Javelina Undergraduate Research Journal

Texas A&M University- Kingsville

Volume 1, 2015-2016

Table of Contents

Volume 1 2015-2016

Statement of Purpose

I am delighted to welcome you to the first issue of a new, refereed journal. What is unusual is that this journal accepts contributions only from undergraduate students. Why does this journal exist? What are the attitudes of the reviewers and editor? How often can you expect the journal to be published? In this editorial, I will answer those questions. The journal exists for a variety of reasons, and a primary one is to illustrate the high quality of undergraduates' scholarly work. Scholarly work encompasses a broad range of investigation and includes more traditional data-based activity, as well as literature reviews and historical research.

Transmitting the results of one's scholarship through a printed medium requires development of formal, written communication skills. Promoting the refinement of such skills is another goal for the journal. According to employers, professional and graduate school faculty, increasing undergraduates' written communication skills would make those students more attractive for employment and for admission to post graduate training or education.

Increasing students' success in life following graduation is another aspiration associated with the journal. Because modeling can facilitate learning, showing students what their peers have accomplished should help to encourage ever widening circles of students to become engaged in

and excited about research. In many meetings and discussion with faculty, I have found ample evidence to conclude that there is a strong commitment to promote writing and scholarship among undergraduate students. Furthermore, these same faculty believe that the use of constructive and informed feedback is the most effective way to improve communication skills. Personal or degrading criticism of students' work is not an acceptable ethic among the journal's reviewers and editorial staff.

If you submit a manuscript, you can expect to receive thorough and encouraging support for your effort. Moreover, editors frequently encourage revision and resubmission of manuscripts that they do not accept. The journal will publish one issue each year.

Submissions will be requested through the faculty in January each year. Students should submit their papers to the chair of the appropriate department by the first week in March Each department, using a process they determine, can select up to three papers for submission no later than March 15, to the editor, Dr. Richard L. Miller at Richard.miller@tamuk.edu. Members of the editorial board and expert reviewers in the relevant discipline will review papers.

Students will have the opportunity to revise their paper in light of the reviewers' comments.

Revised papers will be reviewed by the editorial board, which will select 12-15 for publication.

The criteria for submitting a paper are as follows:

Submissions should be 8-15 pages in length, double-spaced. Keep in mind that the selection is based on quality, not quantity. Longer papers are not disqualified.

Any good scholarly research paper, past or present, is eligible for submission as long as the student wrote it while an undergraduate student at Texas A&M University-Kingsville (e.g. a current Texas A&M University-Kingsville graduate student may submit work done as a Texas A&M University-Kingsville undergraduate). Submissions are requested from all disciplines and may be written in a format appropriate for that discipline.

Initial submissions must be made in ELECTRONIC copy only. Please include student's contact information: name, phone number, e-mail and sponsoring faculty name on the title page only. Refrain from including identifying information in the body of the paper. Papers will be subject to blind review.

The faculty who served as mentors and reviewers for this inaugural issue have given unselfishly of their skills, time, and energy, and are listed in the journal. Reviewers have offered their expertise and perspectives. Of course, without the students and their mentors' commitment to

scholarship, the journal could not exist. Financial support for the journal has come from the Office of Research and Graduate Studies, in collaboration with the Honors College, the Center for Student Success and the Office of Student Access at Texas A&M University-Kingsville. Publication of the journal was under-written by a Title V grant: Integrating a Culture of Academic and Research Engagement (I-CARE).

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Richard L. Miller
Managing Editor

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Reviewers for Volume 1

The following individuals reviewed manuscripts for this volume of the *Javelina Undergraduate Research Journal.* We gratefully acknowledge their valuable contributions to the journal.

Emil Badici	Philosophy
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Brenda Hannon	Psychology
Nadia Hasan	Psychology
Maura Krestar	CSDO
Soyoung Kwon	Sociology
Olivia Modesto	Teacher & Bilingual Ed.
Timothy Oblad	Human Sciences

Phi Kappa Phi Award for Excellence in Undergraduate Research

The Texas A&M Chapter of Phi Kappa Phi is pleased to announce the creation of the Phi Kappa Phi Award for Excellence in Undergraduate Research. Each year, the Executive Officers of the Texas A&M University-Kingsville chapter will evaluate the student papers submitted to the Javelina *Undergraduate Research Journal* and determine if an article merits such recognition. The author(s) of the selected article will receive a certificate that recognizes the scholarly excellence of the selected article and finds meets the high aspirations contained in the motto of Phi Kappa Phi: *Let the love of learning rule humanity.*

Racial Ideologies and Religious Sentiment as Both Cover and Motivation for Genocide

Jennifer L. Eiland*

* *Recipient of the Phi Kappa Phi Award for Excellence in Undergraduate Research*

When the United Nations assembled and ultimately created *The Convention on the Prevention and Punishment of the Crime of Genocide* in 1948, based upon the definition and term developed by Raphael Lemkin, it outlined the broad acts that constitute genocide. According to the Genocide Convention, states committed genocide if they deliberately targeted, gravely harmed, displaced, and murdered people within a specific group; additionally, interfering with the group's fertility and birth rate may also be genocidal acts. It also described the process by which perpetrator states faced punishment by the various nations who signed onto the Genocide Convention. The resolution identified possible segments of the population that may be the victims of genocide, including "national, ethnical, racial, or religious groups." Motivations and causes for genocidal acts often stemmed from ideologies, such as, racial purity and social Darwinism, classism, religious differences, and political nationalism. Additional elements that prompted the

act included resource scarcity, geographical disputes, and climate change. The motivations for genocide proved complex and intermingled; racial purity and social Darwinism combined with political nationalism emerged as natural allies. The mixture of religious differences, racial purity and social Darwinism, and political nationalism, in some cases exacerbated by resource scarcity, proved to be especially toxic during the Holocaust and the Bosnian genocide. During the Holocaust and in the Balkans, the perpetrators, galvanized by ideological and religious sentiment, utilized religion as both a cover and a motivation for genocide. Within this context, religious sentiment may be defined as a general attitude and set of emotions held by a particular group within a culture and community regarding religious ideals, especially those that infuse the group's philosophies, material culture, and expressions of worship and adherence. However, religious ideals behind the act mostly originated from a growing sense of nationalism and desire for racial purity in the face of conflict; religious sentiment became deeply rooted in tradition and national mythologies, and those religions and individuals deemed counter to the national tradition developed into scapegoats. Further analysis will lead to a greater understanding regarding the impact of religious sentiment steeped in racism and nationalism upon a population, and help to explain by what means

this amalgamation of racial ideology with culturally entrenched religious doctrines created the conditions for genocide in two incidences within Europe. The Bosnian genocide and the Holocaust prove representative of how the two factors formed a particularly potent motivation for genocide in Europe, and also demonstrated how such conditions and motivations, which endure in Western thought, built within the social conscious over a period of years before manifesting in a shockingly comprehensive act of violence.[1]

After World War I, Germany experienced many hardships, which helped to create an environment ripe for conflict and political upheaval. The Versailles treaty at the conclusion of World War I impaired Germany financially, as well as placed the bulk of the blame squarely on the struggling nation's shoulders.[2] Due to sanctions stemming from the treaty, Germany suffered geo-political punishments, a forced reduction of their military, and an un-stable post-World War I government.[3] Early signs of promise for a productive post-war nation, such as the Weimar constitution and an elected German parliament, or Reichstag, with an elected, central leader, fell victim to political fighting and economic distresses, such as the Great Inflation and rising unemployment.[4] Germany's issues dramatically increased after French and Belgian soldiers moved into the Ruhr, seeking to punish the Weimar government due to missed and insufficient

reparations; Germany's "passive resistance" to these actions led to rising inflation and political discontent, from both the Communists on the left and parties on the right.[5] During these turbulent times, various political parties, including the German Workers' Party in Munich, sought to gain power in order to implement their visions for Germany.[6] Adolf Hitler joined the German Workers' Party and, through political maneuvering, gained power within the newly named organization, the National Socialist German Workers' Party (NSDAP), in 1921.[7] Through his new position of control, Hitler manipulated the small, insignificant political party, injecting his own ideologies into the party's aims, and eventually using it to implement his nationalistic, anti-Semitic, and pro-Master Race visions that governed the Holocaust and helped instigate World War II.[8]

An examination of the forces which motivated Hitler and the radical, nationalist political party later nicknamed the Nazi party, point to ideologies linked to nationalism and racism, which were heavily inspired by long-standing religious sentiment deeply ingrained within the culture. One particular figure who influenced Hitler was Frenchman Arthur de Gobineau, or more specifically, his *An Essay on the Inequality of the Human Races* published in 1853.[9] Written before Darwin's theory of evolution, Gobineau discussed the concepts of race and culture, and how the

quality of the races varied.[10] Although Gobineau rarely inserted religious language within his essay, the philosophy and ideas he shared derived from centuries of religious sentiment imposed upon the culture.[11] For instance, although he demonstrated an apparent suspicion for religion in various areas throughout the essay, he also emphatically stated the following:

> We must, of course, acknowledge that Adam is the ancestor of the white race. The scriptures are evidently meant to be so understood, for the generations deriving from him are certainly white. This being admitted, there is nothing to show that, in the view of the first compilers of the Adamite genealogies, those outside the white race were counted as part of the species at all.[12]

Although he continued on to express doubts about the supposed Biblical "law regulating the generation of hybrids" and a "multiplicity of origin for the human species," he still accepted the notion of Adam as the first white man, with the variations found within the species stemming from "primal differences of environment" shaping early, primitive men.[13] He eventually stated that the mixing of the races produced a weakening of the species over time, and that, while variation exists within the white race itself, they were more intelligent, civilized, and beautiful than other races.[14]

Houston Stewart Chamberlain also greatly influenced Hitler and the Nazi party through his *The Foundations of the Nineteenth Century*, first published in 1900.[15] As Joseph W. Bendersky summarized Chamberlain's argument, "The Aryan race, which he called 'cultural creators,' was involved in a struggle with the parasitic Jewish race ('cultural destroyers'), and in this struggle for survival and civilization itself, the Aryans needed a strong leader to assure their triumph."[16] Chamberlain engaged in a detailed critique of the Christian religion, especially the fact that the historical Jesus had supposedly been a Jew and that "Not only the Jew, but also all that is derived from the Jewish mind, corrodes and disintegrates what is best in us. And so [Immanuel] Kant rightly reproached the Christian Churches for making men Jews, by representing the importance of Christ as lying in this, that He was the historically expected Jewish Messiah."[17] However, he still viewed the basic concepts of the Christian religion to be honorable and true, and he proclaimed that:

> A Christianity such as we cannot accept has only now become possible; not because it needed a philosophy, but because false doctrines had to be swept aside, and a great all-embracing true philosophy of life founded- a philosophy from which each will take as much as he can, and in which the example and the words of Christ will be within the

> reach of the meanest as well as of the cleverest.[18]

He also stated that "for us [Teutons] God is always in the background" whereas the Jews, even those who embraced a strict orthodoxy or converted to Christianity, found religion from an "atheistical conception"; additionally, the author claimed that the Teutons never found their faith since it always existed within them, while other theists, such as Jews, discovered their religion while in an atheistic state.[19]

An interesting point within Chamberlain's argument emerged through his statement about the "ridiculous and revolting tendency to make the Jew the general scapegoat for all the vices in our time," and his further comment that the "'Jewish peril' lies much deeper; the Jew is not responsible for it; we have given rise to it ourselves and must overcome it ourselves."[20] He mentioned that the burden rests on the Teutons to find their "true religion," and overcome their own shortcomings to "become true Christians."[21] However, despite those apparent shortcomings, the author claimed that the Teutons developed "civilization and culture," not due to a "general progress of mankind," but due to the "self-evident fact that our civilization and culture, as in every previous and every other contemporary case, are the work of a definite, individual racial type."[22] Another quote, which further emphasized

Chamberlain's ideas regarding the Teutons and Jews within religion, claimed:

> No people in the world is so beggarly-poor in religion as the Semites and their half-brothers the Jews; and we, who were chosen to develop; the profoundest and sublimest religious conception of the world as the light, life and vitalizing force of our whole culture, have with our own hands firmly tied up the veins of life and limp along like crippled Jewish slaves behind Jehovah's Ark of the Covenant!"[23]

Despite Chamberlain's rebuke for the scapegoating of Jews, the idea that the Teutons, and by extension Aryans, held an important civilizing role throughout history, as well as the notion that they were inherently more civilized and spiritual due to their race, while at the same time that particular "traits were not a direct result of race, but rather of miscegenation," greatly impacted Hitler's ideology; the Germans needed to reclaim their role as civilizers, and remove elements harming their racially identified community.[24]

While scientific racism emerging from new philosophies and scientific endeavors, such as Social Darwinism and eugenics, contributed to racist ideologies, in post-war Germany they combined with existing nationalistic *Völkisch*

mythologies.[25] *Völkisch* sentiments developed from the notion that once an "*ideal Gemeinschaft*" existed and "In their medieval utopia, the community was rooted in the land and bound together by custom and tradition… [they] lived together in harmony with nature."[26] Post-war *Völkisch* thought often presented as an anti-Semitic ideology, which placed the *Volk*, or those considered belonging to the superior German races, as above others.[27] Yet, as demonstrated by the writings of Chamberlain and Gobineau, the mentality which labeled Jews as alien and "other" derived from a Christian viewpoint, even if some individuals held certain aspects of Christianity as suspect. As the world became more global, technological, and modern, yearnings for the previous, and unsubstantiated, Germanic ideal increased and developed into nationalist ideologies; furthermore, those who previously used religious dogma and law to define racial differences, now needed to find scientific explanations.[28] Through a false representation and manipulative utilization of newly emergent scientific ideas, such as Darwin's evolution, racist ideologues found a new mechanism to attack those of "inferior" race.[29]

Even as Nazi ideologues moved towards scientific racism and away from obviously religious motivations, their inherent distrust of Jews stemmed from an ingrained religious conflict in the culture. Hitler understood the importance of the existing religious sentiment behind the distrust of

Jews, and decided to appeal to churches within Germany to achieve his aims.[30] Additionally, Hitler welcomed religious scholars and preachers into the party, for example, Gerhard Kittel and Walter Grundmann. Kittel sought to separate Christianity and Judaism through an intricate revisionist explanation for the history of Jews, and, more alarmingly, stated that Jews, once revered in the Old Testament, now suffered due to a curse placed upon them by God due to their actions in the New Testament; although he advocated for apartheid, he also seemed to accept the possibility of a violent solution.[31] Grundmann drew parallels between the *Völkisch* ideology and the absolutism of Nazism and Hitler.[32] Additionally, he "envision[ed] a total symbiosis between people and Church," where the "Total Church" existed together with "the Total State."[33] Through the combination of church and state, laws became religious declarations, even those that derived from racial ideologies. He also advocated for the concept of the Jewish curse which derived from their persecution of Christ, and attempted to question and debate the idea of a Jewish Jesus in an attempt to remove Judaism from Christianity.[34] Although a number of religious scholars who theologically opposed Judaism, but denounced actions against Jews, existed during post-war Europe, those who were sympathetic to Jewish apartheid or violence found common ground in the Nazi party, even among individuals who found

motivation through scientific racism instead of religion. As author Anders Gerdmar stated:

> …in the Christian biblical interpretation of the two main research traditions, Jews and Judaism play a decisive role, not only as a religion among others, but as a religion that Christian theology must relate to. It is a relationship that affects the heart of the interpretive tradition, the symbolic world, with its ideology, theology, ethos and comprehensive world-view. This includes the social symbolism, that is, how Jews are conceived in the overall social system. It is all the more important because the Christian state, or the Christian Germany, represents a kind of symbiosis between state and faith; theology and politics cannot be divided. [35]

The Jew, having long represented the "opposite of core values" within the Christian tradition, easily transitions into a similar role within a more nationalistic, pseudo-scientific viewpoint.[36]

The *Party Program of the NSDAP* presented by Adolf Hitler on the twenty-fourth of February, 1920 in Munich, offered an in-depth examination of the ideologies and motivations of the NSDAP, or Nazi party.[37] Through a list of declarations and expectations, they stated what they believed to be important steps towards a prosperous Germany. They demanded the "unification of all Germans in

the Greater Germany," rights for German citizens, and land.[38] More importantly, they focused on the notion of a German citizen, stating, "a member of the race can only be one who is of German blood, without consideration of creed. Consequently no Jew can be a member of the race."[39] Once providing the definition of citizen in an envisioned Nazi Germany, they then outlined that foreigners (those not of German blood) would be a guest within Germany, and subject to different rules and laws.[40] Additionally, only citizens would hold the right to seek office, and future immigration into Germany would end.[41] The platform also proclaimed that the state would focus attention only on citizens, and if resource access or "livelihood and way of life for the citizens" declined, non-citizens would be forced to leave the country.[42] Article ten proved to be particularly interesting, stating "The first obligation of every citizen must be to work both spiritually and physically. The activity of individuals is not to counteract the interests of the universality, but must have its result within the framework of the whole for the benefit of all."[43] The document continued to outline changes in the work week and labor laws, the nationalization of industries, and the demand for "a healthy middle class and its conservation.[44] Other articles declared that they would replace what they term Roman Law with the new German laws, and a restructuring of education and health system.[45] The platform even mandated

that the press must contain only German citizens, and a strict regulation of foreign press.[46] Article twenty-four demonstrated the combination of racial theory and religious sentiment underlying the Party's racially motivated nationalism:

> We demand freedom of religion for all religious denominations within the state so long as they do not endanger its existence or oppose the moral senses of the Germanic race. The Party as such advocates the standpoint of a positive Christianity without binding itself confessionally to any one denomination. It combats the Jewish-materialistic spirit within and around us, and is convinced that a lasting recovery of our nation can only succeed from within on the framework: common utility precedes individual utility.[47]

The Nazis had decided they would control the Church, as well as the government, in an attempt to defeat materialism and promote a more positive form of Christianity.

When Hitler was imprisoned in 1924 after the failed Beer Hall Putsch, he used the opportunity to create *Mein Kampf*, which he viewed as a summary of his and the Party's doctrines.[48] Within it, he outlined his biography, how he arrived at the ideas contained within his ideologies, and how he planned to enact change. He also discussed his thoughts on Jews, race, and anti-Semitism. In one part he discussed his stance on race within the natural

order, stating that the mixing of the races prompted a "lowering of the standard of the higher race [and a] physical and mental regression, and, with it, the beginning of a slowly but steadily progressive illness."[49] This statement, as well as many others touching on racial hierarchies and mixed-race births, clearly attempted a scientific approach to the idea of Nature and race relations. However, he also utilized religious language in the next statement, stating, "To bring about such a development means nothing less than sinning against the will of the Eternal Creator. This action, then, is also rewarded as a sin."[50] The materialistic Jews, according to Hitler and the Party platform, insisted humans controlled Nature; Hitler declared this as "stupid" and "Jewish nonsense."[51] He later wrote that three groups of mankind existed: "culture-founders, culture-bearers, and culture destroyers," and placed the Aryans within the first group.[52] As for the Jews, he declared that they were "never in the possession of a culture of [their] own, the bases for [their] spiritual activity have always been furnished by others," and that the Jews were "only a parasite in the body of other peoples."[53]

Throughout much of the section Nation and Race, he outlined the supposedly nefarious plans of the Jews, which usually included harm to the German community.[54] As for the Jew within the Jewish religion, he mentioned "His life is really only of this world, and his spirit is as alien to true

Christianity, for instance, as his nature was two thousand years ago to the Sublime Founder of the new doctrine."[55] This alien-ness, first viewed through the lens of religion, also underwent scientific scrutiny, which lead to the development of racial theories, such as those developed by Chamberlain and Gobineau. The nationalistic *Völkisch* ideologies, religious sentiment, and racial theories intersected to form one thought contained within *Mein Kampf*:

> There is only one more sacred human right, and this right is at the same time the most sacred obligation, namely: to see to it that the blood is preserved pure, so that by the preservation of the best human material a possibility is given for a more noble development of these human beings. Thus a folkish State primarily will have to lift marriage out of the level of a permanent race degradation in order to give it the consecration of that institution which is called up to beget images of the Lord and not deformities half man and half ape.[56]

This paragraph clearly outlined how racism, nationalistic ideologies, and religious influence motivated Hitler, even as he tried to apply a scientific framework to his plans.

After Hitler gained the office of chancellor within Germany in January 1933, he started to

implement his plans towards a pure Germany.[57] He enacted the "Law to Remove the Distress of the People and the State," also named the Enabling Act, which transferred the power from the Reichstag to himself, and the "Decree of the Reich President for the Protection of the People and State" in February 1933, which allowed the Reich to indefinitely detain people in "protective custody" for the well-being of the state, and the "Law for the Prevention of Genetically Diseased Offspring," which began the first official and state-mandated act of violence towards undesirables, such as Jews.[58] Also in 1933, the first concentration camp, controlled by the SS, opened in Dachau; the Nazi paramilitary group the *Schutzstaffel*, or SS, had been created in 1923.[59] Eventually, Jews were forbidden to marry Germans, vote, and maintain citizenship through the Nuremberg laws.[60] By the time World War II began in 1939, the state had been primed for, and already participating in, violence against targeted groups, such as Jews.[61] Mass immigrations out of Germany by Jews, and acts of controlled violence such as Kristallnacht in November 1938 predated the war, yet still contributed to the act of genocide perpetuated by the Nazis under the cover of war.[62] By the end of the war in 1945, millions of people had been killed in systematic acts of cruelty towards those deemed alien to the German race-especially Jews; according to a report in the *Nazi Conspiracy and Aggression, Volume I*, "an estimated four million

Jews died in concentration camps, and that two million Jews were killed by the State Police in the East."[63] Hitler and the Party officials had heard the call for racial purity within Germany, and although they were ultimately defeated, they succeeded in targeting and eliminating an estimated six million Jews.

Popular culture and literature during Nazi Germany often shed light on prevalent ideologies. *Der Giftpilz*, *The Poisonous Mushroom*, by Ernst Hiemer, created as a primer about the Jews for Nazi children, perfectly encapsulated the paranoia and hatred which developed from the Nazis' racial, and religiously manipulated, ideologies.[64] The book carefully outlined how a German would successfully identify a Jew, usually through stereotypical physical descriptions, such as their noses, their smell, and hair.[65] The author presented them as criminals, swindlers, cheats, and animal torturers.[66] On one page, the author shared outrageously manufactured sections of the Talmud, as well as incorrect statements from a false rabbi.[67] The author had the unlikely rabbi state: "Work is noxious," and "There is no lower occupation than farming," as well as "we may lie and cheat Gentiles."[68] Additionally, in what may seem to be an argument of "us or them" made by the author, he depicted the rabbi as stating, "Only the Jew is human…The Gentile peoples are not called people, rather they are named animals."[69] In one

particularly haunting page, containing an illustration of a mother speaking to her children in front of a cross placed along the road, the author declared, “The man who hangs on the cross was one of the greatest enemies of the Jews of all time. He knew the Jews in all their corruption and meanness,” and continued to state, “Remember that the Jews are Children of the Devil and human murderers.”[70] Even within a children’s primer, notions of racial inferiority based on an alien-ness stemming from a culturally ingrained religious sentiment, persisted. While the philosophies and politics that developed the genocide in Germany emerged from biological racism and a national mythology, those ideologies had stewed in a religious-based hatred in Europe for more than a thousand years; the secular Nazis and the racist philosophers tried to implement a purely scientific approach to their systematic racism, but they also absorbed the culture and mythology that had so long steeped in specific religious doctrines and mores.

The ethnic cleansing and genocidal actions in the Balkans during the Yugoslav Wars developed from a similar, although more overt, national mythology built from religious ideals. The forces that led to genocide in the Balkans began hundreds of years prior to the Yugoslav Wars. Arriving in the area around the sixth century, the people identified as the ancestors of the South Slavs soon joined the

Christian religion.[71] Soon after, they found themselves cleaved into two groups due to the Great Schism: The Western Catholic Church, who maintained that the word of God must be shared in Latin and followed the orders of the Pope, and the Eastern Orthodox, which advocated for Greek within scripture and who denounced the Roman Pope.[72] The nature of the split mostly depended on geography, with the Croats and Slovenes adopting Roman Catholicism, and the Serbs entering into the Orthodox Church.[73] The land which would later be known as Bosnia, another territory in the area, existed as a sort of religious melting pot, as it not only contained the two previous churches, but also a third named the Bosnian Church, who were declared heretical by the other churches.[74] The religious tradition in the area would be further altered by the arrival of the Ottomans in Bosnia in the fifteenth century, during which a large number of Bosnians converted to Islam.[75] Such actions would later be viewed as a race and blood betrayal, by both of the major churches.[76] Buried within the history of the Ottoman invasion, Prince Lazar, a Serbian who perished while fighting the invading Turkish Sultan, inspired the modern development of a mythology within Serbia which connected both religious struggles and nationalistic pride in the face of a force seeking to eliminate both.[77] Although he ultimately failed and the Ottomans ruled over the area for hundreds of years, his sacrifice led him to

be viewed as a “Christ figure,” and the opposite of those who, according to the Serb mythology, capitulated and converted to Islam.[78]

Even during the modern era, such histories impacted the nations that inevitably formed Yugoslavia. Originally formed in the years before World War II, beginning in 1918 and ending in 1941, Yugoslavia, consisting of Macedonia, Serbia, Montenegro, Bosnia-Herzegovina, Croatia, and Slovenia, would be reformed by the communist Josip Broz Tito in 1945.[79] Due to instability from multiple sources, including the death of Tito in 1980, nationalistic ideologies developed and increased in urgency, especially within Serbia.[80] Tensions further escalated when, after Serbian communist Slobodan Milosevic gained power over Yugoslavia, Croatia and Slovenia tried to gain independence in 1991, followed by Bosnia and Herzegovina in 1992.[81] Additionally, racial tensions had long existed within Kosovo stemming from the Albanians who lived within the territory.[82] Moving to the area during the reign of the Ottomans, they remained the primary inhabitants until pushed out by the Serbs.[83] However, after World War II, Tito declined to re-colonize Kosovo after many Serbs left to dodge the War.[84] Eventually, Kosovo returned to Serbia, however, they were guaranteed autonomy in an effort to eliminate tensions due to the mixed population.[85] Over time, the Albanian population increased, which developed into persistent conflict

between the Serbs in Kosovo and the Albanians.[86] A racial and religious tension underscored this conflict, as the Albanians traditionally embraced Islam, although a number left their religion behind while living under "a Stalinist regime" in Albania.[87] The Serbians, long suspicious of Muslims and foreigners, feared to be overpopulated by those they viewed as an enemy.[88]

Conflict erupted over Croatia exiting from Yugoslavia, and the Croats fought the Serb dominated Yugoslav army for independence.[89] When Bosnia declared their intention to separate from Yugoslavia, Bosnian Serbs reacted immediately and violently, and created the "Republika Srpska" outfitted and supported by Serbia.[90] After the war with Serbia began in April 1992, an already complicated conflict turned deadlier when Bosnian Croats joined the fighting in Bosnia, targeting the Muslims in the area.[91] Bosnia now faced two different opponents, both supported by nationalists within their borders. Warfare between the participants turned brutal, and the international community attempted numerous peace agreements to end hostilities, such as the Vance-Owen Peace Plan, the follow up Owen-Stoltenberg Peace Plan, European Union Plan, Washington Agreement, and eventually, the Dayton Peace Agreement.[92] The Washington Agreement had created a Federation between the Croats and Muslims within Bosnia, and the Dayton Peace, while leading to continued

conflict with Kosovo, had officially ended the wars in Croatia and Bosnia.[93]

During the war, parties participated in acts of genocide against specific groups within the population. The national mythology, heavily influenced by religion, and the history of the region not only increased conflict during the war, but contributed to a campaign of terror and genocide against targeted groups.[94] The conflicts proved to be religiously and racially charged beyond the fact that the opponents all belonged to different religions. For instance, during Nazi occupation, a group of Catholic Croatians named the *Ustashe* participated in brutality against much of the population, including the Orthodox Serbs; such actions left a lingering distrust between the two groups.[95] Additionally, Serbians had a longstanding antipathy for Muslims, both due to their interactions with the Albanians in Kosovo, and the nationalistic mythology which placed the Turkish Muslim into the role of evil-doers.[96] Serbians had even alleged that the Albanians attempted acts of genocide towards them, through the rape of Serbian women and increased birth rates; such allegations were never proven.[97] By the time Serbians fought the Bosnians, the Serbs transferred their rage from the Albanians onto the Bosnian muslims.[98] Furthermore, the sins of the past were not forgotten, and those Slavic peoples whose ancestors had converted to Islam faced judgment due to the

concept of “Christoslavism-the premise that Slavs are by essence Christian and that conversion to another religion is a betrayal of the people or race.”[99]

Within such a complex, religiously tense environment, one where they felt victimized and attacked on all fronts by the Croats, genocidal Muslims, and race-traitors, the Serbians moved forward with acts of genocide against the Bosnian Muslims.[100] The Muslims in Bosnia had already been experiencing “persecution” from the Croats.[101] According to a report from the *United Nation’s International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991*, although the peace plan never became official, “the Vance-Owen Peace Plan provided the pretext for removing the Bosnian Muslim population from the HZ H-B [Croatian Community of Herceg-Bosna],” since the plan had outlined dividing Bosnia into ten areas mostly dedicated to the different ethnicities fighting in the area.[102] However, in July 1995 the Serbians moved into Srebrenica and committed one of the most horrific acts of genocide in recent memory.[103]

In April 1992, Serbia gained control over Srebrenica, however, within weeks a Muslim by the name of Naser Oric had successfully regained power over the area.[104] After the success in expelling the militant Serbians in Srebrenica, he and his troops

continued to find military success for the Bosnian Muslims outside of the city.[105] Such actions only increased Serbian pressure in Bosnia, and, even after being declared a safe-haven by the United Nations, and a long siege blocked food and resource deliveries.[106] On July 6, 1995, the Serbians returned to Srebrenica, and began a bloody shelling campaign.[107] Taking advantage of the United Nations' growing desire to evacuate from the area, in July 1995 Serbian General Ratko Mladic led a violent attack against the long-suffering city, with little defense from the United Nations.[108] While the violence in Srebrenica continued until July 21st, Mladic's forces slaughtered or abducted close to 8,000 men, women and children between July 12th and July 16th.[109] According to the ICRC (International Committee of the Red Cross), and an updated report in 2009 issued by the International Commission on Missing Persons, a significant amount of the dead and missing included Bosnian Muslims.[110] The genocidal policy implemented during the greater Yugoslav wars, termed ethnic cleansing, continued within Srebrenica, including the rape and forced impregnation of Muslim women; children born from a union between a Serbian male and a women of another ethnicity would be considered Serbian.[111] They also implemented rape as part of the terror campaign, as women endured the pain of the rape act, and their men bore the shame of watching their loved ones traumatized.[112]

The motivation for such violent actions in Srebrenica, and to people throughout Bosnia, emerged from both geo-political and religiously provoked racial nationalism. The history of the region, including its occupation by the Ottomans, left a lasting impression upon the national mythology; the rising nationalist mentality in Serbia and Croatia led to *Christoslavism*-the notion that "only the weak and cowardly Slavs converted to Islam."[113] The Slavs who had converted to Islam during the occupation also faced accusations of being "Christ killers and race traitors."[114] These allegations date back to the time of Prince Lazar, the "Christ figure" who perished during the fight against the Ottomans, leading to hundreds of years of Turkish control in the region.[115] Although the Muslims, Croats and the Serbs located within Bosnia shared the same Slavic ethnicity and background, their conflicts emerged through "religious faith" differences.[116] The religious differences began during the Great Schism, sundering the Church into Roman Catholic and Eastern Orthodox, and only escalated during the Ottoman invasion.[117] When nationalist ideologies increased during the geo-political turmoil in the 1980s, exacerbated by other religiously motivated turmoil between the Muslim Albanians and Serbians, the old religiously aroused tensions re-emerged and helped create the conditions for genocide throughout Yugoslavia.[118] The Muslim

Albanians personified the face of their previous Ottoman enemy, as well as the religion which resulted in some of their fellow Slavs turning into race traitors. The Bosnian Muslims not only represented the very act of turning into a race traitor due to the actions of their ancestors, but they bore much of the wrath that the Serbs felt for the growing Albanian population in Kosovo.[119] Additionally, the Bosnian Muslims found themselves in the middle of a fight between the Catholic Croats and Orthodox Serbs, which added to the overall misery of the people in Bosnia.[120] By the time rising nationalism in Yugoslavia during the 1980s developed into independence movements, the long simmering religious tensions in the area were used as motivation for both change and war; the national mythologies had been built upon a complicated religious history and sacred imagery, which became popular in the nineteenth century due to "Serb romanticism," and the nationalist movements incorporated them into their rhetoric and campaigns.[121] During the Yugoslav wars, the perpetrators waged genocide against those of their own race who belonged to a different religion, and specifically targeted those they deemed to be race traitors.

The perpetrators within the Holocaust and the so-called "ethnic cleansing" of the Yugoslav wars experienced similar motivations, including racially charged nationalism steeped in a history of religious

tensions.[122] However, such ideologies impacted both groups in different ways. For example, even though religion, or at least religious rhetoric, proved to be an overt motivation for some during the Holocaust, many merely experienced general cultural pressures that had long been inspired by cultivated theological doctrines. *Völkisch* ideas often contained religious intent. Additionally, many of the philosophers and commentators who helped to create the intellectual and philosophical framework for scientific racism, such as Arthur de Gobineau and Houston Stewart Chamberlain, utilized biblical and religious language when outlining the superiority of their race, even while also remaining critical of the institution. As stated by Hitler and various party officials within the 1920 Party Platform, weak Christianity tainted by Jewish materialism was the issue, and the solution included the creation of a more inclusive "positive Christianity."[123] Scientific racism proved to be irrevocably tied to religious sentiment in Third Reich Germany due to the overwhelming folk culture buried within Nazi nationalism, and even those individuals who wished to maintain a purely scientific framework for the Jewish Question had to contend with religious rhetoric. During the Yugoslav wars and various occasions of genocides and ethnic cleansings, religion held an obvious role, both historically and contemporarily. Not only did historical religious imagery motivate the perpetrators, but newly formed religious tensions

provoked conflicts and genocide. Despite the term "ethnic cleansing," no true ethnic divisions existed between the perpetrators and most of the victims; religion had been the primary division between the groups, and when they "ethnically cleansed" another, they actually targeted those they viewed as race traitors.[124] For the genocidal perpetrators in the Balkans, religious nationalism overruled shared ethnic backgrounds. The absolute horror of organized genocidal action against a segment of the population had to be "covered" by a precise national and religious furor: the perpetrators had to kill "them," the targeted group, before the targeted group caused a violent and unstoppable upheaval to the social order which would prove much more violent to the society as a whole; the furor had to emphasize that their actions existed above genocide, it stood as a defensive action. Both regimes demonstrated that religious sentiment, either overtly present or deeply buried within the culture, helped to create the conditions for genocide. National mythologies and prejudice steeped in religious rhetoric stimulated and shaped rising nationalistic movements seeking to eliminate those they labeled as "alien," and the perpetrators utilized religion as both a motivation and cover for their actions.

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Is Full Inclusion Appropriate for Students with Autism?

Tiffany Zuniga

Abstract

Social, communication, and behavioral challenges are all part of the group of developmental disabilities that are found in Autism Spectrum Disorder (Center for Disease Control and Prevention, 2015). When a student with autism is in an educational setting, one of the issues that needs to be determined is whether or not the student should be in a partial inclusion or full inclusion classroom. There are people who are opposed towards inclusion, due to concerns of classroom teachers lacking teacher training and students with autism being too much of a distraction for the other general education students. Others are concerned for the safety of the students and think that inclusion could be a social disadvantage. Even though there are people who have reasons as to why they may be against students with autism being in an inclusive classroom, there are others who have different reasons as to why they support it. Some of the reasons people chose to be for inclusion are because of the belief that students with autism will learn by observing, show an increase in their self-esteem, gain social skills, and will not be left behind educationally. This paper provides insight with the supports of research evidence, on the pros and cons of what serving students with autism is like in an inclusive classroom.

The Individuals with Disabilities Education Act (IDEA) defines autism as, “a developmental disability affecting verbal and nonverbal communication and social interaction, generally evident before age three, which adversely affects a child’s educational performance” (Heward, 2013, p. 236). The Center for Disease Control and Prevention (2015) defines autism as follows: “Autism spectrum disorder is a group of developmental disabilities that can cause significant social, communication and behavioral challenges” (Autism Spectrum Disorder section, para. 1). Research done by the Center for Disease Control and Prevention (2015) indicates that 1 in 68 children (1 in 42 boys and 1 in 189 girls) have autism. The diagnosis of autism can be identified in the early stages of life. Often parents share concerns with a pediatrician who may in turn recommend a developmental specialist. Once a child is diagnosed with autism, great changed may begin to occur in their life, both in the family and at school.

In the school setting, a student with autism will be allowed to receive special education services, based on their disability. When this occurs, one of the main issues in the educational setting is whether or not the student should be in a partial inclusion or full inclusion classroom. According to Stout (2001), partial inclusion classrooms provide support services in the classroom for a certain amount of time during the day. On the other hand,

in full inclusion classrooms, regardless of their disability, students are in a regular classroom full time, while services are still being provided to them (Stout, 2001.).

Experts on both sides of the discussion have proffered whether or not a child with autism should go into full inclusion. Those against full inclusion wonder whether teachers are trained in meeting the needs of children with autism, whether the student will cause a distraction in the class room, whether it is a safe environment for all students, and lastly whether students with autism benefit socially in an inclusive classroom (Cassady, 2011).

Arguments Against Inclusion

Those who oppose inclusion are concerned that the classroom teachers may lack specialized training and that it could be too distracting for the other general education students. Others are concerned for the safety of the students and that inclusion would not be socially beneficial for the student with autism. Researchers have considered these questions and the results of their research may be helpful in answering the questions related to inclusion of students with autism.

Lack of Time from Teachers

One of the most important things in education is for the teachers to successfully interact with all of the students in the classroom (Cassady, 2011).

However, not all teachers are fully trained to meet the different needs of all students in the classroom. As stated by Cassady (2011), most instructors do not believe that they are able to teach students with disabilities effectively while also teaching students without disabilities. Students with autism require much more of the teacher's time, in order to meet their intellectual needs. Whenever the general education teacher tries to spend more time with the special needs students, instructional time is taken away from the general education students.

Heffner (n.d.) maintained that special education students can be much slower at learning compared to general education students. In an inclusion classroom, teachers need to take the time to focus on special needs students to make sure that they understand what is being taught. According to Scruggs, Mastropieri, and McDuffie (2007), general education teachers typically focus more on the entire class while the special education teacher provides the extra attention needed for the special education students. This shows that, even if exceptional students were to be in an inclusion classroom all day, they would have little to no interaction with the classroom teacher.

Behavior Problems That Cause Too Much Distraction

Many teachers believe that students who have autism have behavior problems that can prevent

general education students and other students with disabilities from learning. As reported by Cassady (2011), hyperactivity and defiance are disruptive behaviors that can affect the classroom environment and student learning. These disruptive behaviors will hinder students' learning. Since there is a lack of emotional understanding, students with autism may behave in inappropriate ways and they don't take into consideration the feelings and needs of the people around them (Cassady, 2011).

Simon (2010) claimed that individuals with autism have many restrictive and repetitive behaviors. This is why many students who have autism usually do better when following a schedule or a certain routine (Morewood, Humphrey, & Symes, 2011). If the schedule of a student with autism is suddenly changed, this could result in the child having an emotional outburst. Recovering from a breakdown could vary in time and if general education students were to be around this behavior they may become uncomfortable. The behaviors of a student with autism vary. In some students with autism it may be infrequent and in others it may be common. Therefore, whenever students bring these behaviors into a general education classroom, the teacher will judge them as unnecessary disruptions.

Reduces the Self-Esteem in Students with Autism

Whenever a special education student is placed into an inclusion classroom, many challenges can occur. Autism isn't something that can be noticed by looking at someone's physical features, but it can be noticed by how they act when they are around others. One of the characteristics in autism is the lack of social skills (Heward, 2013). Whenever other students see someone with autism being quiet and not talking to anyone, they may sometimes think that the student is weak, weird, and/or different. Students with autism usually need more time to understand and complete any education work given to them. Therefore it is not uncommon for students with autism to fall behind in class (Heffner, n.d.).

When other students take notice of this, it may result in name calling towards the student with autism. Not only will general education students take notice that students with autism are slow in learning and turning in assignments, but also in everything that they do. Once general education students make it obvious to students with autism that they cannot do things as good as others can, the self-esteem of students with autism will be affected negatively. Berg (2005) put forth in his article that these students will very often feel depressed, overwhelmed, and academically inadequate compared to the general education

students who are not disabled. “The difficulties in social settings and the trouble communicating experienced by these students can increase the risk of being bullies or being left completely alone” (Morewood, Humphry & Symes, 2011, p. 63). Once the students with autism start getting verbally harassed by general education students, who usually are not confronted for their abuses, the students will then slowly, but surely become more aggressive and disruptive.

Socially Unbeneficial

Students with autism are prone to sensitivity (Hume, 2007). Many students with autism may come to find many problems while in a regular classroom. Noise that goes on in the regular classroom, may come to be very painful or distracting to students with autism. Some students who are diagnosed with autism may be over stimulated by materials in a regular classroom. Another factor that could affect these students could be the way a teacher may have their classroom organized.

For students with autism, a complex physical organization of the classroom can make it very limited and difficult for the student to be able to determine what to do or where to go (Mesibov, Shea, & Schopler, 2005). Based on their research, Ochs, Kremer-Salik, Solomon, & Sirota (2002)

hypothesized that students who have autism take time to cope with the environment that may be over stimulating. Therefore, instead of interacting with other students in an inclusive classroom, they take time to think about how they can recover their equilibrium. Sensation and overstimulation are two big factors as to why students with autism will not socially interact with other students in an inclusive classroom.

Arguments For Inclusion

Many people have done research to find flaws that may occur when a student with autism is put into an inclusion class (Cassidy, 2011). Other people have done research in the past as to why putting a student with autism in an inclusion classroom may be beneficial. If inclusion is something that has been growing tremendously, then there has got to be much more evidence as to why inclusion is beneficial than why it is not (Edelson, 2015). Here is some evidence that will explain why so many people support inclusion.

Students Learn By Observation

Even though students with autism may need extra attention in order to meet their educational needs, past research has proven they can learn unanimously just by observing. When put into an inclusion classroom students with autism will find interest in observing other students and will then

learn by imitating what they do (Edelson, 2015). Therefore, even when the classroom teacher may not be able to spend extra attention with the student who has autism, the student will still be able to learn from other students. If a student with autism engages in learning good behaviors by watching other students, it is more likely that the peers of a student with autism will begin to accept the student, socially (Edelson, 2015.). In this case, general education students will be able to benefit from this, because they too, will learn how to accept others who are different and like them.

Increase in Self-Esteem

After doing research, Berg (2005) found that self-esteem is increased when peers interact through modeling and simple physical proximity. This promotes a sense of belonging for all students who have learning needs. According to Berg (2005), when a student is put into an inclusion classroom, the student will gain better self-respect and self-esteem for themselves. In some cases, the general education students begin to have interactions with the student with autism in the classroom. When this occurs, the student with autism will then begin to feel accepted and as part of the students who don't have disabilities. The students will get a sense of feeling as if they can do and experience what their peers' can without any struggles. The students will

then begin to feel good about themselves and they will begin to enjoy school.

Socially Beneficial

Students with autism and general education students usually take advantage of the ability to socialize. If students with autism were pulled aside in a self-contained unit all day, then socializing would almost be impossible. Conforming to Berg (2005), putting special education students in an inclusion classroom, gives them the advantage of making new friends and learning new experiences. This would require putting the students in a different environment of a general education classroom rather than leaving them in a self-contained classroom.

In a self-contained classroom, special education students do not have the opportunity of socializing with non-disabled students. As stated by Berg (2005), "the regular students become conscious of the person first and the labeling fades" (p. 25). In an inclusion classroom, these students are able to practice social skills that start off by developing friendships with their peers. If students are able to get the practice of socializing in an inclusion classroom, then there is a higher probability that they will be able to socialize in their everyday life.

No Child with Autism Left Behind

Under the No Child Left Behind Act, students are required to be tested in reading and math and be considered proficient, which means that they should be executing the grade level that they are assigned (Department of Elementary and Secondary Education (DESE), 2004). The focus of this law was to make sure that no student would be left behind in education. Whether a student has a disability or not, every student is expected to be successful on the reading and math state test given to them. Even if a student with a disability is unable to participate in the normal assessment, there are alternate assessments that are given to them so that they can be assessed (DESE, 2004). Learning may occur when a student with autism is in a special education classroom, but the learning that is taking place usually doesn't tie into the objectives that they are supposed to be learning. Putting a student with autism in an inclusion classroom could benefit them by being able to stay on the right educational path and not getting left behind.

Conclusion

Research has proven that students with autism can benefit from being in an inclusion classroom. Having a student with autism in an inclusive classroom may be difficult and demand a lot of hard work from the people who are involved with the student. However, if everything is handled

properly, the positives may outweigh the negatives for the students who are diagnosed with autism. Putting a student with autism in a full inclusion classroom can bring great success for the student's future. Students with disabilities have the right to receive a free and appropriate education under IDEA. Schools should be doing what is needed to get the students to succeed, no matter how hard it may be.

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Finding the Value of Simplified Two-Player Parcheesi

Nicholas Salyers

The goal of this paper is to expand the simplified version of the board game Parcheesi that Ken Binmore created in his publication "Playing it Real: A Text on Game Theory." to a 3 x 3 matrix (as shown in Figure 2) and calculate the value (V) of the game, which is the initial probability that Player 1 will win prior to the game starting. If V = 0.5, the game is fair since both players have an equal probability of winning. If V < 0.5, the game is favored toward Player 2 and if V > 0.5, the game is favored toward Player 1. The value of Binmore's version of the game, whose game board is shown in Figure 1, is 17/24, which is larger than 0.5, thus indicating that the game favors Player 1. We hypothesize that as the game board becomes larger, the favorability of Player 1 decreases and approaches 0.5.

To understand how to find the value of the game, the rules of the game must first be identified. The game is played between two players, with Player 1 being represented by the white disk and Player 2 being represented by the black disk. The winner is determined by whoever reaches the gray square first. Each player takes a turn, with White always going first, flipping a coin.

If the coin flips tails, the player can either move their counter one space or not move their counter at all. If the coin flips heads, the player can either move their counter two spaces or not move their counter at all. If both players refuse to move their counter, then it is a standoff and the winner is determined by the flip of the coin. The only exception to this is if the winning square can be reached in one move, then the winning move can be achieved even if a heads has been flipped. If a player's counter lands on their opponent's counter, however, the opponent must move back to the start position. These rules are all we need to calculate the value of the game.

Figure 1

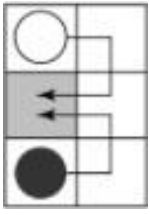
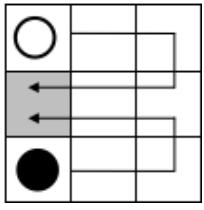


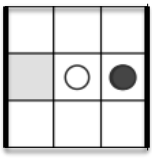
Figure 2

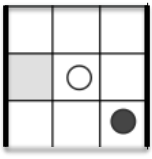


Methodology

The first step of determining the value of the 3 x 3 game is to create all possible positions that could occur during the game when it is White's turn. These positions and their respective values are diagrammed in Figure 3. Figure 4 represents the positions when it is Black's turn and their respective values.

Figure 3.Possible positions & respective values when it is White's turn


Pos 1
Value 1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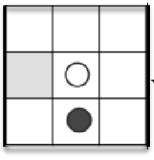
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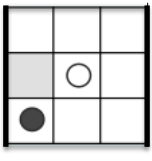
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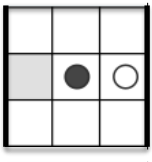
Value 1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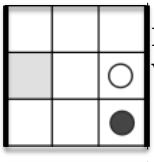
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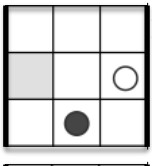
Value a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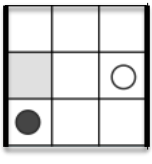
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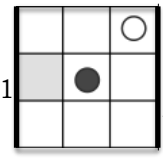
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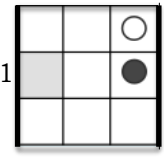
Value b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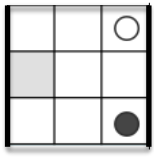
Value c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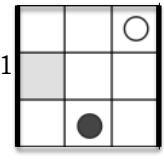
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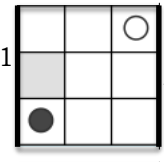
Value e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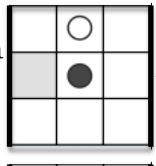
Value f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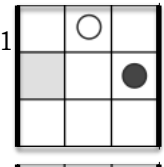
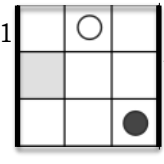
Value 0


Pos 15
Value g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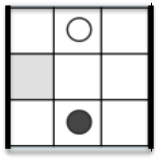
Value h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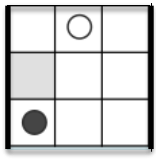
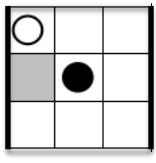
Value i


Pos 18
Value j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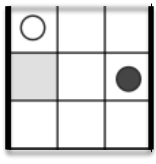
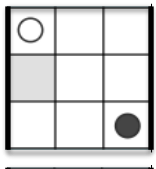

Pos 20
Value k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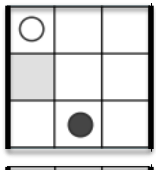
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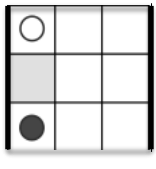
Value m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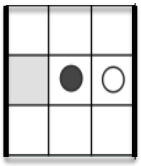
Value n



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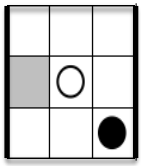
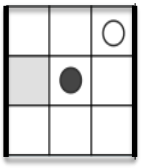
Value 0

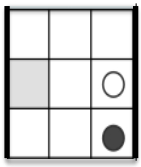


Pos 32
Value 1-b

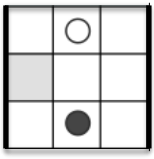
Figure 4. Possible positions and respective values when it's Black's turn



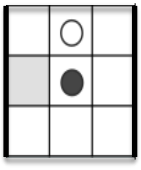
Pos 25
Value 0



Pos 33
Value 1-c



Pos 40
Value 1-i



Pos 26
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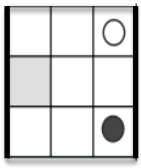
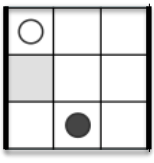
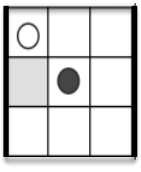


Pos 34
Value 1-d



Pos 41
Value 1-j



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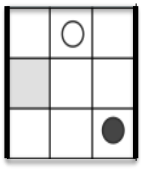

Pos 35
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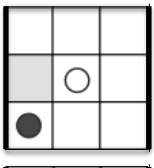

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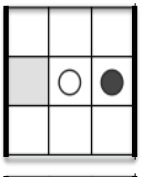
Value 1



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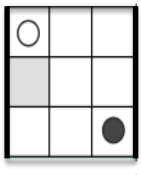
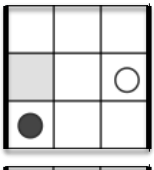


Pos 36
Value 1-f



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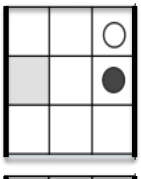

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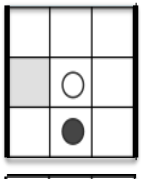

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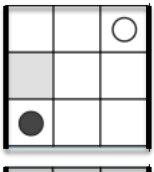

Pos 44
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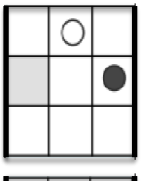

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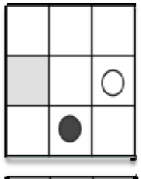
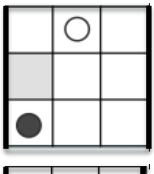
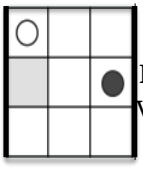


Pos 38
Value 1-g



Pos 45
Value 1-m



Pos 31
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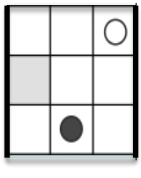
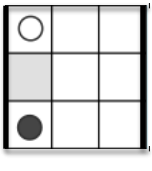


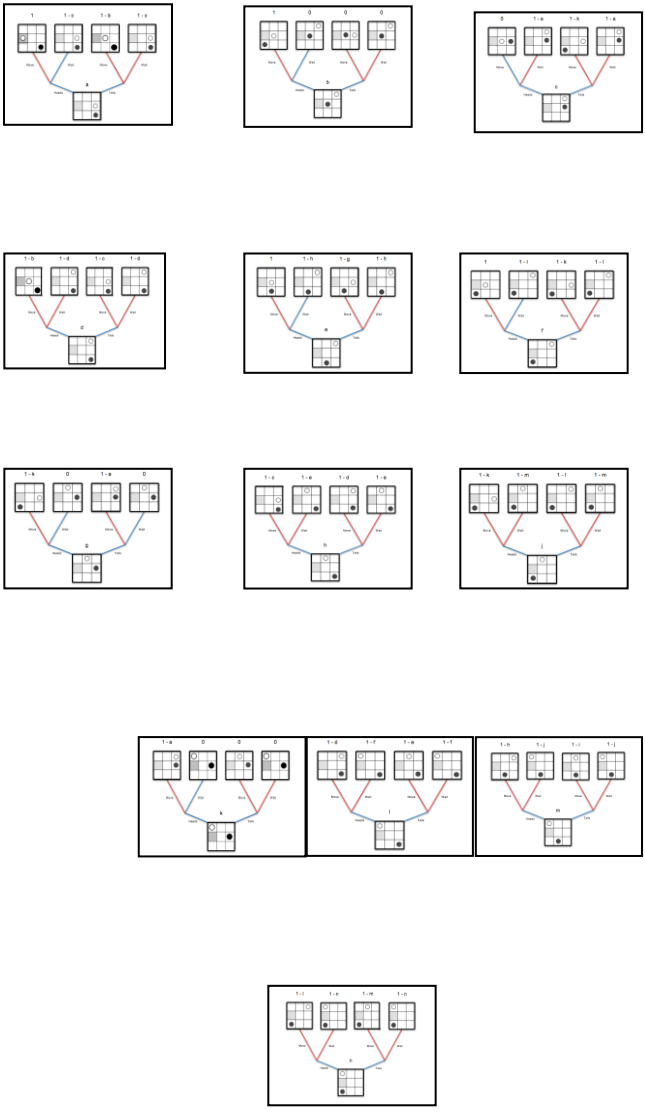
Pos 39
Value 1-h



Pos 46
Value 1-n

The values of White's positions that are not immediately known are assigned letters (a-n) and the corresponding positions when its Black's turn are assigned 1-letter (1-a – 1-n). Note that the value of the entire game will be n since that position represents the start of the game. To calculate the unknown values, backward induction, the process of reasoning backwards in time to determine the most optimal outcome, will be utilized. The results of backward induction will be shown in Figure 5, with red lines indicating the most optimal decision that White can make on a turn. Once all possible outcomes have been outlined, Zermelo's algorithm, which is used to create a winning strategy for Player 1, is applied to determine the most optimal strategy for White in each position. For example, for position with unknown value a, if White flips a heads, their optimal choice is to move since it guarantees them a win. However, if they flip a tails, a win is not guaranteed, so the optimal move is not known. Since the probability of flipping a heads is ½ and the probability of flipping a tails is ½, the value of a can be represented as ½(1) + ½(max(1 – b, 1 – c)). Figure 6 shows the value of all values a-n represented through Zermelo's algorithm.

Figure 5. Representation of all values using backward induction



a = ½ + ½(max(1-c,1-b))
b = ½
c = ½(1-a) + ½(max(1-k,1-a))
d = ½(max(1-b,1-d)) + ½(max(1-c,1-d))
e = ½ + ½(max(1-g,1-h))
f = ½ + ½(max(1-k,1-l))
g = ½(1-k) + ½(1-a)
h = ½(max(1-c,1-e)) + ½(max(1-d,1-e))
i = ½(max(1-g,1-i)) + ½(max(1-h,1-i))
j = ½(max(1-k,1-m)) + ½(max(1-l,1-m))
k = ½ - ½(a)
l = ½(max(1-d,1-f)) + ½(max(1-e,1-f))
m = ½(max(1-h,1-j)) + ½(max(1-i,1-j))
n = ½(max(1-l,1-n)) + ½(max(1-m,1-n))

Table 1: Values calculated through Zermelo's algorithm.

The final step to determine n is to create possible scenarios for each unknown value and use proofs by cases and proofs by contradiction to determine which cases are valid and which cases are not.

Scenario 1:
a = ½ + ½(max(1 – c, 1 – b))
c = ½(1 – a) + ½(max(1 – k, 1 – a)) k = ½ - ½(a)

Since we know that b = ½, we can plug that into a. a = ½ + ½(max(1 – c, ½))

Consider 3 cases:
1. 1 – c < ½, c > ½
2. 1 – c = ½, c = ½
3. 1 – c > ½, c < ½

Case 1: Assume $1 - c < \frac{1}{2}$, $c > \frac{1}{2}$
$a = \frac{1}{2} + \frac{1}{2}(\max(1 - c < \frac{1}{2}, \frac{1}{2}))$ $a = \frac{1}{2} + \frac{1}{2}(\frac{1}{2}) = \frac{3}{4}$
$k = \frac{1}{2} - (\frac{1}{2}(\frac{3}{4})) = 1/8$
$c = \frac{1}{2}(1 - \frac{3}{4}) + \frac{1}{2}(\max(7/8, \frac{1}{4}))$ $c = \frac{1}{2}(\frac{1}{4}) + \frac{1}{2}(7/8) = 9/16$

Since 9/16 is greater than ½ (which is what we assumed), this case is valid.

Case 2: Assume $1 - c = \frac{1}{2}$, $c = \frac{1}{2}$ $a = \frac{1}{2} + \frac{1}{2}(\max(\frac{1}{2}, \frac{1}{2}))$
$a = \frac{1}{2} + \frac{1}{2}(\frac{1}{2}) = \frac{3}{4}$
$k = \frac{1}{2} - (\frac{1}{2}(\frac{3}{4})) = 1/8$
$c = \frac{1}{2}(1 - \frac{3}{4}) + \frac{1}{2}(\max(7/8, \frac{1}{4}))$ $c = \frac{1}{2}(\frac{1}{4}) + \frac{1}{2}(7/8) = 9/16$

Since 9/16 does not equal 1/2, this case is contradictory.

Case 3: Assume $1 - c > \frac{1}{2}$, $c < \frac{1}{2}$
$a = \frac{1}{2} + \frac{1}{2}(\max(1 - c > \frac{1}{2}, \frac{1}{2}))$
$a = \frac{1}{2} + \frac{1}{2}(1 - c) = 1 - \frac{1}{2}(c)$
$k = \frac{1}{2} - \frac{1}{2}(1 - \frac{1}{2}(c)) = \frac{1}{4}(c)$
$c = \frac{1}{2}(1 - (1 + \frac{1}{2}(c))) + \frac{1}{2}(\max(1 - \frac{1}{4}(c), 1 - 1 + \frac{1}{2}(c)))$
$c = \frac{1}{4}(c) + \frac{1}{2}(1 - \frac{1}{4}(c))$
$c = \frac{1}{2} + 1/8(c) = 4/7$

Since 4/7 is not less than ½, this case is contradictory.

From this, we can conclude that case 1 must be true and that a = ¾, c = 9/16, and k = 1/8.

From the previous scenario, we can calculate g. g = ½(1 – k) + ½(1 – a)
g = ½(1/8) + ½(¼)
g = 9/16.

Scenario 2:
d = ½(max(½, 1 – d)) + ½(max(7/16, 1 – d))

Consider 5 cases:
1. 1 – d < 7/16, d > 9/16
2. 1 – d = 7/16, d = 9/16
3. 7/16 < 1 – d < ½, ½ < d < 9/16
4. 1 – d = ½, d = ½
5. 1 – d > ½, d < ½

Case 1: Assume 1 – d < 7/16, d > 9/16
d = ½(max(½, 1 – d < 7/16)) + ½(max(7/16, 1 – d < 7/16)) d = ½(½) + ½(7/16)
d = 15/32

Since 15/32 is less than 9/16, this case is contradictory.

Case 2: Assume 1 – d = 7/16, d = 9/16
d = ½(max(½, 7/16)) + ½(max(7/16, 7/16)) d = ½(½) + ½(7/16)

d = 15/32

Since 15/32 does not equal 9/16, this case is contradictory.

Case 3: Assume 7/16 < 1 – d < ½, ½ < d < 9/16
d = ½(max(½, 7/16 < 1 – d < ½)) + ½(max(7/16, 7/16 < 1 – d < ½)) d = ½(½) + ½(1 – d)
d = ¼ + ½ - ½(d) d = ½

Since ½ is not greater than ½ and less than 9/16, this case is contradictory.

Case 4: Assume 1 – d = ½, d = ½
d = ½(max(½,½)) + ½(max(7/16, ½)) d = ½(½) + ½(½)
d = ½

Since d = ½ (which is what we assumed), this case is valid.

Case 5: Assume 1 – d > ½, d < ½
d = ½(max(½, 1 – d > ½)) + ½(max(7/16, 1 – d > ½))
d = ½(1 – d) + ½(1 – d)
d = ½ - ½(d) + ½ - ½(d) d = ½

Since d is not less than ½, this case is contradictory.

From this, we can conclude that case 4 must be true and that d = ½.

Scenario 3:
e = ½ + ½(max(1 – g, 1 – h))
h = ½(max(1 – c, 1 – e)) + ½(max(1 – d, 1 – e))

From previous calculations, we can simplify these values to only contain e and h.

e = ½ + ½(max(7/16, 1 – h))
h = ½(max(7/16, 1 – e)) + ½(max(½, 1 – e))

Consider 5 cases:
1. 1 – e < 7/16, e > 9/16
2. 1 – e = 7/16, e = 9/16
3. 7/16 < 1 – e < ½, ½ < e < 9/16
4. 1 – e = ½, e = ½
5. 1 – e > ½, e < ½

Case 1: Assume 1 – e < 7/16, e > 9/16
h = ½(max(7/16, 1 – e < 7/16)) + ½(max(1/2, 1 – e < 7/16)) h = ½(7/16) + ½(½)
h = 15/32
e = ½ + ½(max(7/16, 1 – 15/32)) e = ½ + ½(17/32)
e = 49/64
Since 49/64 is greater than 9/16 (which is what we assumed), this case is valid.

Case 2: Assume 1 – e = 7/16, e = 9/16

h = ½(max(7/16, 7/16)) + ½(max(½, 7/16)) h = ½(7/16) + ½(½)
h = 15/32
e = ½ + ½(max(7/16, 1 – 15/32)) e = ½ + ½(17/32)
e = 49/64

Since 49/64 does not equal ½, this case is contradictory.

Case 3: Assume 7/16 < 1 – e < ½, ½ < e < 9/16
h = ½(max(7/16, 7/16 < 1 – e < ½)) + ½(max(½, 7/16 < 1 – e < ½)) h = ½(1 – e) + ½(½)
h = ½ - ½(e) + ¼ h = ¾ – ½(e)
e = ½ + ½(max(7/16, 1 – (¾ – ½(e)))) e = ½ + ½(max(7/16, ¼ + ½(e)))
e = ½ + ½(¼ + ½(e)) e = ½ + 1/8 + ¼(e)
e = 5/6

Since 5/6 is not greater than ½ and less than 9/16, this case is contradictory.

Case 4: Assume 1 – e = ½, e = ½
h = ½(max(7/16, ½)) + ½(max(½,½)) h = ½(½) + ½(½)
h = ½
e = ½ + ½(max(7/16, ½)) e = ½ + ½(½)
e = ¾

Since ¾ does not equal ½, this case is contradictory.

Case 5: Assume 1 – e > ½, e < ½
h = ½(max(7/16, 1 – e > ½)) + ½(max(½, 1 – e > ½))
h = ½(1 – e) + ½(1 – e)
h = 1 – e
e = ½ + ½(max(7/16, 1 – (1 – e))) e = ½ + ½(max(7/16, e))

* Note that no matter what e equals, e > ½, which is contradictory of our assumption.

From this we can conclude that case 1 works and h = 15/32 and e = 49/64.

Scenario 4:
f = ½ + ½(max(1 – k, 1 – l))
l = ½(max(1 – d, 1 – f)) + ½(max(1 – e, 1 – f))
From previous calculations, we can simplify these values to only contain f and l. f = ½ + ½(max(7/8, 1 – l))
l = ½(max(½, 1 – f)) + ½(max(15/64, 1 – f))

Consider 5 cases:
1. 1 – f < 15/64, f > 49/64
2. 1 – f = 15/64, f = 49/64
3. 15/64 < 1 – f < ½, ½ < f < 49/64
4. 1 – f = ½, f = ½
5. 1 – f > ½, f < ½

Case 1: Assume 1 – f < 15/64, f > 49/64

l = ½(max(½,1 – f < 15/64)) + ½(max(15/64, 1 – f < 15/64)) l = ½(½) + ½(15/64)
l = 47/128
f = ½ + ½(max(7/8, 81/128)) f = 15/16

Since 15/16 > 49/64 (which is what we assumed), this case is valid.

Case 2: Assume 1 – f = 15/64, f = 49/64
l = ½(max(½, 15/64)) + ½(max(15/64, 15/64)) l = ½(½) + ½(15/64)
l = 47/128
f = ½ + ½(max(7/8, 81/128)) f = 15/16

Since 15/16 does not equal 49/64, this case is contradictory.

Case 3: Assume 15/64 < 1 – f < ½, ½ < f < 49/64
l = ½(max(½,15/64 < 1 – f < ½)) + ½(max(15/64, 15/64 < 1 – f < ½))

l = ½(½) + ½(1 – f) l = ¾ - ½(f)
f = ½ + ½(max(7/8, 1 – (¾ - ½(f)))) f = ½ + ½(max(7/8, ¼ + ½(f)))
f = ½ + ½(7/8) f = 15/16

Since 15/16 is not greater than ½ and less than 49/64, this case is contradictory.

Case 4: Assume 1 – f = ½, f = ½

l = ½(max(½,½)) + ½(max(15/64, ½)) l = ½(½) + ½(½)
l = ½
f = ½ + ½(max(7/8, ½)) f = 15/16

Since 15/16 does not equal ½, this case is contradictory.

Case 5: Assume 1 – f > ½, f < ½
l = ½(max(½,1 – f > ½)) + ½(max(15/64, 1 – f > ½)) l = ½(1 – f) + ½(1 – f)
l = 1 – f
f = ½ + ½(max(7/8, 1 - f))
* Note that no matter what f equals, f > ½, which is contradictory of our assumption.

From this, we can conclude that case 1 works and f = 15/16 and l = 47/128.

Scenario 5:
i = ½(max(7/16, 1 – i)) + ½(max(17/32, 1 – i))
Consider 5 cases:
1. 1 – i < 7/16, i > 9/16
2. 1 – i = 7/16, i = 9/16
3. 7/16 < 1 – i < 17/32, 15/32 < i < 9/16
4. 1 – i = 17/32, i = 15/32
5. 1 – i > 17/32, i < 15/32

Case 1: Assume 1 – i < 7/16, i > 9/16

i = ½(max(7/16, 1 – i < 7/16)) + ½(max(17/32, 1 – i < 7/16)) i = ½(7/16) + ½(17/32)
i = 31/64

Since 31/64 is not greater than 9/16, this case is contradictory.

Case 2: Assume 1 – i = 7/16, i = 9/16
i = ½(max(7/16, 7/16)) + ½(max(17/32, 7/16)) i = ½(7/16) + ½(17/32)
i = 31/64

Since 31/64 does not equal 9/16, this case is contradictory.

Case 3: Assume 7/16 < 1 – i < 17/32, 15/32 < i < 9/16
i = ½(max(7/16, 7/16 < 1 – i < 17/32)) + ½(max(17/32, 7/16 < 1 – i < 17/32))
i = ½(1 – i) + ½(17/32)
i = ½ - ½(i) + 17/64 i = 49/96
Since is greater than 15/32 and less than 9/16 (which is what we assumed), this case is valid.

Case 4: Assume 1 – i = 17/32, i = 15/32
i = ½(max(7/16, 17/32)) + ½(max(17/32, 17/32)) i = ½(17/32) + ½(17/32)
i = 17/32

Since 17/32 does not equal 15/32, this case is contradictory.

Case 5: Assume 1 – i > 17/32, i < 15/32
i = ½(max(7/16, 1 – i > 17/32)) + ½(max(17/32, 1 – i > 17/32)) i = ½(1 – i) + ½(1 – i)
i = 1 – i i = ½

Since ½ is not less than 15/32, this case is contradictory. From this, we can conclude that case 3 works and i = 49/96.
Scenario 6:
j = ½(max(1 – k, 1 – m)) + ½(max(1 – l, 1 – m))
m = ½(max(1 – h, 1 – j)) + ½(max(1 – i, 1 – j))
From previous calculations, we can simplify these values to only contain j and m. j = ½(max(7/8, 1 – m)) + ½(max(81/128, 1 – m))
m = ½(max(17/32, 1 – j)) + ½(max(47/96, 1 – j))

Consider 5 cases:
1. 1 – m < 81/128, m > 47/128
2. 1 – m = 81/128, m = 47/128
3. 81/128 < 1 – m < 7/8, 1/8 < m < 47/128
4. 1 – m = 7/8, m = 1/8
5. 1 – m > 7/8, m < 1/8

Case 1: Assume 1 – m < 81/128, m > 47/128
j = ½(max(7/8, 1 – m < 81/128)) + ½(max(81/128, 1 – m < 81/128)) j = ½(7/8) + ½(81/128)
j = 193/256

m = ½(max(17/32, 1 – 193/256)) + ½(max(47/96, 1 – 193/256)) m = ½(17/32) + ½(47/96)
m = 49/96

Since 49/96 is greater than 47/128 (which is what we assumed), this case is valid.

Case 2: Assume 1 – m = 81/128, m = 47/128
j = ½(max(7/8, 81/128)) + ½(max(81/128, 81/128))
j = ½(7/8) + ½(81/128)
j = 193/256
m = ½(max(17/32, 1 – 193/256)) + ½(max(47/96, 1 – 193/256)) m = ½(17/32) + ½(47/96)
m = 49/96

Since 49/96 does not equal ½, this case is contradictory.

Case 3: Assume 81/128 < 1 – m < 7/8, 1/8 < m < 47/128
j = ½(max(7/8, 81/128 < 1 – m < 7/8)) + ½(max(81/128, 81/128 < 1 – m < 7/8))
j = ½(7/8) + ½(1 – m) j = 15/16 - ½(m)
m = ½(max(17/32, 1 – (15/16 – ½(m)))) + ½(max(47/96, 1 – (15/16 – ½(m))))
m = ½(max(17/32, 1/16 + ½(m))) + ½(max(47/96, 1/16 + ½(m))) m = ½(17/32) + ½(47/96)

m = 49/96

Since 49/96 is not greater than 1/8 and less than 47/128, this case is contradictory.

Case 4: Assume 1 – m = 7/8, m = 1/8
j = ½(max(7/8, 7/8)) + ½(max(81/128, 7/8)) j = ½(7/8) + ½(7/8)
j = 7/8
m = ½(max(17/32, 1 – 7/8)) + ½(max(47/96, 1 – 7/8)) m = ½(17/32) + ½(47/96)
m = 49/96

Since 49/96 is not equal to 1/8, this case is contradictory.

Case 5: Assume 1 – m > 7/8, m < 1/8
j = ½(max(7/8, 1 – m > 7/8)) + ½(max(81/128, 1 – m > 7/8)) j = ½(1 – m) + ½(1 – m)
j = 1 – m
m = ½(max(17/32, 1 – (1 – m))) + ½(max(47/96, 1 – (1 – m)))
m = ½(max(17/32, m)) + ½(max(47/96, m)) m = ½(17/32) + ½(47/96)
m = 49/96

Since 49/96 is not less than 1/8, this case is contradictory.

From this, we can conclude that case 1 works and j = 193/256 and m = 49/96

Scenario 7:
n = ½(max(1 – l, 1 – n)) + ½(max(1 – m, 1 – n))
n = ½(max(81/128, 1 – n)) + ½(max(49/96 , 1 – n))

Consider 5 cases:
1. 1 – n < 49/96, n > 47/96
2. 1 – n = 49/96, n = 47/96
3. 49/96 < 1 – n < 81/128, 47/128 < n < 47/96
4. 1 – n = 81/128, n = 47/128
5. 1 – n > 81/128, n < 47/128

Case 1: Assume 1 – n < 49/96, n > 47/96
n = ½(max(81/128, 1 – n < 49/96)) + ½(max(49/96, 1 – n <49/96)) n = ½(81/128) + ½(49/96)
n = 439/768

Since 439/768 is larger than 47/96 (which is what we assumed), this case is valid.

Case 2: Assume 1 – n = 49/96, n = 47/96
n = ½(max(81/128, 49/96)) + ½(max(49/96, 49/96))
n = ½(81/128) + ½(49/96)
n = 439/768

Since 439/768 does not equal 47/96, this case is contradictory.

Case 3: Assume 49/96 < 1 – n < 81/128, 47/128 < n < 47/96
n = ½(max(81/128, 49/96 < 1 – n < 81/128)) + ½(max(49/96, 49/96 < 1 – n < 81/128))
n = ½(81/128) + ½(1 – n) n = 209/384

Since 209/384 is not greater than 47/128 and less than 47/96, this case is contradictory.

Case 4: Assume 1 – n = 81/128, n = 47/128
n = ½(max(81/128, 81/128) + ½(max(49/96, 81/128)) n = ½(81/128) + ½(81/128)
n = 81/128

Since 81/128 does not equal 47/128, this case is contradictory.

Case 5: Assume 1 – n > 81/128, n < 47/128
n = ½(max(81/128, 1 – n > 81/128)) + ½(max(49/96, 1 – n > 81/128))
n = ½(1 – n) + ½(1 – n) n = ½

Since ½ is not less than 47/128, this case is contradictory.

From this, we can conclude that case 1 works and that n = 439/768.

Discussion and Conclusion

A summary of all values is provided in Table 1. As we can see, the majority of the positions in the game are in favor toward Player 1. Additionally, the value of the game (n), is greater than 1/2 and less than 17/24 (the value of the 3 x 2 game), which supports our hypothesis that as the game board expands, the value decreases and approaches 1/2. Further calculations can be performed to further support the hypothesis.

Table 1. List of all values. Those greater than 1/2 indicate that it is in favor of Player 1. Those less than 1/2 indicate that it is in favor of Player 2.

a = 3/4
b = 1/2
c = 9/16
d = 1/2
e = 49/64
f = 15/16
g = 9/16
h = 15/32
i = 49/96
j = 193/256
k = 1/8
l = 47/128
m = 49/96
n = 439/768

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Using Eye Tracking Technology to Assess the Detection of Inaccurate Information

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Abstract

The acquisition of information is a crucial component of everyday life. However, information is often riddled with errors and inaccuracies (Rapp & Braasch, 2014). In response to this problem, the present study provides some insight into the detection of inaccurate information using state-of-the-art eye tracking technology, a method that is rarely used in this type of research. More specifically, using eye-tracking technology, we investigated the detection of anomalous words located earlier or later in questions. The results revealed that readers detected anomalous words located later in questions more frequently than anomalous words located earlier in questions, even though more effort was exerted trying to detect anomalous words located earlier in questions (i.e., anomalous words located earlier in questions had longer first pass fixation durations, longer total fixation durations, and more regressions than anomalous words located later in questions).

What sport includes bats, innings, gloves, pitchers, catchers, bases, ***referees****, and outfielders?* If your answer is *baseball* then you have fallen for a semantic illusion because *baseball* does not have *referees*, it has *umpires*. When presented with an anomalous question, like this *baseball* example, readers often fail to detect an anomalous word like *referees*, even though they know that the anomalous word *referees* has no association with *baseball* and despite being warned beforehand that questions may contain anomalous words.

Many studies have observed semantic illusions, a term used to describe undetected anomalous words (e.g., Ericson & Mattson, 1981; Hannon, 2014; Hannon & Daneman, 2001; Reder & Kusbit, 1991; Shafto & MacKay, 2000). The present study uses eye tracking technology to investigate whether the locations of anomalous words in questions influences their detection (Hannon, 2015). For example, are anomalous words detected more frequently when they are located later in questions (e.g., *What sport includes bats, innings, gloves, pitchers, catchers, bases,* ***referees****, and outfielders*?) than when they are located earlier in questions (e.g., *What sport includes bats,* ***referees****, innings, gloves, pitchers, catchers, bases, and outfielders?*)?

Background

A large body of research has sought to understand why people sometimes fail to detect

anomalous words (e.g., Ericson & Mattson, 1981; Hannon 2015; Hannon & Daneman, 2001; Reder & Kusbit, 1991; Shafto & MacKay, 2000). In the seminal study by Erickson and Mattson (1981), readers read aloud an anomalous question (*How many animals of each kind did **Moses** take on the ark?)* and three non-anomalous questions. All questions were read aloud in order to eliminate encoding failure as an explanation for semantic illusions. Readers were then instructed to answer by saying: (i) wrong, if they noticed an error, (ii) don't know, if they did not know the answer, or (iii) by answering the question, if they did not detect an error. Despite a lack of time pressure and being warned ahead of time that some questions included anomalous words, readers still failed to detect anomalous words 80% of the time (Erickson & Mattson, 1981).

In subsequent years, research has shown that the semantic strengths of anomalous words influences detection (e.g., Hannon, 2014; Hannon & Daneman, 2001; van Oostendorp & de Mul, 1990). How many semantic features anomalous words have in common with the correct words that they are posing for gauge this semantic strength. Consider the anomalous questions (a) *What sport includes bats, innings, gloves, pitchers, catchers, bases, **referees**, and outfielders?* and, *(b) What sport includes bats, innings, gloves, pitchers, catchers, bases, **judges**, and outfielders?* It is more difficult to

detect *referees* in question (a) than *judges* in question (b) because *referees* share more semantic features with the correct word *umpires.* For example, *referees* are associated with sports, like the correct word *umpires,* whereas *judges*, does not share this important semantic feature.

Another factor that contributes to the detection of anomalous words is the number of contextual cues (i.e., words that lead to the illusionary answers) in the questions. Indeed, research suggests that readers fail to detect anomalous words when there are more contextual cues in the questions (e.g., Hannon & Daneman, 2001). For example, in the anomalous questions (c) *What sport includes bats, innings, gloves, pitchers, catchers, bases,* ***referees****, and outfielders?* and (d) *What sport includes bats, innings, catchers, bases,* ***referees****, and outfielders?* it is more difficult to detect the anomalous word, *referees,* in question (c) than question (d) because question (c) has eight contextual cues (e.g., *sport, bats, innings, gloves, pitchers, catchers, bases, outfielders*) whereas question (d) has only six contextual cues (e.g., *sport, bats, innings, catchers, bases, outfielders*).

Nevertheless, there is a lack of research examining the influence that location has on detection of these anomalous words and the few studies that have examined location have mixed findings. Reder and Kusbit (1991), for example, found that questions with anomalous words located

near the ends of questions were read slower than questions with anomalous words located near the beginning of questions. In contrast, Hannon (2015) found that immediate conscious detection of anomalous words was slower for anomalous words that were located near the middle of questions than for anomalous words located near the ends of questions. In addition, Daneman, Lennertz, and Hannon (2007) found no significant difference in detection of anomalous words located early versus later in paragraphs (i.e., 53% vs. 56.5%). On the other hand, Hannon (2014) found that anomalous words located earlier and late in questions were detected more frequently than questions with anomalous words located in the middle (i.e., 48% and 54% vs. 38%).

Partial Match Theory

There are a number of theories explaining semantic illusions, however, the theory that is most relevant to the present study is Reader and Kusbit's (1991) *Partial Match Theory*. In this theory "semantic illusions occur because of a *partial matching* or overlap between the semantic features in an anomalous question and its respective concept or schema in memory" (Hannon, 2014, pp. 105). "That is, the more features in a question that match/overlap with the features in the memory trace for that question's answer, the more difficult it is to detect the anomalous word" (Hannon, 2014,

pp. 106). Consider, for example, the anomalous questions *(a) What sport includes bats, innings, gloves, pitchers, catchers, bases,* ***referees****, and outfielders?* and *(b) What sport includes bats, innings, gloves, pitchers, catchers, bases,* ***judges****, and outfielders? Judges* is easier to detect in question (b) because the anomalous word *judges* shares less features with the memory trace of the answer *baseball* than does the anomalous word *referees* in question (a).

With respect to the location of anomalous words, the partial match theory predicts that anomalous words located later in questions will be detected less frequently than anomalous words located earlier in questions. The reason why is because the contextual cues in questions with anomalous words located later will have activated many semantic features in the memory trace of the correct answer and consequently, readers are less likely to process the meaning (i.e., all of the semantic features) of the anomalous word deeply. In contrast, because few contextual words precede an anomalous word located earlier in a question, few semantic features in the memory trace of the correct answer will be activated and consequently, readers are more likely to process the meaning of the anomalous word deeply.

The Present Study

The present study investigated whether location of anomalous words influences their detection. Each reader read questions that included anomalous words (i.e., critical questions) and questions that did not include anomalous words (i.e., filler questions). Half of the critical questions had anomalous words located earlier in the questions (e.g., ccXccccccc) while the other half of the critical questions had anomalous words located later in the questions (e.g., ccccccccXc). See Table 1 for examples. Anomalous words located earlier in questions had two contextual cues preceding them and six contextual cues following them (e.g., ccXccccccc). Anomalous words located later in questions had seven contextual cues preceding them and one contextual cue following them (e.g., ccccccccXc).

Table 1

Examples of Critical Task Questions with Anomalous Words Located Earlier and Later in Questions

Location of Anomalous Word	Critical Question
Early	ccXcccccc
What sport includes bats, **referees**, innings, gloves, pitchers, catchers, bases, and outfielders?	
What character is associated with hearts, **apathy**, bows, desire, passion, arrows, attraction, and Valentine's Day?	
Late	cccccccXc
What sport includes bats, innings, gloves, pitchers, catchers, bases, **referees**, and outfielders?	
What character is associated with hearts, bows, desire, passion, arrows, attraction, **apathy**, and Valentine's Day?	

The study was conducted using a SMI Red250Mobile; a state-of-the-art eye tracker. Unlike older designs, the SMI eye tracker does not fix a reader's head in place, rather a reader's head can move freely. Using this technology, we were able to accurately record a reader's eye movements as they read the critical questions. We then isolated and analyzed a number of dependent variables that have never been used before in semantic illusion research.

The dependent variables assessed here were: (i) fixations, which are where readers focus as they read text, (ii) total gaze time, which is the cumulative amount of time spent reading an area of interest, and (iii) number of regressions, which are the number of returns to previously read text.

Method

Participants and Design

Forty-eight Texas A&M University-Kingsville English as first language students received a gift for participating in the study. The study consisted of two tasks: the anomaly detection task and the post knowledge check. The anomaly detection task was presented on an eye tracker while the post knowledge check was presented on a computer using ePrime software. The eye tracker was a SMI Red250Mobile system, which allows head movements to occur unrestrained. Because the SMI Red250Mobile system allows two computer monitors to operate simultaneously, one monitor presented the questions to the readers while the other monitor was used by the researcher to monitor both the reader's eye movements and feedback about his/her eye movements in real time.

Anomaly Detection Task

In this task, critical and filler questions were randomly presented on a computer screen. Readers

read each question aloud and then responded to the question in one of three ways: (i) by saying wrong if there was a detected error in the question, (ii) by saying don't know, or (iii) by answering the question.

Materials. There were 208 questions: 104 critical questions that each contained an anomalous word and 104 filler questions. The filler questions were identical to the critical questions except that they did not contain anomalous words. Each critical question contained an anomalous word, that was located either early or late in a question as well as eight other contextual cues about the answer to the question. As seen in Table 1, for example, the question *What sport includes bats,* ***referees****, innings, gloves, pitchers, catchers, bases, and outfielders?* (ccXccccc) includes the anomalous word ***referees*** and eight contextual cues: *sport, bats, innings, gloves, pitchers, catchers, bases,* and *outfielders*.

Fifty-two of the questions had an anomalous word located early in the question and 52 of the questions had an anomalous word located later in the question. As shown in Table 1, when the anomalous word was early in a question, two contextual cues preceded the anomalous word and six contextual cues followed the anomalous word (i.e., ccXccccc). On the other hand, as shown in Table 1 when the anomalous word was later in a question, seven contextual cues preceded the

anomalous word and one contextual cue followed the anomalous word (i.e., ccccccccXc).

The questions were counterbalanced thereby resulting in 48 unique files. One file was randomly assigned to each reader. Each file contained 104 critical questions and 104 filler questions. In each file, half of the critical questions had anomalous words located early in the questions whereas the other half of the questions had anomalous words located later in the questions.

Procedure. After the eye tracker was calibrated to the eyes of the readers', readers were familiarized with the anomaly detection task by completing a number of practice questions. They were instructed to respond in one of three ways: (i) wrong, if they detected an error in a question, (ii) don't know, if they did not know the answer, or by (iii) by answering the question if they did not detect an error in that question. During the practice questions, readers received feedback about the correctness of their responses. Readers did not receive feedback about their answers once the practice questions were completed.

Each question was preceded by an asterisk (i.e., *) that remained on the screen for 500 msec. The purpose of the asterisk was to provide the reader with a location as to where to place their eyes. Following the asterisk, a question appeared in the middle of the computer screen. The reader read

the question aloud and then pressed the spacebar to signal that they were done reading the question. At this point the reader responded aloud to the question. If a reader responded by saying wrong, than the reader was asked to identify why they believed the question was incorrect. The researcher then wrote down his response. This procedure was included to ensure the reader answered the question as wrong for the correct reason. Once a reader was ready to continue, the researcher entered the reader's "wrong", "don't know", or "answer" into the computer and the asterisk appeared signaling the beginning of the next question. This overall procedure continued until the reader responded to all of the questions.

Post Knowledge Check

After readers completed the anomaly detection task, they then began the post knowledge check. The post knowledge check assessed a reader's knowledge about the topics of the critical questions presented in the anomaly detection task. There were 104 multiple-choice questions, one multiple-choice question for each critical question. For example, the post knowledge check multiple-choice question for the critical question *What sport includes bats, **referees**, innings, gloves, pitchers, catchers, bases, and outfielders?* was: *Baseball includes*_____ (a) *judges, (b) umpires,* or (c) *referees.* The researcher entered the reader's

response. If a reader selected the correct answer, *umpires,* as his/her answer, than that data for the accompanying critical question was left in the reader's dataset. On the other hand, if a reader selected either *judges* or *referees*—which are incorrect answers to the post knowledge check question—than the data for the accompanying critical question was removed from the reader's dataset because this response indicates that the reader does not have adequate knowledge about the critical question's topic.

Results

Results include two sections. Section one interprets the detection data, which assessed how frequently readers detected the anomalous words as a function of location (early, late). Section two interprets the eye movement data. The dependent variables and analyses for each section are reported below.

Detection Accuracy Data

Accuracy of detection was determined by using the following formula:

$$\frac{\text{The number of critical questions correctly identified as WRONG and answered correctly on the post knowledge check}}{\text{The number of critical questions answered correctly on the post knowledge check}}$$

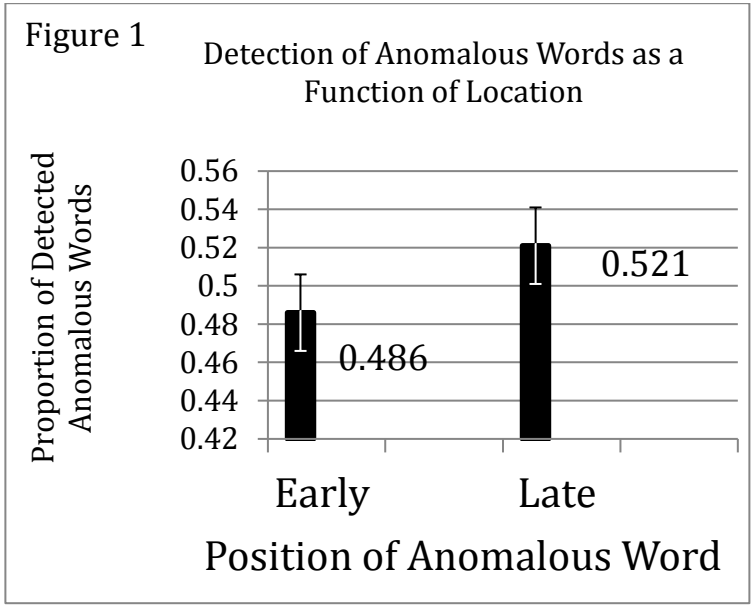
See Table 2 for additional information about the relationship between the post knowledge check and responses to critical questions.

Table 2

The Relationship Between Responses to Critical Anomalous Questions and Answers to Post Knowledge Check

Response to Critical Question	Answers to Post Knowledge: Correct Answer	Answers to Post Knowledge: Incorrect Answer
Answered the question	Fell for the semantic illusion	Lacked the knowledge to detect the anomalous word
Don't Know	Lacked the knowledge something other than the anomalous word	Lacked knowledge of the anomalous word
Wrong	Detected the anomalous word (only if the anomalous word was identified as the reason for saying wrong)	Believed the question to be wrong for an incorrect reason

As Figure 1 shows, anomalous words located later in questions (i.e., ccccccXc) were detected more frequently than anomalous words located earlier in questions (i.e., ccXccccc), 52.1% versus 48.6% respectively, $t(47) = 2.09$, $p<.05$. This finding suggests that anomalous words located later in questions are easier to detect than anomalous words located earlier in questions, a finding that is inconsistent with the Partial Match Theory.

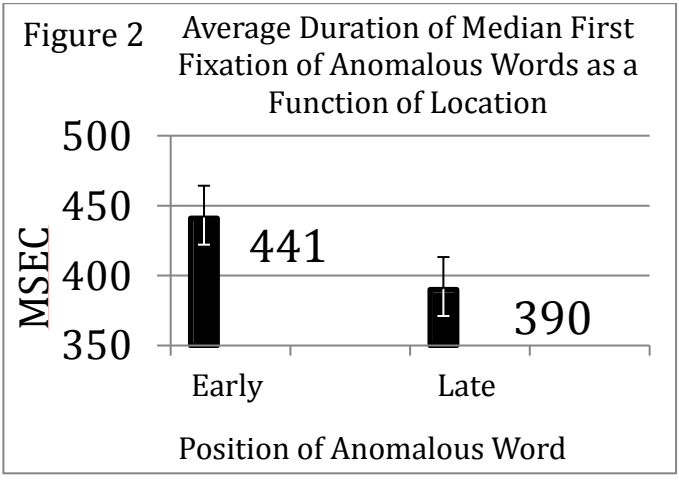


Eye Movement Data

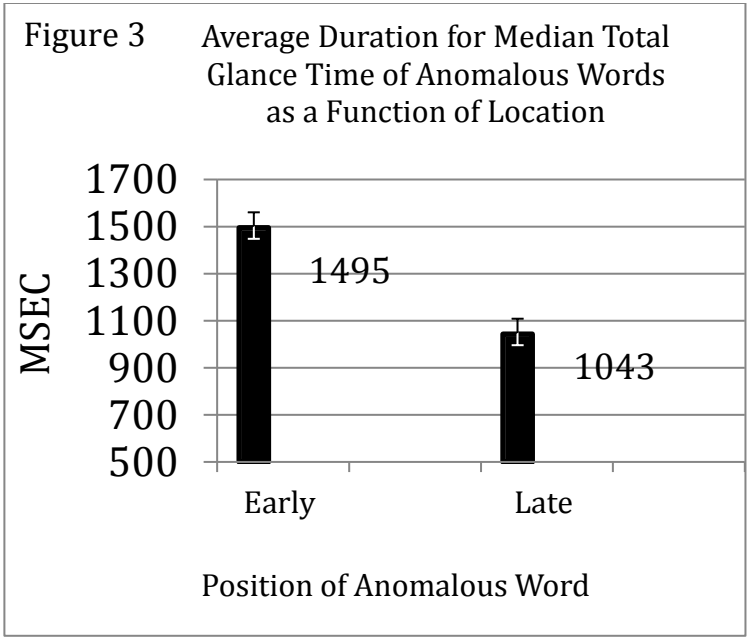
The eye movement data consisted of three measures. The first measure, which was *median first fixation time*, was the median amount of time a reader spent reading correctly identified anomalous words the first time they encountered the anomalous words. This measure was recorded in msec. The second measure, which was *median total glance time*, was the median total amount of time readers spent looking at the anomalous words. This measure was also recorded in msec. The third measure, which was the *average number of regressions to the anomalous words*, was the average number of times readers returned to re-read the

anomalous word in a question after they had initially read it.

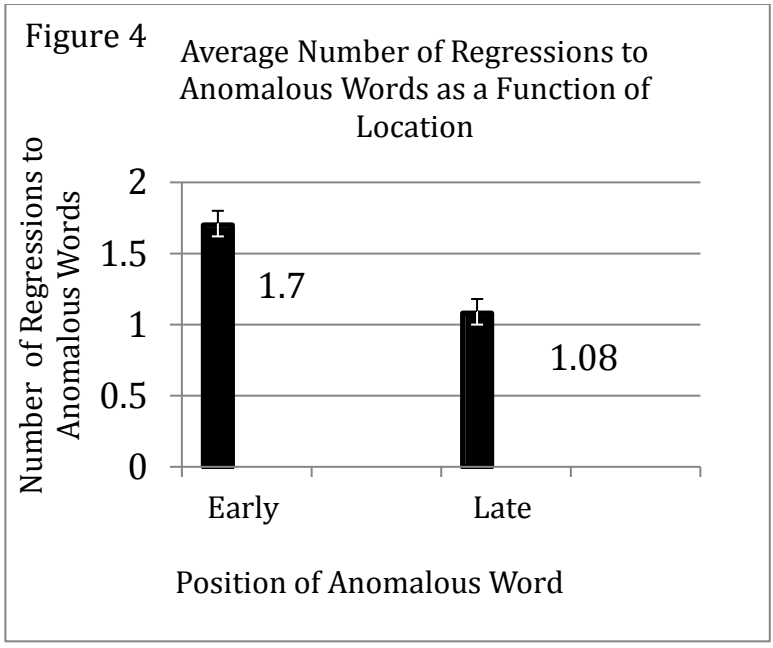
Median first fixation duration. Figure 2 shows that when readers first encountered anomalous words located earlier in questions they spent significantly more time reading these anomalous words than they did reading anomalous words located later in questions, 441 versus 390 msecs, $t(47) = 2.09$, $p < .05$.



Median total glance time. Figure 3 shows that the median total glance time for anomalous words located earlier in questions was significantly longer than the median total glance time for anomalous words located later in questions, 1495 msec versus 1043 msec, $t(47) = 5.44$, $p < .05$.



Average number of regressions. Figure 4 shows that readers regressed more frequently to anomalous words located earlier in questions than anomalous words located later in questions, 1.70 times versus 1.08 times, $t(47) = 7.51$, $p < .05$.



Discussion

The present study investigated whether detection of anomalous words varied as a function of location in a question (i.e., early, late). It was found that anomalous words located earlier in questions were detected less frequently than anomalous words located later in questions. It was also found that anomalous words located earlier had longer first fixation durations, longer total glance durations, and more regressions than anomalous words located later in questions. Overall these findings suggest that although anomalous words located earlier in questions are detected less frequently than anomalous words located later,

readers exert more effort trying to detect these earlier anomalous words.

The present results are both consistent and inconsistent with previous findings. With respect to consistency, the present findings are consistent with Hannon (2014), who also observed that anomalous words located earlier in questions are detected less frequently than anomalous words located later in questions. With respect to inconsistency, the present finding that anomalous words located later in questions are read faster than anomalous words located earlier in questions is inconsistent with Reder and Kusbit (1991), who observed the opposite. The present findings are also inconsistent with Daneman et al. (2007), who observed that location of anomalous words in text did not influence detection of anomalous words.

The present findings are also inconsistent with the Partial Match Theory (e.g., Reader & Kusbit, 1991). As noted earlier, according to the Partial Match Theory, anomalous words located later in questions will be detected less frequently than will anomalous words located earlier in questions. However, the results of the present study were exactly opposite to this prediction. Rather, a better explanation for the present results is when the anomalous word was located later in a question by the time the reader encountered this anomalous word, they already had an answer in mind for the

question, consequently, the contradictory nature of the anomalous word was immediately detected.

Although the eye tracking technology used in the present study was accurate and reliable, it still had some limitations. For example, if a reader wore glasses with thick bifocal lenses, there was a high potential for data loss because the eye tracker camera had problems recording eye movements through the lens. As well, if a reader moved his/her head outside the range of the eye tracker camera than his/her eye movement could be lost. These limitations were discovered prior to running the readers of this study. In an effort to avoid these types of issues, only readers with average or above eyesight participated. In addition, readers sat in a stable non-moving chair and were warned not to move their heads or their bodies too drastically during the experiment.

Through the use of eye tracking technology, the present study showed that even though readers exerted more effort trying to detect anomalous words located earlier in questions, anomalous words located later were still detected more frequently. This finding persisted regardless of the eye movement dependent measure.

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Should Students with Intellectual Disabilities be Included in General Education Classrooms?

Agatha Diaz

Abstract

An intellectual disability affects around 460,000 students in the United States. According to IDEA, an intellectual disability affects a person's general intellectual functioning (Center for Parent Information and Resources, 2016). Because of the effects of this disability, general education classrooms may not be suitable for many students with intellectual disabilities. People believe general education classrooms do not meet the needs of the student, which can hinder their ability to reach their full potential. This is why many students with intellectual disabilities are assigned to special education classrooms. Inclusion is described as the placement of students with disabilities in general education classrooms with little or no assistance (Heward, 2013). The severity of the disability determines the level of assistance needed. In this paper, both perspectives on the topic of whether students with intellectual disabilities should be placed in an inclusive classroom are presented. Viewing both sides of the issues helped highlight both the pros and cons of inclusive placement of students with intellectual disabilities, which could help inform educational placement decisions for these types of students.

Special education has grown over the years because of the increasing population of individuals with disabilities (Houtrow, 2013). An intellectual disability, previously known as mental retardation, is a disability that has been recognized for many years. What exactly is an intellectual disability? The Individuals with Disability Educational Act (IDEA) of 2004 defines this disability as a "significant sub average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period" (Regulations: Sec. 300.8 Child with a Disability). The federal government projected that around 3% of the general population has an intellectual disability. However, if school districts were to base prevalence just on IQ test scores, the number would decrease to around 2.3%. During the school year of 2009-2010, 460,964 students were given special educational instruction under the IDEA definition of intellectual disability (Heward, 2013).

Individuals who are thought to have an intellectual disability are screened and examined with a standardized test such as an IQ test by a trained professional (Heward, 2013). Also, it is important to recall that this disability has contributed to many positive results for the special education realm. Some positive outcomes were that the United States helped children with intellectual disabilities in the first public school special education programs that were established. Also, to

prepare the teachers for students with intellectual disabilities, the legislature offered federal funding for the first time to fund the proper training for the educators. Subsequently, IDEA offered a free public education for students with disabilities. Many parties have a challenging time creating the best environment for students with intellectual disabilities. Inclusion is one option being used for educating students with intellectual disabilities.

What is Inclusion?

Inclusion is the term used to describe the placement of students with disabilities in general education classrooms with assistance (Heward, 2013). Also, there is another placement option referred to as full inclusion that involves having the students with disabilities placed into general educational classrooms with no assistance (Mackenzie, 2003). Some parties say that general education classrooms do not fully meet the educational needs of the students or allow them to reach their full potential. Many think that inclusion allows the disabled student to gain knowledge from non-disabled students and also gain more confidence from being allowed to stay with the non-disabled students ("The Pros and Cons", 2012).

What is the Purpose of this Paper?

Since there are many views on inclusion of individuals with intellectual disabilities, it is difficult

to give preference to one perspective over another. Even though there are many opinions, one may say that partial inclusion is a good alternative for an individual with disabilities. Partial inclusion allows the students to be able to experience general education classes, while also having time for more intensive special education services (Bowerman & Goff, 2007). In this paper, both spectrums will be studied in order to decipher if inclusion for individuals with intellectual disabilities is the right option for some students.

Social and Environmental Factors Impacting Inclusion Success for Students with Intellectual Disabilities

Lack of Trained Personnel

Many children with intellectual disabilities may need a paraprofessional or an aide to help them in everyday tasks or to help them understand the material given in classrooms at a specific pace. However, many schools are not equipped with enough trained personnel in order to satisfy the needs of all the students if all were placed in inclusive classrooms (Tompkins & Deloney, 1995). If not every student has a paraprofessional or an aide, then the student may have trouble completing all of the assignments he/she needs to do. Also, students who have severe intellectual disabilities need as much attention as they can so it would be difficult

for one teacher to take care of many students with disabilities and students without disabilities. Overall, many more trained personnel are needed if inclusion is used throughout school districts ("The Pros and Cons", 2012).

Classroom Barriers for the Individual with an Intellectual Disability

Children and adults with intellectual disabilities have a difficult time adjusting to new settings and new agendas. If students are placed in an inclusive environment, they may become uncomfortable. There are many things in a general education classroom that may bother the individual. One factor is the lack of control over the things that can happen (Tompkins & Deloney, 1995).

In a general education classroom, students may leave classes to attend a meeting for an organization or the teacher may step out to use the restroom as the class is doing their work. An ever-changing environment that can happen in a classroom may seem overwhelming to a person with an intellectual disability. Also, other students may not respond positively to the individual with the disability. According to Tompkins and Deloney (1995), some students who do not have an intellectual disability may harass the student who does. This causes problems within the classroom and creates a negative environment for the student placed in an inclusive classroom.

Another factor that may make the student uncomfortable is the rate of learning for the other students. The teacher will most likely accommodate the student's needs. However, if the rest of the students grasp the lesson and the individual with an intellectual disability does not, it may lead to lower self-esteem and negative outlooks (The Pros and Cons", 2012).

Managing Instructional Time

Because individuals with an intellectual disability have a slower learning rate than the average person (Heward, 2013), having a child with an intellectual disability may hinder the learning of the other individuals in the classroom and vice versa. Two views can be observed in this situation. One view is that of the students with no intellectual disabilities. If the educator has to constantly take instructional time to converse with the student with the intellectual disability, the students with no disabilities lose instructional time. This may put the regular students behind where they may need to be in the curriculum (Antoinette, 2002).

On the other hand, one may say that the student with the disability is delayed in the learning environment. This is the case because some teachers, who may not have had adequate training for special education, may teach the full lesson and then at the end, have little instructional time for the students with special needs to really grasp the

concept of the lesson. This will hurt the students because the different paces will eventually become overwhelming for both the teacher and the students, with a disability (Tompkins & Deloney, 1995).

Parental and Educationalist Concerns

According to Zinkil and Gilbert (2000), many parents worry that their children may not receive the best education. Some say that the replacement of special education teachers will dim the activism for children with intellectual disabilities and other disabilities (Tompkins & Deloney, 1995). Basically, the parents are worried that everything that has been fought for in order to get their child a free education may be lost. Also, special education workers are worried that they will not be needed. Another factor that parents and special education educators have a concern over is the broad spectrum the students will be placed under the new environment. In big schools, the students can possibly be scattered all around the school. Also, costs for more training and accommodations may affect others. In this case, accommodations and resources may not be provided as needed or as frequently ("The Pros and Cons", 2012).

Lastly, many parents and special education teachers are apprehensive of inclusive classrooms, because some general education classrooms are not fit for students with intellectual disabilities. School districts have to take into account many factors

such as the severity of the disability, how both sides will react concerning the students with disabilities and the students without disabilities, and the overall well being of all the students (Tompkins & Deloney, 1995).

Strategies to Address Inclusion Classroom Challenges

Paraprofessionals as a Source of Support

One positive aspect that is rarely observed is the greater access to general curriculum for the individuals with intellectual disabilities (Wehmeyer, Lattin, Lapp-Rincker, & Agran, 2003). When placed in the general education classrooms, students with intellectual disabilities begin to have a taste of what the curriculum is like for the students who do not have a disability. However, since the IQ of a person with an intellectual disability is usually below 70 (Heward, 2013), it may be difficult for the individual to even attempt to do the work. This is where a paraprofessional can be of assistance.

The paraprofessional can guide the students through the work even though they may not remember how to do it later on. Also, if the student with intellectual disability is always in a resource room or life skills room, the individual may not receive challenging assignments that will benefit him or her. The resource room teacher may feel like the student is only capable of low-level work. Then

putting the individual in a general education classroom may open a new realm of progress and advancements in curriculum that no one ever expected (Wehmeyer et al., 2003).

Building Self-Efficacy

Thoughts of inclusion can be negative. However, some may be positive. One positive argument for inclusion can be over the fact that inclusion can make students with intellectual disabilities feel more confident and well liked. Since the students without disability are learning how to act with someone with a disability, the students with intellectual disabilities may feel honored. This is because they are teaching the other students a life lesson on how to act with different people ("The Pros and Cons", 2012). Also, when the non-disabled peers are accepting of the students with the disability, the students with disabilities will more likely be asked to participate in more everyday activities by their peers which can lead to increased confidence within themselves.

Improved Understanding of Non-disabled Peers

Inclusion does not only affect the student with an intellectual disability. It also affects the students around the individual ("The Pros and Cons", 2012). According to Salend (1999), the affect of a student with an intellectual disability on others can be positive. This is because the students who do not

possess a disability get to be exposed to a different way of life. In order to be around a student with an intellectual disability, the non-disabled peers must observe the student's learning styles, behaviors, adaptive styles, etc. to further interact with him or her Another way inclusion can positively affect normal students is by placing more responsibility on them.

If a child with an intellectual disability is in the classroom and experiences difficulty in comprehending the material, the non-disabled peers may take initiative to study harder in order to help their fellow classmate (Salend, 1999). Lastly, having inclusion can help regular students reach positive realization. This means that having an individual with an intellectual disability can help show students that they should be more grateful for their life and their skills. Observing the struggle of a child or an adult in their classroom will greatly impact their life and they may be more thankful and more accepting of people who may be a bit different (The Pros and Cons", 2012).

Conclusion

Special education will always be a part of our educational system, so as a society, the population needs to be able to accommodate accordingly. The outlook of both the disabled and non-disabled are provided in order to determine if inclusion is an appropriate environment for a student with an

intellectual disability. Even though people are entitled to their own views, one may believe after reading this context that partial inclusion is the most ideal choice for an individual with an intellectual disability. Partial inclusion will help because it gives the student the best of both worlds (Bowerman & Goff, 2007).

Inclusion has a positive attribute in preparing students with intellectual disabilities for what is to come. Even though schools have a team of people to help guide the students for a better quality of life, inclusion can also prepare them for adulthood (Kim & Turnbull, 2004). Engaging in general education while having an intellectual disability can help the individual interact with people who do not have a disability. This will help the student be prepared by having a foundation of how to react to certain situations since the workplace or post-secondary education will mainly consist of individuals without disabilities. Also, this can assist the individuals in learning normal everyday tasks that can help them in the future such as greeting people, saying "please" and "thank you," and working around large groups of people ("The Pros and Cons", 2012).

This paper presents ways of understanding the impact of inclusion on children with disabilities, other students in the classroom, parents, teachers and education administrators. In reviewing the research, there appears to be a relative argument for partial inclusion at the least, which will allow an

individual with intellectual disability to receive education in a general education classroom, while also getting pulled out for more intensive special education services. Even though some may not agree and may think full inclusion or maybe even no inclusion at all is best, the main priority in accommodating individuals with intellectual disabilities or any disability is to put the priorities of the individual first, and make sure that they reach their full potential and will not be set back by their disability.

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An Examination of the Model School Suicide Prevention Program and Policy Implications

Neha Kashmiri

Suicide is the third most common cause of death for children and teenagers (Center for Disease Control (CDC), 2015). In order to combat these rising rates, preventative measures must be put into place. Among the places that all children and teenagers can be found is at school, therefore, schools must be involved in the preventative process. As a result, a coalition of interested organizations, such as the American Foundation for Suicide Prevention (AFSP), created a Model School Policy on Suicide Prevention. The Model School Policy is "research-based, comprehensive and easily adaptable for middle and high schools without policies or those that need help amending existing policies" (American Foundation for Suicide Prevention (AFSP), 2014, para 1). The goal of the Model School Policy is for schools to implement the program in order to educate and aid students who are struggling with suicidal thoughts, provide information to school staff about risk and protective factors involving suicide, as well as creating safety measures and procedures if a suicide does occur.

This paper examines the rates of suicide and associated risk factors for school aged children, and proposes the use of the Model School Policy developed by AFSP et al. This modular and flexible policy can be adapted by school districts to fit their populations in order to be better organized and prepared to respond to suicide prevention and postvention in their own schools.

Suicide Among School Aged Children

Among school-aged individuals, suicide (11%) is the third leading cause of death, followed only accidental deaths (48%) and homicides (13%) (CDC, 2010). According to a study by the Suicide Prevention Resource Center, one in six high school students stated indicated that they have serious thoughts of suicide (Varia, 2013). While suicide rates amongst children (aged 5-12) have remained relatively stable in the past two decades, suicides among white children have gone down (from 1.14 to 0.77 per 1 million) and suicides among black children has gone up (from 1.36 to 2.54 per 1 million) (Bridge et al., 2015). This racial trend most likely follows increasing societal racial tensions. Mimicking adult statistics, boys are more likely to commit suicide than girls, although girls are more likely to attempt suicide (Child Trends, 2015). Girls with a history of depression are more likely to have at least one suicide attempt; boys with depression, behavioral issues, and substance use are more

likely to have at least one suicide attempt (Beck-Little & Catton, 2011). It is important for school staff to be aware of children who are at a greater risk of suicide, and create early preventative interventions to target specific needs of these children.

At-Risk Populations

Populations that have elevated risk of suicide have one or more of the following qualities: a substance use disorder/mental illness, history of self-harm and/or prior attempts; placement outside of the home (such as in foster care, in which youth have two times the risk of committing suicide; or in the juvenile justice system, in which youth have four times the risk of committing suicide). Status as homeless, LGBTQ+, American Indian, low socioeconomic status, lack of healthcare, experience of suicide loss of someone close, or serious medical conditions or disabilities also increases the chances of suicide (AFSP et al., 2014; Shah, 2012).

A study by Levasseur, Kelvin, & Grosskopf found that sexual minority youth are 4.39 times more likely to attempt suicide (2013). Transgender youth, especially, are much more likely to self-harm and commit suicide than their LGB peers (Haas et al., 2010). LGBTQ+ youth are much more likely to report harassment and victimization than any other subgroup; associated risk factors involving the suicidality of LGBTQ+ is rejection by their parents,

stress concerning their identities (increased when paired with racial/cultural stress, as African American gay males have the highest increase in risk of suicide), and low socioeconomic status (Craig & McInroy, 2013).

Regarding race, American Indians, both male and female, are most likely to commit suicide. Factors related to suicides among American Indians include: the suicide of a close friend or family member, physical or sexual abuse, use of alcohol and drugs, emotional health issues, and gun availability (Borowsky et al., 1999). A 2012 study found that depression—a leading risk factor of suicide—among American Indians and Alaskan Natives was disproportionately high, caused by historical trauma and low socioeconomic status (Urban Indian Health Institute, 2012).

Bullying and Suicidality

Bullying is a factor that is frequently found in schools and warrants a discussion separate from the risk factors already discussed. Persistent and aggressive bullying can increase the bullied student's feelings of isolation and despair, which in turn increases the risk for suicide. There is also a relationship with students who are in the aforementioned at-risk populations and their likelihood of being bullied (AFSP et al., 2014). Bullying, including cyberbullying, does not directly cause student suicide, however, bullying increases

risk factors associated with suicide, as well as increasing thoughts of suicide. Bullying increases factors such as depression and isolation. Bullied students and suicidal students also share the risk factors of low self-esteem, stressful home life, and lack of social supports (Varia, 2013). However, certain studies have found that not only the bullied student, but also the perpetrator of the bullying is at higher risk for increased levels of depression; cyberbullying, which has become an increased public concern, had similar levels of increasing of thoughts of suicide in both the bullied student and bullying student (Klomek, Sourander, & Gould, 2011).

Protective Factors

Protective factors exude positive effects on an individual and lower his or her risk of committing suicide. These include a positive social environment of friends, family, communities, religion, and other social relationships, mental health care, and the ability to solve problems. Protective factors do not completely remove the risk of suicide but do exert buffering effects, which lessen suicide risk and provide support network in case of an attempt by a student (AFSP et al., 2014).

School Intervention

School interventions can provide vital support to a student when he or she is unable to do so by

other means. For instance, some states make it difficult for young people to access mental health care without the knowledge of their parents. This especially becomes a problem when parents are the source of distress or would be unwilling to have their child participate in counseling. For instance, a gay teenager within a fundamentalist Christian household may be under pressure involving his sexuality but be unable to access mental health care without his parent's consent, or with confidentiality laws to protect him in certain states. In Texas, the age at which a person can sign a consent form for mental health care without a parent is at age 16, or if they are a married or a parent (Texas Department of State Health Services (DSHS), 2011). In this case, school services can be vital in the emotional well-being of the student. Schools are able to provide a stable, supportive environment for students who may not have any other significant protective factors. Schools are able to employ specific professionals, such as counselors and social workers who are able to teach students healthy coping techniques, and assist students in gathering other tools to foster greater well-being.

The Model School Policy for Suicide Prevention

The Model School Policy for Suicide Prevention was created by a conglomerate of organizations dedicated to preventing and lessening the risk of suicide: The Trevor Project, the National

Association of School Psychologists, the American School Counselor Association, and the American Foundation for Suicide Prevention. The policy was created out of a desire to address the issue of school-aged child and teenage suicide by providing a comprehensive model that schools could adapt and adopt for their students. In 2014, when the policy was introduced, only four states in the United States had required annual trainings of educators in suicide prevention (American Foundation for Suicide Prevention (AFSP) et al., 2014).

The policy is meant to be used "as a tool for school staff, school board members, advocates, parents, and students for the development and implementation of comprehensive school district policies on suicide prevention" (Trevor Project et al., 2014, para 3). The Model School policy describes its purpose as being to protect the health and well-being of students by having guidelines and procedures put in place to prevent, assess the risk of, intervene, and response to suicides on school campuses (AFSP et al., 2014). The policy defines its objectives as firstly having the school district show that they recognize that students' educational outcomes are affected by their behavioral, physical, and emotional well-being. Secondly, have the district recognize that suicide is a leading cause of death among young people and that schools have an ethical responsibility to be proactive in preventing suicides. The final objective of the policy is for

schools to recognize that school is an environment that has individual and societal factors that contribute to the risk of suicide among students (ASFP et al., 2014).

The Model School policy understands that in order to prevent suicides, there has to be a holistic approach that emphasizes well-being not only in schools, but in families and communities as well. It states that parental involvement is vital in identifying warning signs, as well as a major source of providing protective and risk factors for students, and it also acknowledges that a supportive network of friends and community members can increase a student's well-being. However, the policy emphases the importance of schools being a place that provides students with mental health services—as it raises their "physical and psychological safety, academic performance, cognitive performance and learning, and social–emotional development" (AFSP et al., 2014). This also allows administrators to access available resources when needed for students in crisis.

The policy defines important terms involved in suicide risk and prevention: at-risk, crisis team, mental health, postvention, risk assessment, self-harm, suicide, suicide attempt, suicidal behavior, suicide contagion, suicidal ideation. Then it provides a list of risk and protective factors for policy readers (AFSP et al., 2014).

The Model School policy provides written sequential tasks that are to be executed by the school's suicide prevention task force when students that show or state that they are at risk of suicide, have made an attempt, or committed suicide. They include:

Assessment and referral. When at-risk students are brought to the attention of the school, the school's responsibility is to monitor the students, alert the principal and appropriate counselors at the school, then contact the guardians of the students and ask for written permission to seek outside care for the student, if needed (AFSP et al., 2014).

In-school suicide attempt. In the case of an in-school suicide attempt, the immediate task is to provide first aid to the student until professional help or transportation to a hospital arrives. If the student stays on campus, the student will be monitored while all other students are moved out of the area. Then, if appropriate and possible, a mental health assessment will be requested for the student. The principal or an on-school qualified mental health professional will be notified of the attempt, and will then contact the guardian of the student. After this, a crisis team will be deployed to see if further steps are needed to ensure the safety and well-being of the students (AFSP et al., 2014).

Re-entry procedure. As described by the policy, re-entry procedures involve the school's appointment of an on-school mental health or other qualified professional to coordinate with the student, guardian(s), and outside mental health care provider. The student's guardian will provide the school's appropriate offices with written documentation from a mental health care professional assessing the student and clearing them as no longer a danger to themselves or others. The appointed school professional will check on the student periodically in order to help them with readjusting to the school environment and answering any ongoing concerns the student may have (AFSP et al., 2014).

Out of school suicide attempt. The procedure for an out of school attempt includes the staff member who becomes aware of a student that plans to, or is in the process of, making an attempt on their life to immediately contact the police or emergency medical services. Then the staff member will contact the student's guardian(s), as well as alerting the appropriate school suicide prevention coordinators and principal (AFSP et al., 2014).

Postvention procedures. Procedures after a suicide death has occurred—called postvention procedures—are the most complicated and involve

the entire school working together in order to overcome the burdens and possible consequential trauma of a suicide. Firstly, the appointed crisis team will form an action plan for the school to respond to the death. The action plan will include the verification of the death as suicide with the student's guardian(s), hospital, coroner, or police. Once the death is confirmed to be a suicide, the crisis team will assess the situation, including how it will affect the students and which students were closest to the deceased and the impact on the current school environment. For instance, another recent traumatic event or the school being on break may respectively increase or decrease the level of response needed. In the case that the death occurred during the school year, the school has the responsibility to share the information with students, staff, and the deceased's guardian(s); the recommended method of doing so is providing a statement with the basic facts of the death (no specifics about the suicide method) and known funeral arrangements, recognition of the sorrow the news will cause, and a provision of resources available for the bereaved. A letter should also be sent home with students including the name and facts of the death, the school's plan for supporting students, as well as a list of available services and warning signs that peers may display of committing suicide themselves (AFSP et al., 2014).

Suicide contagion is the effect of a suicide increasing the suicidal thoughts and behaviors of people involved in the deceased's life (AFSP et al., 2014). A single impactful suicide can have a modeling effect, which creates a cluster of suicides; this is especially critical in schools where there may be hundreds or thousands of other students in the school, which increases the likely number of students who can be affected by the suicide of a peer. Suicide contagion occurs in cases where suicide stories surge in gossip and are dramatized, and especially if media outlets sensationalize the suicide. It is the task force's responsibility to recognize which students are most likely to be affected by the suicide and provide safety plans and support services for them. The next step for the task force is to develop memorial plans—which again, should not be featured prominently at school because of the risk that the memorial can sensationalize the suicide and create suicide contagion.

When dealing with the media, the policy suggests that only the principal or a single designee should speak to the media, with a prepared statement about the facts of the death, postvention plans, and available resources for students. The policy recommends leaving out personal opinion, speculation of the motivation of the student, means of death, and other personal information. The appointed spokesperson should also urge the media

to not use personal information, means of suicide, speculation of motivation of the suicide, and not to sensationalize the news, to instead urge the community to seek information on suicidal risk factors and find helping resources (ASFP, 2014).

Finally, the policy provides resources for schools to use. These include guidebooks and toolkits the school can use, other programs that the schools can use for suicide prevention, crisis services, guides for speaking to the media about suicides, and relevant research. Also included is sample text schools can use in the student handbook regarding suicides and mental health resources (AFSP et al., 2014).

Importance for Student's Well-Being

The Model School Policy functions across several dimensions. Based on the principle that schools have an ethical responsibility to help their students, the Model School policy shows in its contents and its aims that it places value on the safety and well-being of young people in schools (ASFP et al., 2014). The policy reminds readers of the policy that its users should be careful with how they present information on suicides and not to jump to conclusions about suicidal students and risk populations. Therefore, the policy shows that it values the lives of young people and demonstrates understanding of working with student populations.

The policy expects to aid schools with the task of lessening the risk of suicide in school aged youth, providing resources to help those considering suicide, and educating staff and students about the warning signs for suicide. If these measures fail, then the policy provides detailed procedures to be followed in the event of an attempt or risk of an attempt. The policy also provides postvention plans so that schools can help students cope with the loss of a peer, and work with outside sources such as parents and the media. The policy expects the recommendations and procedures to be followed so that confusion and disorganization is minimized.

A study by Schmidt et al. (2015) found that many of the issues that schools have with suicide prevention programs comes from difficulty in choosing and implementing a program that works for the students. Because the Model School policy is concise, flexible, and modular, it gives schools the opportunities to adapt the policy for their own use, with attention to the demographics and culture of their schools. For example, a school of primarily minority students with low socio-economic status will have different needs than a school of primarily white, middle-class students.

Limitations and Further Research

The Model School Policy for Suicide Prevention has not been evaluated by any source to date. The policy is fairly new and has remained in

an advocacy state. However, when the Model School Policy was introduced in 2014, only four states required annual trainings of educators about suicides in student-aged populations; as of 2016, there are 10 states (including Texas) which have annual state mandated trainings, while seventeen other states have non-annual state mandated trainings (ASFP, 2016). This growth in state requirements for suicide prevention education is in part due to advocacy by groups such as the American Foundation for Suicide Prevention, one of the spearheads of the Model School Policy. Continuing to advocate for this policy among schools so that it can be adopted, implemented, and assessed will be a major continuing need at this time. The adaptability of the Model School Policy may prove to be a shortcoming when it does begin to be assessed; for example, there may be a school, which primarily uses the policy to address depressive and suicidal thoughts amongst its students, while another school uses it to foster help-seeking behaviors and growth of protective factors. Understanding how to evaluate these differences at the time of evaluation will be an important consideration.

Texas' House Bill (HB) 2186, which was adopted in 2015, made it a requirement for school educators to be trained in suicide prevention techniques, using best practice techniques as defined by the Department of State Health Services

in coordination with the Texas Education Agency (ASFP, 2016). There are sixteen criteria which need to be met in order for a program to qualify under the Best Practices Registry (Texas Education Agency (TEA), 2015) The Model School Policy meets all of them, and should be placed under review in order to be placed on the list. Currently, the best practice model listed is the SOS Signs of Suicide Middle School and High School Prevention Program. This program was found to meet all of the Best Practices Registry criteria, however, the SOS program's evaluation found the program to have insufficient evidence of effectiveness, with the pre-and-posttest for suicidal thoughts yielding insignificant changes. The program was also ineffective in increasing help-seeking behaviors, including seeking help from a psychologist, psychiatrist, or social worker when experiencing depression and suicidal thoughts (National Registry of Evidence-based Programs Practices (NREPP), 2016).

The Model School Policy may not have favorable results upon evaluation as well, however, finding a program that is effective in practice is a necessity, in order to protect the health of children and teenagers, therefore, the policy, and others like it need to be continuously advocated for.

Conclusion

Students considering taking their own lives are often being faced with pressures that they feel

they cannot or are unable to share with others. However, it is the responsibility of adults in a student's life to show the student that they can overcome the burdens they are facing, and that suicide will not end anything but their own lives. The Model School Policy developed by the American Foundation for Suicide Prevention was created with that thought in mind. The Model School policy is aims to increase well-being among school aged populations, and the education that it provides regarding suicide can have a lifelong effect on students. The policy promotes mental health care across school aged populations by assigning a task force that is specifically designed to monitor and aid those who are considering or have shown signs of committing suicide.

Research based suicide prevention policies, such as the Model School Policy, should be advocated for by school boards, administrators, teachers, school counselors, and other school officials because placing importance on students' mental well-being gives them the ability to succeed not only within schools, but in all other facets of their lives. By providing resources and support, individuals considering suicide can learn to escape, improve, or cope and manage whatever situation they believe is hopeless. Educational systems can create a solid support system for students who may never have been shown the dignity, respect, or kindness towards their mental and social well-being

so that they have a better chance of success within their lives.

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Is It Wrong? The Effect of Moral Relativistic Priming on Moral Behavior

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Abstract

The purpose of this study was to examine the effect of moral priming on individual moral behavior, moral reasoning, and moral approach. Participants were given an argument over a moral issue framed in either absolutist or relativistic terms, and were asked to state the extent of their agreement on a 7-point Likert scale. Participants gave a written response to three different moral scenarios and were then given an opportunity to cheat, which was the measure of their moral behavior. The results found that while the prime did not elicit immoral behavior, it created psychological reactance in the absolutist condition, which overall showed higher levels of moral reasoning, compared to the relativist and control conditions, which showed lower levels of moral reasoning. Also, merely being primed with a moral perspective seems to affect the approach and response to a moral issue.

Much of the research in moral psychology has been done in exclusion to the work done in ethics and moral philosophy. It is debatable whether or not this exclusion was deliberate or unintentional. Nevertheless, it can be contended that ethics and moral philosophy can provide valuable insights and direction for psychological research in the same area. Welch (2011) argues that if the development of our knowledge about morality comes strictly from empirical research, there can be no objective basis for our morality. Empirical evidence is by nature arbitrary and so the theories based upon it are the interpretation of the theorizer. Welch (2011) asserts that it is irresponsible for the theorist to suppose certain things concerning morality solely based upon empirical evidence, without the consideration of moral philosophical content. If we take to Welch's stance for the interdisciplinary study of moral psychology and moral philosophy, then how is research to be conducted in the overlap of these two fields?

Vauclair and Fischer (2011) conducted a study to investigate if a person's cultural values predict their moral attitudes. Vauclair and Fischer's work aimed to provide further insight into the *moral universalism vs. moral relativism* philosophical debate. This debate considers whether morality is universal in that it applies to all people the same way, or if morality is relative and specific to particular cultures. Vauclair and Fischer (2011)

found that across many cultures people tended to judge morality, in terms of justice, fairness, and social cooperation, the same way. They also found that on the individual level, the determination of one's obligations to their social group is relative to one's culture (Vauclair & Fischer, 2011). Vauclair and Fischer's study is an excellent example of overlapping moral psychology and moral philosophy in research. A similar study conducted by Rai and Holyoak (2013) examined the same overlap. A distinct difference between these two studies is in the researchers intended starting points. Vauclair and Fischer purposed to see what insights can be gained from moral psychological research into moral philosophy, specifically the debate of *moral universalism vs. moral relativism*. Rai and Holyoak took the opposite approach and were curious to see what effect moral philosophy has on moral psychological research, specifically if different ethical perspectives affect a person's moral behavior.

In their study, Rai and Holyoak (2013) took two contrary philosophical views of morality: *moral absolutism* and *moral relativism*. Moral absolutism is the position that holds moral beliefs to be objectively true. These beliefs are based upon objective facts about morality and are not determined by any particular culture or social group. Moral absolutism is similar to moral universalism in that both hold the belief that moral truths apply to all people the same way. Moral relativism is the direct opposite of

moral absolutism in that it holds moral beliefs to be subjectively true and these beliefs develop out of a progressing society and its cultural attitudes (Rai & Holyoak, 2013).

In their experiment, Rai and Holyoak (2013) primed each participant with a moral argument concerning the topic of female genital mutilation. There were three arguments given to three conditions: Absolutist, Relativist, and Control. The argument given to the absolutist condition was framed in absolutist terms (e.g. "Female genital mutilation is always wrong no matter the circumstances"). The argument given to the relativist condition was framed in relativist terms (e.g. "Female genital mutilation is wrong only if the culture it is done in deems it wrong"). The control condition was given a morally neutral argument. Once the participant was primed he or she was then given an opportunity to cheat, which was the measure of moral behavior (Rai & Holyoak, 2013). The participant was given a pair of 10-sided dice to roll and was asked to record the combined number he or she rolled; the combined number would be the number of tickets they would have entered into a raffle drawing for a cash prize. Rai and Holyoak (2013) hypothesized that those primed with absolutism would engage in moral behavior (i.e. reporting the number rolled) and those primed with relativism would engage in immoral behavior (i.e. report a number other than the one rolled). Rai and

Holyoak (2013) found that those primed with relativism did engage in cheating more than those primed with absolutism. Their results supported their hypothesis, but there may be some possible confounds to their experiment.

The first possible confound is the topic used for the priming argument in the absolutist and relativist conditions. The issue of female genital mutilation predominately occurs in third world countries and not so much in first world countries such as the United States. The central purpose of the priming argument was to prime the participant to critically think about the issue in the argument, and thereby be influenced by the framing of the argument. Usage of the issue of female genital mutilation may have been counterproductive to this purpose because it is foreign to American college students, who were the sample pool of participants for Rai and Holyoak's (2013) study. Participants may have given a superficial analysis of the argument due to the foreign nature of female genital mutilation in American culture, consequently rendering the prime ineffective.

The second possible confound is the use of probability as a measure of cheating. In Rai and Holyoak's (2013) experiment they did not directly observe each participant recording the combined number he or she rolled with the pair of 10-sided dice. Instead each conditions overall reported dice rolls were assessed. If one condition's reported dice

rolls is higher when compared to another condition's reported dice rolls, with the probability of chance taken into account, it was determined that the participants in that condition reported falsely on their dice rolls. The relativist condition reported dice rolls were higher than the absolutist and control conditions and so the participants in the relativist condition were determined to have cheated (Rai & Holyoak, 2013). The problem with probability as a measure of cheating in this case is that it does not show for certain if a participant did in fact cheat, and so the supposed correlation between relativistic moral priming and immoral behavior is a weak one.

In addition to these two possible confounds, Rai and Holyoak did not examine two important aspects of moral psychology: moral reasoning and moral approach. When primed with a moral argument framed in a particular moral perspective, how is a participant's reasoning about subsequent moral issues affected? The same question can be asked about a participant's moral approach. In the long-lasting debate on moral approach, Lawrence Kohlberg held that men tend to take a justice approach to moral issues while Carol Gilligan held that women tend to take a care approach (Kohlberg & Gilligan, 1971). This view that gender is what determines one's moral approach had been the prevailing view in moral approach research. However, Clopton and Sorell (1993) suggest that it is the content of the moral issue in question and not

gender that determines one's moral approach to that issue. Will a moral prime affect one's moral approach as well?

In this study, Rai and Holyoak's (2013) experiment was replicated controlling for the two suggested confounds. The prime's effect on moral reasoning and moral approach was investigated as well. The hypothesis was that those primed with moral relativism would engage in immoral behavior, namely cheating.

Method

Participants

The participants in the experiment were recruited voluntarily from several Introduction to Psychology classes. A total of 27 participants participated in the experiment. There were 12 males and 15 females. The participants were between the ages of 18 and 29, with an average age of 19.69.

Materials

The priming arguments used were based on the ones used in Rai and Holyoak's (2013) study. The absolutist and relativist conditions were given the moral argument prime, which first defined the moral issue in question, gave a brief definition of absolutism or relativism depending upon the participant's condition, and a brief argument concerning the moral issue framed from the moral

perspective of the participant's condition. Female genital mutilation was replaced with the moral issue of Active Euthanasia. Active euthanasia was chosen because of its suggested relevance to an American college student and also because of its moderate controversy, unlike other moral/political issues such as abortion or gun rights, which are highly controversial and polarizing issues. The control condition was given a neutral argument over the methodology of baking.

A demographics page was used to record the participant's age, sex, and level of agreement with their given argument on a 7-point Likert scale. Three different moral scenarios were used to measure the written response of a participant once morally primed. The three scenarios were the Heinz Dilemma ("Heinz cannot afford medicine for his sick dying wife. Should he steal it?"), the Best Friend's Wedding Dilemma ("On your best friend's wedding day you find out their spouse to be is unfaithful. Do you tell your best friend?"), and the Lifeboat Dilemma ("You're on a sinking lifeboat with 9 others bailing out water and if you leave they will sink. You have the opportunity to get to a safe lifeboat. Should you leave?").

A direct measure of cheating was used by replacing the pair of 10-sided dice with a pair of 6-sided loaded dice set to always roll a one and a six for a combined seven. If the participant reported anything other than a seven as their dice roll it was

known that he or she cheated. Halfway through the experiment it was discovered that no one was cheating, and it was suggested that the incentive to cheat was not strong enough. Perhaps the participant felt content with rolling a seven out of a possible twelve. The pair of 6-sided loaded dice was replaced with a raffle drawing of twenty cards. The participant was told each of the cards had a number one through twenty written on it, but in reality each card had either the number two or three written on it. The participant may have felt a stronger incentive to report a false number when drawing a two or three out of a possible twenty.

Procedure

Each participant was randomly assigned to one of the three conditions, and each participant was tested individually. Upon entering the testing room the participant was given their conditions priming argument, the demographics page and the three moral scenarios. The participant was instructed to read the given argument, complete the demographics page, and provide a written response to each of the three moral scenarios. The participant was then given the pair of 6-sided loaded dice and instructed to roll the dice after completing the forms and to record their rolled number on the back of the demographics page. The participants given the 20 card raffle were instructed to pick a card after completing the forms and to record the number

drawn on the back of the demographics page. After instructing the participant the researcher left the room until the participant was finished.

Results

The data did not support the hypothesis since not a single participant cheated. Although it was impossible to determine if moral priming affected moral behavior in any way, the prime did affect the other aspects examined. When analyzing the participants reported agreement with the given argument the absolutist and relativist conditions were polarized. The absolutist condition (M = 5.22) strongly disagreed on average with the argument, whereas the relativist condition (M = 2.78) strongly agreed with theirs, F = 9.54, p = .007.

Each participant's written response to each of the three moral scenarios was analyzed using Kohlberg's six stages of moral development (Kohlberg & Gilligan, 1971). Concerning moral reasoning only the analysis of responses to the Lifeboat Dilemma had significant results. The absolutist condition (M = 3.78) showed higher moral reasoning than the relativist condition (M = 2.89) and the control condition (M = 3.00) in response to the Lifeboat dilemma, F = 2.75, p = .08. When analyzing the responses to the moral scenarios concerning moral approach, only the Best Friend's Wedding Dilemma had significant results. The morally primed conditions (absolutist and relativist)

responded similarly to the dilemma with a care approach (N = 16) compared to the control condition which responded evenly care (N = 5) and justice (N = 4), □□(26) = 5.97, p = .05.

When analyzing the responses themselves, once again only the Lifeboat Dilemma had significant results. The morally primed conditions responded similarly to the dilemma by choosing to stay in the lifeboat (N = 16) rather than to leave, while the control condition responded evenly to stay (N = 5) and to leave (N = 4), □□ (27) = 5.14, p = .08.

Discussion

It was very surprising that not a single participant cheated. However, this reality is evidence for the suggested confound of probability as a measure of cheating. Adhering to Occam's razor, a direct measure of individual cheating would be a more efficient measure than comparing probabilities between groups. The fact that the current experiment used a direct measure of cheating and yet no cheating occurred suggests that the probability measure of cheating used in Rai and Holyoak's (2013) study is flawed. However, an explanation is needed for why no one cheated in the current study. Perhaps the incentive to cheat was still not strong enough. A study done by Schurr and Ritov (2015) showed that participants who won a competition were more likely to cheat on a following competition, than those that lost the initial

competition. According to this finding participants in the current study may have been more inclined to cheat if they had won something beforehand.

The polarization of agreement in the relativist condition and disagreement in the absolutist condition suggests a preexisting underlying relativistic perspective in the participant's. It stands to reason participants who already have a moral relativistic perspective would dislike something framed in absolutist terms and like something framed in relativist terms. The interesting thing is that although the absolutist condition strongly disagreed with their argument, they exhibited higher moral reasoning than the relativist condition. The explanation for this is the absolutist condition may have experienced psychological reactance, which is what a person experiences when he or she feels his or her choices are being limited or withheld. The participants in the absolutist condition, being underlying relativist, may have reacted to the restricting tone of the absolutist argument. Reacting to the argument in this way may have put the participant's mind on alert to any other dislikable things in the argument. The participant's mind now being alerted may have elicited a higher level of reasoning when responding to the three moral scenarios. The relativist condition did not experience psychological reactance perhaps because the participants already being relativist agreed without resistance to their given argument. A possible

confound arises when trying to account for psychological reactance in the absolutist condition. It seems to follow that since a central tenant of absolutism is this aspect of universalism, which is by nature limiting to choices, psychological reactance would be the appropriate response. However, the data also allows the possibility that the participants in the absolutist condition disagreed with their given argument because of a dislike of the topic of active euthanasia. This current research does not provide supporting evidence for either of these two theories of the cause of the psychological reactance.

That data on the moral approach of the morally primed conditions suggests that participant's merely being primed with a moral perspective, regardless of what it is, affects their approach to a moral issue. Perhaps when morally primed the participant thought more in depth about the given moral scenario, considering the finer details including the people within the scenario. This deeper thinking of the issue may have led the participant to be more sensitive to the people within the scenario. Also, there were no gender differences in moral approach in either the absolutist condition or the relativist condition. This finding supports Clopton and Sorell's (1993) suggestion that moral approach is determined by context rather than gender.

Concerning the data on the responses themselves, the data suggest the same as the data on moral approach. Merely being primed with a moral perspective, regardless of what it is, affects a participant's response to a moral issue. If moral priming leads participants to think more in depth about a moral issue and thereby elicits a sensitivity to the people in that issue, then maybe it also leads the participants to be more sensitive to their own moral intuitions, and respond accordingly.

Future Research

For the purpose of examining further the impact of ethical views on moral behavior, moral reasoning, and moral approach it would be interesting to conduct a longitudinal study to investigate the impact of ethical views over a long period of time. It would also be pertinent to repeat this study including a stronger incentive to cheat, in order to determine if moral priming does in fact affect moral behavior.

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