a part of productive vocabulary knowledge).⁸

Lastly, this study will examine the relationship between musical ability and second language acquisition skills in specifically pre-teens and teenagers, which is an age group that is previously unresearched since the focus of the field was usually on adults.

Methodology

Overview

An exploratory research method was utilized to clarify the relationship between music and second language acquisition in terms of receptive and productive vocabulary skills. I hypothesize that musically trained students would have greater receptive and productive vocabulary knowledge. Specifically, language tests examining receptive and productive vocabulary knowledge were used to obtain data pertaining to the music and non-music groups’ grasp on Arabic vocabulary, then scores for each section were compared through a single-tailed Student’s t-test that examined whether the music group performed better

than the non-music group. Lastly, an interview including three questions was conducted to collect quantitative data comparing the participants' confidence in their performances. The participants included only middle and high school students who attended the international American school in Kuwait.

Sample Size

For the study, 7 people who are unfamiliar with Arabic and did not take classes related to music for the past three years were selected into the non-music group, and 12 people who are unfamiliar with Arabic and are currently taking classes related to instrumental sheet music were selected for the music group. Convenience sampling was utilized in this occasion due to the limited number of students who completed the consent form that required a parent's signature within the specified time-frame (Appendix A). Prior to selecting candidates, all AFL I (Arabic for Foreign Learners Level 1) and AFL II students in grades 6 to 12 were asked to complete a survey (Appendix B) in class that helped separate them into the two groups, and participants were given one week to turn in the consent form.

Procedures

After receiving consent from the participants' parents, tests were conducted to assess their second language receptive and productive skills. The language tests were constructed based on the definitions of receptive vocabulary knowledge (knowledge needed to understand a vocabulary word while listening to or reading the word) and productive vocabulary knowledge (knowledge needed to use a vocabulary word while speaking or writing the word), and the vocabulary words were chosen from the studied lessons in the textbook each level uses. As each level uses a different study book, two versions of the test were constructed to ensure that the difficulty level of the tests were appropriate for each student. The test for both Arabic levels consisted of vocabulary words that came from multiple sections distributed throughout the textbook (passages from the beginning, middle, and near the end of the textbook), and the sections were ensured to be the ones that were learned in class.

Within the receptive vocabulary knowledge exam (Appendix C), the first part gave participants 5 minutes to listen

three times to a short passage narrated by an Arabic speaker that contains words that are incorrect in grammar or usage, and then they were instructed to identify which underlined words are incorrect (of 12 underlined words, only 6 were incorrect). Furthermore, for the second part of the receptive skills exam, the participants were given 5 minutes to read through a relatively short Arabic passage and to write a translation of the text on a lined piece of paper. For the productive vocabulary knowledge test (Appendix D), participants listened to 15 pre-recorded English vocabulary words and were given 8 seconds to orally translate the words into Arabic while being recorded for the first part of the test. Then, the participants were given 6 minutes to write a paragraph introducing themselves (their name, hobbies etc.) for the second part of the productive skills test, which were graded by two native Arabic speakers according to a holistic rubric (Appendix F). Afterwards, each student's results for the various vocabulary tests were converted into percentages (number of questions correct divided by total number of questions in that vocabulary test, and then multiplied by 100) for the one-tailed Student's t-test. Lastly, an interview containing questions on their evaluation of their performance on the tasks involved (Appendix E) was conducted with each individual participant, and their answers were typed and analyzed for keywords in order to obtain qualitative data comparing the overall confidence levels of both groups.

The receptive skills language tests were administered to the two AFL levels (AFL 1 and AFL 2) separately in a designated classroom during lunch, with the AFL 1 participants tested first. This section of the language test took two days to complete due to the absence and remake sessions of certain subjects. Then, the two parts of the productive skills language tests along with the interview were administered to each individual separately before school, during lunch, and after school in the school campus.

After all the testing finished, the receptive skills language test and the first part of the productive skills language test were scored by the author, and the written section of the productive skills test was scored by two native Arabic-speakers.

Results

In order to achieve the purpose of this study, participants were asked to complete both the receptive and productive vocabulary tests, which were each divided into two sections,

Table 1. Description of Data for First Receptive Vocabulary Test

	Group	N	Mean	SD	SE
Test Scores	Music	12	74.167	15.050	4.345
	Non-Music	7	48.571	29.114	11.004

Table 2. T-test of the First Receptive Vocabulary Test

	t	df	p
Test Scores	2.549	17.000	0.010*

After collecting the students' scores on the first receptive vocabulary test and converting them into percentages, it was revealed that the music group had a mean score of 74.167% and standard deviation value of 15.050%, and the non-music group had a mean score of 48.571% and standard deviation value of 29.114%.

Table 3. Description of Data For Second Receptive Vocabulary Test

	Group	N	Mean	SD	SE
Test Scores	Music	12	47.808	22.636	6.535
	Non-Music	7	36.600	20.384	7.705

Table 4. T-test of the Second Receptive Vocabulary Test

	t	df	p
Test Scores	1.078	17.000	0.148

The information for the scores of the second part of the receptive vocabulary test is shown in tables 3 and 4. As for this section, the music group had a mean score of 47.808% on the test and standard deviation value of 22.636%, and the non-music group had a mean score of 36.600% on the test along with a standard deviation value of 20.384%.

Table 5. Description of Data for First Productive Vocabulary Test

	Group	N	Mean	SD	SE
Test Scores	Music	12	67.917	15.294	4.415
	Non-Music	7	43.571	18.192	6.876

Table 6. T-test of the First Productive Vocabulary Test

	t	df	p
Test Scores	3.126	17.000	0.003

The music group had a mean score of 67.917% in addition to a standard deviation value of 15.294%, and the non-music group had a mean score of 43.571% along with a standard deviation value of 18.192%.

Table 7. Description of Data for Second Productive Vocabulary Test

	Group	N	Mean	SD	SE
Test Scores	Music	12	35.008	13.352	3.854
	Non-Music	7	23.800	15.311	5.787

Lastly, the information of the second part of the productive vocabulary test is highlighted

Table 8. T-test of the Second Productive Vocabulary Test

	t	df	p
Test Scores	1.674	17.000	0.056

in tables 7 and 8. The results show that the music group had a mean score of 35.008% in addition to a standard deviation value of 13.352%, and the non-music group had a mean score of

23.800% along with a standard deviation value of 15.311%.

Table 9. Participants' Self-Perceived Performance on Receptive Skills Exam

	Above Average	Average	Below Average
Music Group	0/12	9/12	3/12
Non-Music Group	0/7	2/7	5/7

Table 10. Participants' Self-Perceived Performance on Productive Skills Exam

	Above Average	Average	Below Average
Music Group	3/12	6/12	3/12
Non-Music Group	1/7	2/7	4/7

Table 11. Participants' Self-Perceived Performance on the Exam Overall

	Above Average	Average	Below Average
Music Group	0/12	8/12	4/12
Non-Music Group	0/7	4/7	3/7

Furthermore, qualitative data was produced through the interview that took place after the language tests. By asking each participant for their thoughts on their performance in the productive vocabulary test, receptive vocabulary test, and the overall assessment, keyword analysis revealed that an overwhelmingly large proportion of participants in the music group felt positive about their performance, with most using synonyms of average or above average to describe their performance. Contrastingly, the non-music group's participants mostly chose to express negatively about their performance, with most using synonyms of average or below average to describe their execution within the various language tests.

To determine whether those who are taking music class performed better than those who are not being musically trained, a one-tailed Student's t-test was used to analyze the data. The p-value for the first receptive test is 0.01, which is lower than the usual alpha level of 0.05 (Table 2). This signifies that the null hypothesis is rejected 99% of the time, and it can be stated that the music group participants scored significantly higher on this test than their counterparts. Contrastingly, the p-value for the second part of the receptive test is 0.148, so it can be stated that the evidence does not disprove of the null hypothesis (which is music group participants do not score significantly better than their counterparts) (Table 4). Next, since the p-value is 0.003 for the first section of the productive vocabulary test, it can be stated that the music group participants scored significantly higher than the other group's participants (Table 6). Lastly, the evidence does not refute the null hypothesis for the second productive vocabulary test because the p-value is 0.056 (Table 8).

Overall, participants from the music group performed significantly better than the participants from the non-music group in the first parts of the receptive and productive vocabulary tests. As these language tests examined the participants' ability to understand words when simultaneously listening to and reading the words and their capability to utilize words when speaking in Arabic, the results show that music may influence second language learners to become more proficient in these aspects. Interestingly, through analyzing the responses to

the interview questions, qualitative data suggest that participants taking music classes were more confident in their performance than the other group's participants during the interview, as they answered with mostly positive reflections on their performance in contrast to the non-music group. This can be interpreted as music students predicted that they would score higher in the tests, which then sheds a new light onto the relationship and strengthens the connection between learning music and improved second language vocabulary acquisition.

Implications

The results of the study stated that pre-teen and teenage AFL students taking instrumental music classes with sheet music would score higher on vocabulary recall tests than AFL students who are not involved in music classes, as the first group performed significantly better on the first receptive and productive tests than the latter group. This outcome suggests that the positive relationship between musical ability and language skills is also evident within the age group of 12 to 18 year olds and is applicable to groups outside of the United States who are studying Arabic as a second language. The results also establish the idea that musical training can benefit foreign language students' ability to understand when simultaneously listening to and reading the vocabulary word whilst further supporting the positive relationship between musical ability and verbal vocabulary retrieval shown in the foundational source. An explanation is provided by a study done by Strait et al., which concludes that musically trained children are better able to concentrate in class, even when the environment is noisy, and are able to integrate more auditory information into their memory.⁸ As vocabulary words are integrated into memory through the help of auditory stimuli in the Arabic classes participants were selected from, increased attention and reception to meaningful auditory information influenced by learning music can provide an explanation for the results of the study.

However, the data is only partially consistent with the hypothesis, as music students only performed statistically significantly better in two out of the four language test parts.

While there is less evidence that explains why musical training did not influence second language learners' ability in skills such as recalling a vocabulary word while writing, it is clarified that even though music and language processing do overlap in brain areas, there is not sufficient evidence that establish that they both use the same neural circuits.¹² This paper highlights the idea that although there is quite a substantial amount of evidence that support the link between music and language, there is still room for development and research within this field, so the certainty of the relationship between the two variables is not yet completely established.

Overall, since this study supports the idea that musical training relates to better second language acquisition in aspects such as retrieval of word meanings when both listening to and reading the word and retrieval of words when speaking foreign language vocabulary in pre-teens and teenagers, music can be further integrated into the second language department within middle and high schools. Using music to teach English to Chinese students in Taiwan was extremely effective in helping students develop their English language abilities. Similarly, music can be utilized in other foreign language classes, such as Arabic, in order to help elevate the students' second language vocabulary acquisition. Thus, from the results of this study that is supported by the accumulated evidence in this field of research, middle and secondary schools can start encouraging foreign language teachers to incorporate songs and other musical elements into the curriculum.

Limitations

Even though a significant difference was detected between the groups' percentages for the first receptive test, the exact variable that correlates with music is unclear since the two skills (ability to understand a word while reading and listening) were incorporated within the examination. In addition, although there was a large percentage of diversity within the school and sampling populations, due to the lack of response from AFL students within the institution, the samples created through convenience sampling were relatively small in

size and may not be the most accurate representation of foreign language learners. This then limits the applicability of the results since the study does not utilize random samples.

Call for Further Research

Although the results indicate a positive relationship between musical training and second language acquisition in pre-teens and teenagers within an international school, it does not indicate that musical training is a direct cause of better second language vocabulary knowledge, which means further studies can be performed through an experimental approach. On top of that, to strengthen the relationship between the two variables, more research can be conducted under similar environments with a greater number of participants to explore whether this relationship is consistent. Lastly, to clarify which receptive skill correlates with musical ability, the first part of the receptive skills test should be revised to only focus on the ability to understand a word when it is spoken since the second receptive vocabulary knowledge test focuses on the ability to understand a word when it is written.

Conclusion

As human society continues to advance and become a closer-knit community through technology, foreign languages have become a more integral part of students' education. Relating to this progression, the importance of musical education is highlighted in this study through its positive relationship with second language acquisition. Musical training is correlated with an increase in students' ability to understand words when simultaneously reading and listening to the words, and in their ability to utilize words when verbally communicating (Tables 2, 6). Furthermore, the qualitative data suggests that musically trained foreign language learners are more confident in their receptive and productive vocabulary knowledge performance. In accordance to previous studies, music has proven its benefits in multiple second language acquisition areas,

but its impact on productive writing skills remains unclear. Furthermore, even though the study was situated within an international school setting in the Middle East, the size of the sample was limited and convenience sampling did not produce random samples. Thus, further research that focuses on the relationship between music and the receptive and productive vocabulary knowledge area should be conducted in international settings with larger samples produced through probability sampling in order to provide stronger evidence that support music's beneficial role in learning new languages.

Appendix 1: Consent Form

**Participant Consent to Participate in a Research Study
The American School of Kuwait**

Title of Study: Music and Language: Examining the Relationship Between Instrumental Musical Training With Sheet Music and Second Language Acquisition Skills

Introduction

- You are being asked to be in a research study that is trying to explore whether there is an association between learning music and second language acquisition skills.
- You may be selected as a possible participant because you are a student in AFL I/II and you either currently have instrumental musical training with sheet music or have not taken musical training classes for the past two years.
- We ask that you read this form and ask any questions that you may have before choosing to participate in this study.

Purpose of Study

- The purpose of the study is to explore the correlation between instrumental musical training with sheet music and ability in various second language skills, such as understanding and differentiating words when they are spoken.
- Ultimately, this research will be presented as a paper in an AP Research class, and will possibly be published in a journal.

Description of the Study Procedures

• If you decide to participate in this study, you will be asked to do the following actions: Participate in two Arabic language tests that will occur in one of the earlier months of 2018, which will ask you to perform tasks such as identifying mispronounced words. One of the language tests, which will include listening to a recording, circling answers on a sheet of paper, reading through a passage, and a writing a translation of the designated passage, will occur at lunch. The other language test, which will include recording your translation of various vocabularies and giving you time to write a response to a question, will occur at a time that is convenient to you (you will have a choice of before school, after school, or during lunch). At the end of the second test, you will go through a short interview that focuses on your thoughts of the testing process. Each test should not take more than 15 minutes to complete, and will occur inside a designated classroom or area. As a total, the whole experiment may take around 30 minutes of your time.

Risks/Discomforts of Being in this Study

- There are no reasonable foreseeable (or expected) risks. There may be unknown risks.

Benefits of Being in the Study

- The benefit of participation is
 1. Being able to receive a Maltesers packet at the end of each test (so you'll receive two in the end)

Confidentiality

- The records of this study will be kept strictly confidential. Research records will be kept in a secured computer, and all electronic information that may reveal the candidates' identity will not be transferred to outside sources. For the audio files, they will not be labeled with information relating to the participants' identity, they will only be listened to by two or three native Arabic speakers, and they will be deleted at the end of the study. We will not include any information in any report we may publish that would make it possible to identify your child.

Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study *at any time*. You have the right not to answer any single question, as well as to withdraw completely from the interview at any point during the process; additionally, you have the right to request that the interviewer not use any of the interview material.

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during, or after the research. If you have any further questions about the study at any time, feel free to contact me, Teji Wang, at teji1930@stu.asu.edu.kw. If you like, a summary of the results of the study will be sent to you.
- If you have any problems or concerns that occur as a result of your participation, you can report them to the ASK administration.

Consent

- Your signature and your parent/guardian's signature below indicate that you have decided to participate as a research subject for this study, which is allowed by your parent/guardian, and that you and your parent/guardian have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study investigators.

Participant's Name: _____ Phone Number: _____

Participant's Signature: _____ Date: _____

Parent/Guardian's Signature: _____ Date: _____

Investigator's Signature: _____ Date: _____

Appendix 2. Survey For Interested Participants

Music and Language Experiment Survey

Thank you for taking this survey :)

If you're taking multiple music classes (Example: piano and choir classes), just choose one that fits the requirements (choose piano class).

* Required

Email address *

Your email

Please type in your name (first, last): *

Your answer

Please indicate your grade level: *

- High school (9-12)
- Middle school (6-8)

Please choose your AFL Level: *

- AFL 1
- AFL 2

Are you presently taking a music class (in or outside of school)?

*

- Yes
- No

If yes, does your music class involve playing instruments (piano, flute, violin etc., excluding choir) *

- Yes
- No
- Does not apply since I'm not taking any music classes

If you answered yes to the previous question, does your music class involve playing with music sheets (with treble/base clef and music notes)? *

- Yes
- No
- Does not apply since I'm not taking music classes

If you are not taking any music classes, have you ever taken music classes before within the last three years (from 2015 - 2018)? *

- Yes
- No
- Does not apply since I'm taking music classes now

Please type in your phone number (in case you're chosen for the experiment) *

Your answer

Please type in your phone number once again to make sure: *

Your answer

If there is any additional information that you feel will help me understand your music experience, please place the information below:

Your answer

Thank you again for finishing this survey. Please make sure that all the information is factual :)

Appendix 3: Receptive Vocabulary Knowledge Language Test
First Part:

Instructions (all instructions were verbally communicated with participants):

Please write your name at the top of the test.

Please Listen to the recording of the passage while following along with the written passage in front of you. In the recording that corresponds with the passage, there will be deliberate mistakes in grammar or content, and you will have to identify which word is incorrect as it does not fit in with the sentence.

Within the text itself, 12 words will be underlined, but only 6 will be mistaken. Each underlined word has a number under it. You will have 5 minutes to complete this task.

AFL 1 (answer key):

Note: the participants were given a test without answers AFL 2 (answer key):

Name: _____ Receptive
AFL level: 1 Test+(part+3):
Please listen to instructions first.

كريم : مرحبا ، أنا كريم ، وأنا ولد .
أنا تلميذ في مسجد ، وأنا تحب أخى .
أنا تحب تفاح وموز .
في الحديقة شجر أسود وزهر أخضر .
حول بيتي شجر . في ليل شمس أظفر .

Fill in X (wrong) or ✓ (correct)

1. ✓
2. ✓
3. ✓
4. X
5. X
6. ✓
7. X
8. X
9. ✓
10. X
11. X
12. ✓

أسرة كريم




AFL 2 (answer key):

Note: the participants were given a test without answers

Receptive
Test (part 2)

Name: _____
AFL: 2 _____
Please listen to instructions first

دينا : باسمي دينا ، وأنا تلميذة ، وأذهب
على المدرسة في الصباح . في فصل تلميذ
مشرة ومنتوضف . المدرس بحث يقرأ
على السبورة . بيتي في الجابرية ، وأمام
البيت مكتب البريد ، وخلف البيت حديقة .
في بيتي ، نعيش فوق الزف ، ويملك مع
قطار في أمساء . في الشارع شزطين ، وإشارة
المرور . إشارة المرور خضراء قف

	✓ (right) or X (w)
1.	✓
2.	X
3.	✓
4.	X
5.	✓
6.	X
7.	✓
8.	✓
9.	X
10.	X
11.	✓
12.	X

Recordings can be found in: <http://researchrecordings.dynadot.com/>

Second part:

Instructions:

Please write your name at the top of the test.

Please read through the following Arabic passage and write a complete translation of the text on the lined paper. You will have 5 minutes to complete this task.

AFL 1:

Name: _____

AFL level: 1

Receptive Test (part 2)

Please listen to instructions first

كريم: مرحبا، أنا كريم، وأنا ولد.

أنا تلميذ في مدرسة، وأنا أحب أُمِّي.

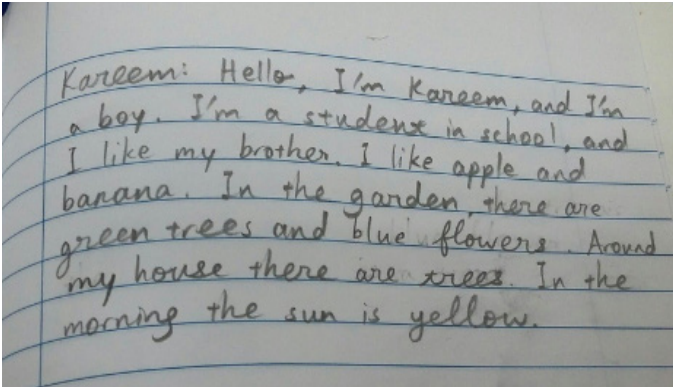
أنا أحب ألعاب وألغاز.

في الحديقة شجر أخضر وزهر أزرق

حول بيتي شجر. في صباح شمس أهنفر.

Write your translation below:

(Answer key:)



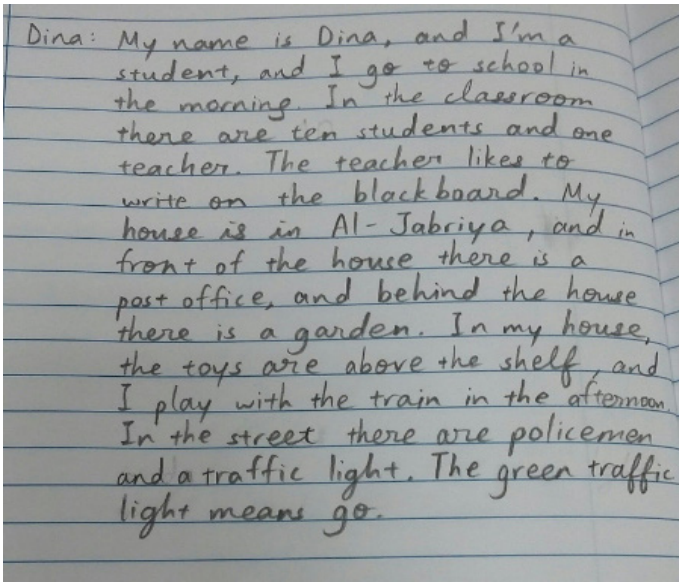
AFL 2:

Name: _____ Receptive
AFL: 2 Test
Please listen to instructions first (part 2)

دينا : باسمي دينا ، وأنا تلميذة ، وأذهب
إلى المدرسة في الصباح . في فصل تلميذ
مُشرفة ومُدرّس واحد . المُدرّس يحبُّ يكتُب
على السيورة . بيتي في الجابرية ، وأمام انبيت
مكتب البريد ، وحلف انبيت حديقة .
في بيتي ، نعبس فوق الرف ، وألعب مع
قطار في النساء . في الشارع شرطي ، وإشارة
المُروور . إشارة المُروور خضراء بسر .

Write your translation below:

(Answer key:)



Appendix D: Productive Vocabulary Knowledge Language Test Instructions:

Please provide an arabic translation of the following words. You will be given 8 seconds after each word is spoken to provide an answer.

First part:

AFL 1 pre-recorded words: rabbit, black, tree, night, knife, nose, teacher, fish, bread, blue, large, bed, banana, food, my father

AFL 2 pre-recorded words: where, street, ten, garden, horse, dinner, blackboard, market, classroom, behind, police, traffic light, car, pencil, bicycle

Recordings found in: <http://researchrecordings.dynadot.com/> Second part:

Instructions: Please write a paragraph in Arabic introducing yourself (your name, hobbies, favorites etc.). You will have six minutes to complete this task.

Appendix E: Qualitative Questionnaire Addressing Participants' Confidence Level in Their Performance
Interview Questions:

1. How do you feel about this productive skills test?
2. How do you feel about the other language test (receptive skills)?
3. Do you think you did well on these tests as a whole?

Appendix F: Rubric for Scoring Second Part of Productive Vocabulary Test

1	2	3	4	5
Very lacking response for the level	Very simple in response	Quite simple in response	Relatively complex for the level	Complex for the specific level
Many mistakes in word usage (to the point that the meaning of the whole piece is obscured)	Relatively many mistakes in word usage (some parts may not make sense at all)	Mistakes in word choice but general idea is still conceived	Mostly correct usage of words (minor mistakes involved)	Correct usage of all the words
Many mistakes in grammar (to the point that meaning of whole piece is obscured)	Relatively many mistakes in grammar (some parts may not make sense at all)	Mistakes in grammar but does not disrupt meaning of text	Mostly correct grammar (minor mistakes involved)	Correct usage of grammar in the whole piece

NOTES

- ¹ Carlos R. Abril and Brent M. Gault, “The State of Music in Secondary Schools: The Principal’s Perspective,” 68.
- ² Dana L. Strait et. al, “Musical training during early childhood enhances the neural encoding of speech in noise,” 197; L.R. Slevc and Akira Miyake, “Individual differences in second-language proficiency: does musical ability matter?” 2006; Agnes S. Chan, Yim-Chi Ho, and Mei-Chun Cheung, “Music training improves verbal memory,” 128; Patrick C. M. Wong et. al, “Musical experience shapes human brainstem encoding of linguistic pitch patterns,” 1.
- ³ Steven Brown, Michael J. Martinez, and Lawrence M. Parsons, “Music and Language Side by Side in the Brain: A PET Study of the Generation of Melodies and Sentences,” 2795.
- ⁴ John T. Crow, “Receptive Vocabulary Acquisition for Reading Comprehension,” 128)
- ⁵ Aniruddh D. Patel, “Why would Musical Training Benefit the Neural Encoding of Speech? The OPERA Hypothesis,”
- ⁶ Wong et. al, “Musical experience shapes human brainstem encoding of linguistic pitch patterns,” 1.
- ⁷ Strait et. al, “Musical training during early childhood enhances the neural encoding of speech in noise,” 197.
- ⁸ Chan, Ho, and Cheung, “Music training improves verbal memory,” 128.
- ⁹ Lorna S. Jakobson, Lola L. Cuddy, and Andrea R. Kilgour, “Time tagging: A key to musicians’ superior memory,” 307.
- ¹⁰ Susannah J. Lamb and Andrew H. Gregory, “The relationship between music and reading in beginning readers,” 25.
- ¹¹ Slevc and Miyake, “Individual differences in second-language proficiency: does musical ability matter?” 675.
- ¹² Susannah J. Lamb and Andrew H. Gregory, “The relationship between music and reading in beginning readers,” 1.
- ¹³ Liza Lee and Shu-Chuan Lin, “The impact of music activities on foreign language, English learning for young children, 11.

BIBLIOGRAPHY

- Abril, Carlos R., and Brent M. Gault. 2008. “The State of Music in Secondary Schools: The Principal’s Perspective.” *Journal of Research in Music Education* 56 (1): 68–81. doi:10.1177/0022429408317516.

- Brown, Steven, Michael J. Martinez, and Lawrence M. Parsons. 2006. "Music and Language Side by Side in the Brain: A PET Study of the Generation of Melodies and Sentences." *European Journal of Neuroscience* 23 (10): 2791–2803. doi:10.1111/j.1460-9568.2006.04785.x
- Chan, Agnes S., Yim-Chi Ho, and Mei-Chun Cheung. 1998. "Music training improves verbal memory." *Nature* 396 (6707): 128.
- Crow, John T. 1986. "Receptive Vocabulary Acquisition for Reading Comprehension." *The Modern Language Journal* 70 (3): 242–250. doi:10.2307/326940
- Jakobson, Lorna S., Lola L. Cuddy, and Andrea R. Kilgour. 2003. "Time tagging: A key to musicians' superior memory." *Music Perception*, 20: 307–313. <http://dx.doi.org/10.1525/mp.2003.20.3.307>
- Lamb, Susannah J., and Andrew H. Gregory. 1993. "The relationship between music and reading in beginning readers." *Educational Psychology*, 13: 13–27.
- Lee, Liza, and Shu-Chuan Lin. 2015. "The impact of music activities on foreign language, English learning for young children." *Journal of the European Teacher Education Network*, 10: 13–23.
- Patel, Aniruddh D. 2011. "Why would Musical Training Benefit the Neural Encoding of Speech? The OPERA Hypothesis." *Frontiers in Psychology*, 2: 142. <http://doi.org/10.3389/fpsyg.2011.00142>
- Peretz, Isabelle, Dominique Vuvan, Marie-Élaine Lagrois, and Jorge L. Armony. 2015. "Neural overlap in processing music and speech." *Philosophical Transactions of the Royal Society B: Biological Sciences*, 370 (1664): 1.
- Slevc, L. R., and Akira Miyake. 2006. "Individual differences in second-language proficiency: does musical ability matter?" *Psychological*

Science, 17 (8): 675–681. doi:10.1111/j.1467-9280.2006.01765.x

Strait, Dana L., Alexandra Parbery-Clark, Emily F. Hittner, and Nina Kraus. 2012. “Musical training during early childhood enhances the neural encoding of speech in noise.” *Brain and Language*, 123 (3): 191–201. <http://doi.org/10.1016/j.bandl.2012.09.001>

Wong, Patrick C. M., Erica Skoe, Nicole M. Russo, Tasha Dees, and Nina Kraus. 2007. “Musical experience shapes human brainstem encoding of linguistic pitch patterns.” *Nature Neuroscience*, 10 (4): 420–422. <http://doi.org/10.1038/nn1872>

About the Authors

JACK WALL is a senior Pre-Law Political Science major and Spanish minor from Austin, Texas. He is a member of Tau Kappa Epsilon fraternity. After Baylor, he plans to go to law school and become a lawyer. His favorite areas of research include Sharia law, the Indo-Pakistani conflicts, and Middle Eastern terrorist organizations such as the Islamic State of Iraq and Syria. In his free time, he loves to lift weights, run, hike, and play racquetball.

EVA MORRISON is a senior Medical Humanities student from Fort Collins, Colorado. In addition to being a BIC student, she is a member of the Baylor Track and Field team and the Baylor Equestrian team. Eva earned all-Big XI academic honors her sophomore and junior years here at Baylor. After graduation, Eva plans to pursue a masters degree and then attend medical school. She loves riding her horses, sports, doing anything in the mountains, and traveling with her family.

WILL TARNASKY is from Dallas, TX. He graduated from Baylor in December 2018 with a double major in Great Texts and German with Honors. He will continue his studies at Yale Divinity School Fall 2019 in the Master of the Arts in Religion program, concentrating in History of Christianity.

TEJI WANG is a freshman who is a part of the Baylor Interdisciplinary Core program. Being a TCK, Teji is Chinese, but she has lived most of her life in Kuwait, a petite Middle Eastern country where Mediterranean cuisine flourishes. Since her mother (a nurse) is a dominant influencer within Teji's life, her current plan is to pursue a career in nursing. However, Teji is passionate about tackling the food waste problem and interacting with music along with the Japanese culture, which inspired her to join Campus Kitchen, play the piccolo in the Golden Wave Band, and start learning Japanese.

