In this 103rd year of MTSU, the publications of the University Honors College are made possible, in part, by a generous gift by Paul W. Martin Jr. in honor of President Sidney A. McPhee for his continuing dedication to the University Honors College and for his unwavering commitment to academic excellence.

Submission guidelines

Original unpublished undergraduate and graduate research from the natural and social sciences and from the humanities is now being accepted for the 2014 issue of *Scientia et Humanitas* from MTSU students and recent graduates either by themselves or in conjunction with a faculty mentor.

Articles should have approximately 10 to 30 typed, double-spaced pages and may include revisions of papers presented for classes, conferences, Scholars Week, the Social Science Symposium, or Honors theses. Papers should include a brief abstract of no more than 250 words stating the purpose, methods, results, and conclusion.

Papers may be submitted through the online submission system on the journal’s website, capone.mtsu.edu/scientia.

Preface

In the fourth volume of Scientia et Humanitas, I am excited to report a number of editorial changes that continue to add to our journal’s prestige. The continually increasing volume of submissions from both undergraduate and graduate students across campus prompted our adoption of a faculty review board. I would like to thank Dr. David Urban, Dr. David Foote, Dr. Jane Marcellus, Dr. Janis Brickey, Dr. John Vile, Dr. Amy Sayward, Dr. Philip Phillips, Dr. Kaylene Gebert, and Dr. Robert Sieg for volunteering to serve on our board and ensure the accuracy of our students’ published research.

Two award-winning essays open this volume. Dennis Wise, a PhD candidate in English and winner of the Deans’ Distinguished Essay Award, studies Spenser’s *A View of the State of Ireland* through a Machiavellian lens to establish Spenser’s acceptance of Machiavellian political philosophy. Following Wise’s article, Ellen Goertzen also receives the Dean’s award for her study of the impact of deworming treatments on intestinal parasite load in equines from Middle Tennessee, a paper she wrote while an undergraduate animal science major at MTSU. Sarah Gray-Panesi’s examination of Milton’s influence on Ann Radcliffe’s Gothic Fiction follows Wise’s and Goertzen’s essays, and received honorable mention for the 2013-14 William R. Wolfe Graduate Writing Award.

The humanities continue to be well represented in this year’s issue. In addition to Wise’s and Gray-Panesi’s projects, Sarah Rivas, a late stage English Master’s degree candidate, explores the character of Marmee in Louisa May Alcott’s *Little Women* to unearth messages concerning womanhood and femininity in Alcott’s novel. Luke Judkins, an undergraduate English and Psychology major, studies the psychological implications of regret in Robert Frost’s “The Road Not Taken.” Rounding out the Humanities for this issue, English PhD candidate Cori Mathis compares Baz Luhrman’s film adaptation of Shakespeare’s *Romeo and Juliet* to discover how Luhrman explores gender concerns addressed in Shakespeare’s original play.

The sciences are represented by two projects in this issue in addition to Goertzen’s study. Holly Plemons, a Master’s candidate in Education, offers a literature review of sources examining the link between cardiovascular disease and periodontal disease. Joseph Cooper, who recently received his Master’s degree in Aviation Administration, examines the development of faith-based missionary aviation and its ability to increase the range and effectiveness of missionary efforts in remote locations.

As my second (and final) year with the journal draws to a close, I would like to thank all of those members of MTSU’s faculty and staff who have helped us succeed by promoting our journal to their students. The level of scholarship presented for our consideration continues to impress, and I am forever grateful.
to my editorial team for their hard work and dedication. Many thanks are due to my fellow editors, reviewers, proofreaders, and advisors, and especially to the University Honors College for sponsoring this publication. To the students of MTSU, thank you for your contributions, and I hope you enjoy the fourth issue of Scientia et Humanitas.

Sarah Gray-Panesi,
Editor in Chief

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Classical Poetry and Modern Political Philosophy: Spenser and Machiavelli in A View of the State of Ireland

Dennis Wise

Abstract

The sixteenth-century English poet Edmund Spenser has long seemed full of contradictions. On one hand, Spenser is a poet of "twelve private morall virtues," falling into the civic-humanist tradition advocated by his predecessor Sir Philip Sidney. On the other hand, Spenser's A View of the State of Ireland advocates a brutal and bloody colonial policy in relation to the Irish, views that seem incompatible with a master of moral poetry. I suggest that we understand the apparent contradiction as a conflict between Spenser's classicism and his apparent acceptance of modern political philosophy, initiated by Niccolò Machiavelli. According to Leo Strauss, Machiavelli was an "esoteric" writer, someone who did not openly proclaim his doctrines of realpolitik. Machiavelli's method broke with classical political philosophy, which—like the classical literature championed by Sidney—often taught moral or imaginary ideals as a guide to action. I argue that Spenser read Machiavelli well, understanding those chapters of The Prince most closely pertaining to Spenser's own colonial situation in Ireland, and wrote A View according to those views. Spenser's personal experience as a colonial administrator led him (following Machiavelli) to break decisively with classical political philosophy, even while Spenser's literary theory refused to diverge from Sidney. In other words, Spenser is ancient in his art and modern in his politics. Rather than being simply a poet of the "State" or of nascent English nationalism, Spenser actually understands and encompasses the contradictions and changes of his own historical moment.
In "A Letter of the Authors," annexed to the 1590 *The Faerie Queene*, Edmund Spenser makes an interesting remark concerning the nature of the ideal. In defending his poetic practice, he contrasts Xenophon with Plato. According to Spenser, Plato had, "in the exquisite depth of his judgement, formed a Commune welth such as it should be," whereas Xenophon—writing about the (allegedly) perfect ruler in the *Cyropædia*—"fashioned a gouernement such as might best be" (15). What fascinates Spenser about Xenophon is how Xenophon portrays his ideal ruler in terms of human figures and examples rather than through a series of doctrines, precepts, or rules. To put the matter in another way, talking about the "twelue priuate morall vertues" (16) in treatise form might have certain uses, Spenser believes, but it lacks the pure value of demonstrating those virtues as incarnated by exemplary figures. *The Faerie Queene* constitutes Spenser's own contemporary attempt to demonstrate virtue incarnated. No mere treatise, risking dullness and pedantry, should hope to convey the loveliness of virtue as powerfully as masterfully-wrought poetry.¹

What makes "A Letter of the Authors" remarkable, though, is not just that Spenser values Xenophon more highly than later centuries typically did.² Rather, it is that Spenser explicitly likens his poetic King Arthur to Xenophon's Cyrus the Great. Thus Spenser follows in the footsteps not only of Xenophon but also of Vergil with Aeneas, Ariosto with Orlando, and Tasso with Rinaldo and Godfredo, and Homer with Agamemnon and Ulysses. Poetry—as a genre—enjoys a higher spot on the pedestal than either philosophy or history. Philosophy, on Spenser's view, is the genre of rules and abstractions, exemplified by Plato's *Republic*, and the historical shackles of historiography prevents historiography from attaining the freedom and power that poetry acquires easily.

Yet, beneath Spenser's advocacy of poetry, lies a problem. He claims that poetry—the highest genre—concretely represents the virtues, but Spenser offered only silence on what poetry of his sort cannot do, that is, discourse well on the realm of practical politics. In *A View on the State of Ireland*, Spenser seems to argue for a harsh—even brutal—colonial policy towards Ireland. The dialogue's main speaker, Irenius, proposes a number of solutions: permanent garrisons, forced relocations, despoliation of land. That despoliation would lead to famine, leading in turn to wide-scale starvation and death and thereby "solving" the so-called Irish problem. The policy aids and abets the brutal use of executive power against indigenous peoples, whose purpose is the maintenance of colonial rule and the increase of wealth and power for the English nation.

Tracing Spenser's intellectual history, as Andrew Hadfield notes, is a tricky business. Hadfield himself suggests that Spenser's Irish policy shares some correspondences with Jean Bodin. Bodin "took issue with Machiavelli's contention that a republic was the most lasting form of government, alleging that despotism was in fact more durable because subjects could be controlled more easily and were unable to resist as free men were" (10). Yet Hadfield is careful to say that he notes only a correspondence, not necessarily a direct connection. For my part, I believe that, while a comparison with Bodin may be fruitful, a comparison with Niccolò Machiavelli can be more fruitful still. For now let me suggest that Machiavelli—as the first truly modern political philosopher—is the theorist most aware of the possibilities and dangers of realpolitik. Besides Spenser's own reference to *Discourses on Livy* at the end of *A View*, we know that Machiavelli was well-known during Spenser's school years; Spenser's friend Gabriel Harvey boasted "[y]ou can not stepp into a schollars studye but (ten to on) you shall litely finde open" a volume either by Bodin or Machiavelli (79). Spenser's own familiarity seems assured.

But it seems impossible to reconcile the ideology of Spenser's poetry and the dauntingly pragmatic approach of his politics. His poetry creates a knight of perfect virtue while Spenser's political views effectively sneer at those virtues—for example, Elizabeth's mercy—as mere obstacles for a puissant political practice. My argument is that this tension never becomes resolved within Spenser's thought; not only that, this tension results in a continuous and *living* contradiction. By a "living" contradiction I mean that, rather than threatening the foundations of his views as a normal foundation contradiction might, *this* contradiction actually spares Spenser from falling into ineffective practice. The keystone of my argument is Xenophon—or, rather, Xenophon's interpretation of Cyrus. Machiavelli, like Spenser and many others prior to the nineteenth century, also rated Xenophon higher than Plato. Yet Machiavelli realized (in a way that Spenser apparently did not) that Xenophon's Cyrus never actually existed. He was a literary figure romanticized and idealized by Xenophon. Machiavelli recognized that Cyrus acquired and kept his empire.

1 Spenser's debt to *The Apology for Poetry* and Sir Philip Sidney (to whom he dedicated *The Shepheards Calenders*) is clear. Sidney had defended poetry by arguing that it combined the precepts of historians with the moral focus of philosophers—arguing, in effect, that poetry surpasses both history and moral philosophy. Especially in terms of teaching morality, Sidney greatly prefers poets. "For, indeed, if the question were whether it were better to have a particular act truly or falsely set down, there is no doubt which is to be chosen, no more than whether you had rather have Vespasian's picture right as he was, or, at the painter's pleasure, nothing resembling. But if the question be for your own use and learning, whether it be better to have it set down as it should be or as it was, then certainly is more doctrinable the feigned Cyrus in Xenophon than the true Cyrus in Justin" (337-8). Because Sidney conceives the Greek writer Xenophon as an exemplary teacher of virtue, he categorized Xenophon as the "most excellent poets that never versified" (333). Niccolò Machiavelli's task was to shatter the respect of potential rulers for those feigned Cyriuses which they learned from men like Sidney; my argument will be that Spenser accepted that shattering for his political writings in terms of his practical politics, but that he kept those politics strictly separate from his poetical writings. By implication, although I will not have time to explore the point in great depth, I suggest that even the fifth book of *The Faerie Queene* owes its theoretical allegiance to Sidney rather than to Machiavelli.

2 To take one example out of many, the translator of one of Xenophon's Penguin editions says quite easily that "[c]ertainly, he is not an original thinker or writer" (Waterfield 8). In such works as *On Tyranny and Xenophon's Socrates*, however, the political philosopher Leo Strauss has done much to revive Xenophon's modern reputation.

3 For a contrary view, see Christopher Nadon. He views the *Cyropædia* as a "drama" rather than a political treatise or a work of history, and he approvingly cites Spenser and Sidney for recognizing this fact (24). In his view, their belief that Xenophon is a "poet" seemingly equates to Xenophon's "dramatic" qualities. Yet Nadon's own insightful analysis of *Cyropædia* requires the most exhaustive close and critical reading of the text—the same sort of reading required by Plato's "dramas." For my part, I see Spenser's and Sidney's art as strictly within the civic-humanist tradition. Their categorization of Xenophon as a poet indicates certain elements of ideality and moral virtue excluded by Nadon's (and Machiavelli's) reading of Xenophon's text. In other words, the art of Spenser and Sidney seems entirely antithetical the political philosophy and hermeneutics of Machiavelli, who would not approve of *The Faerie Queene*. 
via frauds; he could never have acquired his empire simply through those virtues ascribed to him by Xenophon: justness, benevolence, cool rationality, and a keen ambition nonetheless free from cruelty, vengefulness, and avarice. Yet where Spenser’s poetry unproblematically accepts the “poetic” creation of Xenophon, Spenser’s “political science” accepts Machiavelli and a Machiavellian interpretation of Xenophon—views irreconcilable with the poetic view. Spenser’s own practical experience as a colonial administrator showed him the limitations of the Xenophonic ideal; that, along with his sense of nationalism, led him into a political modernity first articulated by Machiavelli, a man who shattered classical models of political philosophy and their “imaginary” Republics and Princedoms (Machiavelli 40), even while Spenser’s artistic practice—based on unshattered classical models—created a separate intellectual sphere for his idealistic inclinations. Edmund Spenser stands astride the dividing point between the ancient world and modernity—a divide of which he seems blithely unaware. Yet it is this fundamental divide that leads Spenser, almost instinctively, to shy away from applying the moral virtues of *The Faerie Queene* to *A View on the State of Ireland*.

The second section of this paper examines the potentially greatest challenge to my view of Spenser as embodying a living intellectual contradiction—namely, that *A View* is not a work by Spenser at all. The third section aims to place Spenser more squarely within Machiavellian thought—emphasizing the distinctiveness of Machiavelli’s views and ways of reading ancient authors like Xenophon. Additionally, many chapters of *The Prince* bear directly on Spenser’s situation in Ireland, and I will suggest that we have good reasons for identifying Irenius quite closely with Spenser himself. My fourth section is a brief conclusion in which I suggest that we have good reasons for identifying Irenius quite closely with Spenser himself. My fourth section is a brief conclusion in which I suggest that we have good reasons for identifying Irenius quite closely with Spenser himself.

### Spenser And The Authorship Of *A View*

Some debate exists on how closely we can identify Spenser with the main speaker of *A View of the State of Ireland*, Irenius. On one hand, we know that Spenser himself benefitted significantly from Irish colonialism, gaining the estate of Kilcolman in Cork County in 1589, earning the status of “gentleman.” He served as secretary to Lord Arthur Grey, the Lord Deputy of Ireland, and therefore probably witnessed the massacre of a Spanish garrison at Smerwick in 1580. He seems to have been involved with the Munster plantation scheme, a plan that took confiscated lands arising from the Second Desmond Rebellion (1579–1583)—itself a protest against English interference in Munster Country—and resettled those lands among wealthy English colonists. On the other hand, none of these biographical details necessarily link Spenser to the draconian views promulgated by Irenius. Spenser himself apparently understood the horror of the famine Irenius advocates. One mere year of famine, for example, will—despite the richness of the land—bring the populace to such wretchedness, as that any stony heart would have rued the same. Out of every corner of the woods and glynes they came creeping forth upon their hands, for their legs could not bear them; they looked like anatomies of death, they spake like ghosts crying out of their graves; they did eate the dead carrions, happy where they could finde them, yea, and one another soone after, insomuch as the very carcasses they spared not to scrape out of their graves; and, if they found a plot of water-cresses or shamrocks, there they flocked as to a feast for the time, yet not able long to continue therewithall; that in short space there were none almost left, and a most populous and plentiful country suddenly left voyde of man and beast; yet sure in all that warre, there perished not many by the sword, but all by the extremitie of famine, which they themselves had wrought. (Spenser 101–2)

The crux of the argument separating Spenser from Irenius seems to be an overwhelming doubt that someone with his humanist education and poetical genius could sincerely espouse such horrors. To induce wide scale famine such as Irenius proposes—and suddenly to absolve the English from responsibility by saying that the Irish “themselves had wrought” it—seems monstrous and beyond belief. Irenius, so the argument might run, is an unreliable narrator, along the lines of Sir Raphael Hythloday in Sir Thomas More’s *Utopia*.

That Hythloday does not equal More is clear, even beyond the fact that he seems to advocate positions that More himself argues against in different writings. Many of the names within *Utopia* are jokes set to distance the reader from its views. *Utopia* means both a “good place” and a “no place”—a place that exists nowhere. The first name of the main speaker harkens to the archangel Raphael while his last name means “peddler of nonsense.” And many of the names within Utopia call attention to their own fictiveness, as More himself obliquely points out. While maintaining a veneer of verisimilitude, More writes that, if he had indeed written a fiction, he would have managed it so that, even though I might have wanted to deceive the ignorant mob, I would at least have inserted some pointed

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4 In Chapter XVIII, Machiavelli says that a ruler should seem to be “the embodiment of mercy, good faith, integrity, humanity, and religion” (47). The appearance of those virtues are more important than their reality, however. We must “understand that a Prince, and most of all a new Prince, cannot observe all those rules of conduct in respect whereof men are accounted good, being often forced, in order to preserve his Princedom, to act in opposition to good faith, charity, humanity, and religion” (46). Nobility and honor are honored by their breach.

5 Some examples include the ease with which the Utopians practiced divorce and euthanasia, as well as how they permitted female priests as well as male—all practices anathema to a devout Catholic like More. A further contradiction might be seen in Hythloday’s Epicurean argument concerning philosophy and politics, i.e., that it runs counter to true philosophy for a philosopher to engage in politics, even as an advisor. Advisors must lead by indirection and half-truths (because full truths cannot be uttered safely). Philosophers, however, should never say what is not true. More himself, of course, was an extremely active political figure, thus leading to doubt about the equivalence between More himself and Hythloday.
hints which would have let the more learned discover what I was about. Thus even if I had done nothing more than assign to the ruler, river, city and island such names as would have informed learned readers that the island is nowhere, the city is a phantom, the river has no water, the ruler no people, which would not have been hard to do and would have been much more elegant than what I actually did, for if I had not been forced by historical accuracy, I am not so stupid as to use those barbarous and meaningless names Utopia, Ander, Amaurot, and Ademus. (139)

The joke, of course, is that More does precisely what he disavows doing. A View contains no such pointed hints, however. The dialogue operates on a quite surface level. Eudoxus (whose name means "good belief") listens to—and gradually becomes persuaded by—his friend Irenius. Throughout the first half of the dialogue, Eudoxus's literary existence enables Irenius conveniently to discourse on the laws, customs, and religion of the Irish natives. In the second half of the dialogue, Eudoxus serves as the voice of natural sentiment and mercy. He protests Irenius's increasingly violent "solutions" to the Irish problem before, finally, succumbing to the inexorable pressure of Irenius's "logic."

The primary motivation for reading A View against the grain, it seems to me, is the desire to "salvage" Spenser as a poet. Yeats, for one, had readily distinguished between Spenser the poet and Spenser the colonial administrator, lamenting that Spenser the man had been so unfortunately subservient to "the State," someone who wrote "out of thoughts and emotions that had been organized by the State" and saw nothing "but what he was desired to see" (372), blinding the poet in him to the native genius of the Irish whom he should have admired. Nonetheless, as Ciaran Brady accurately notes, we cannot so easily gloss over the fact that Spenser's apparent "ethical defense of brutality" calls into question Spenser's entire "moral sensibility" (18)—a stunning denouement for a poet whose great theme is the "eternal private moral vertues." Stephen Greenblatt's conclusion might seem doubly outrageous, suggesting as he does that Edmund Spenser saw the destruction of Irish culture (seen as the barbarous Other) as vital to maintaining English identity and therefore English colonial power. Greenblatt concludes, "Spenser's art does not lead us to perceive ideology critically, but rather affirms the existence and inescapable moral power of ideology as that principle of truth toward which art forever yearns" (192). For some, it is difficult to accept that Spenser's art—seen as a paragon of humanistic learning and virtue—connotes the "inescapable moral power of ideology," which would effectively undermine the entire Renaissance humanist project of virtuous citizenship and active participation in civic life. The desire to exculpate Spenser can go to amazing lengths. Jean Brink argues, for example, that "the grounds for attributing the View to Spenser are highly circumstantial" (221)—the logic being that Spenser cannot be held accountable for views that do not belong to him. While her argument rests mainly on the fact that no scholar has yet done significant textual analysis on A View's numerous extant manuscripts, Brink at best only raises a few questions against the long-held view of Spenser's authorship. Yet such questions are only raised out of the apparently appalling realization that "Spenser the political scientist" does irreparable harm to "Spenser the moral-humanist poet."

In a post-deconstructionist age, I take it as axiomatic that all texts are inherently unstable, and that it is legitimately possible to read A View against the grain. In other words, texts are not unified wholes intended to portray one clear meaning (or a finite number of such meanings) to a passively responsive reader. Rather, texts carry within themselves the seeds of their own subversion, dependent only on the willingness of some daring critic to point them out. Even if we do not grant A View the same sort of irony recognized for Utopia or even a text like Erasmus's In Praise of Folly, someone might legitimately argue that ambiguity lies at the core of A View. Ciaran Brady, claiming that A View was originally written as a prose tract on politics, argues that Spenser eventually switched to the dialogue form because he wanted to place his brutal policies within the humanist tradition—worried that, if he simply stated his views bluntly in treatise form, the English may otherwise become "brutalized by the task which they were being urged to undertake in Ireland" (47). This Spenser may be more palatable to some, insofar as it seems to explain why Spenser may have felt no contradiction between his roles as poet and politician, but hardly constitutes a defense of Spenser, especially under a postcolonial viewpoint. Reconciling the poet with the colonial administrator does not, in the end, absolve the colonial administrator. 6

The question then becomes: how likely is it that Spenser's political tract would subvert its own surface meaning? To this question I would like to make two comments. My first point involves what political philosopher Leo Strauss calls "esoteric writing." Users of this art incorporate both an exoteric and an esoteric teaching into their texts. The esoteric teaching is meant for cursory readings of texts; the content seems relatively culturally and politically acceptable. The esoteric teaching, however, contains more heterodox opinions—the sorts of opinions that might question the foundations of what the society considers to be sacred and unanimous, or, less dramatically, question opinions held to be salutary to society in general (such as belief in a god who upholds the moral order). Those who hold heterodox views must provisionally accept orthodox opinion before guiding readers with a philosophical disposition into replacing the orthodox opinion with heterodox (and philosophical) knowledge. Thus (discussing the Muslim philosopher Fārābī), Strauss says that it is " rash to identify the teaching of the falsafī with what they taught most frequently or most conspicuously" (17). These careful writers must be take the fate of Socrates as their example.

6 Wesley Kisting also attempts to mitigate some of the sting of Spenser's imperialism. He argues that critics such as Ciaran Brady and Nicholas Canny improperly ignore A View's dialogue form, seeing it as a "monovocal" text; under their view, Spenser equals Irenius and Eudoxus constitutes the straw man. Nonetheless, even Kisting can only achieve so much by arguing that "equivocal language infuses" Spenser's two most relevant works, A View and Book V of the Faerie Queene, which allegedly results in a "moral ambivalence" equally present in both works (29). That is to say, Kisting claims that Spenser simultaneously acknowledges Irenius's violent strategy and sees "murdy as a dire threat to justice as well as a serious failure of the reader's moral responsibility to rescue Ireland from damnable savagery" (32). Even if we accept the claim that the logic behind A View is ultimately "self-subverting" (29), Spenser's concrete position as an advocate of bloody-minded English imperialism does not save him from the ultimate charge, one also leveled by Chinua Achebe against Joseph Conrad—that he is a "thoroughgoing racist" (1789).
guiding principle, a man accused for introducing new gods into the city and for thereby corrupting the young. The questioning stance implied by all philosophy poses dangers to political societies and political regimes, who need a fundamental agreement (without serious argument) about “sacred” things in order to maintain social and political stability. Esoteric writers, wishing to philosophize while avoiding persecution, therefore place contradictions, ambiguities, instabilities within their texts that undermine the esoteric interpretation (36). Such clues guide the careful reader towards the hidden—but personally dangerous—real teaching of the text.

Unfortunately, notwithstanding the (anti-deconstructive) thesis that texts may contain secret-but-true meanings, Spenser’s View does not qualify for esoteric reading. This art is meant to protect the holder of heterodox opinions from persecution. In such texts, a bland meaning masks more subversive or dangerous meanings. A View, however, operates in precisely the opposite way—the shocking opinion is stated outright, seemingly convincing the rational Eudoxus. If “mercy” toward the colonized were the text’s actual purposes, there seems to be no reason for hiding it—especially as Irenius explicitly links that mercy to Queen Elizabeth. Although anti-Irish sentiment was rampant at the time, it did not exist to the extent that advocates of mercy would have been persecuted.

Indeed, framing an argument for a “merciful” policy toward Ireland might have found a number of palatable forms for a Christian humanist audience. One such argument could simply be a worry about saving souls—acquiring and maintaining an empire, bloody process that it is, does not lead to the sort of spiritual purity conducive to entering Heaven. (Such an argument puts a religious slant on Spenser’s worry—according to Ciaran Brady’s—about the effect imperial brutality would have on the English subjects who carried them out.) Another argument might rest upon classical foundations. Many ancient political theorists held that a good state (such as Athens or Sparta) must be small in order to be successful. The far-flung Persian empire was the ultimate symbol of luxury and decadence, and it would not have been lost on Spenser that the precipitous decline of Sparta as a Greek power began almost as soon as its victory in the Peloponnesian war granted it Athens’s empire. Additionally, many conservative Romans of the later Republic blamed the perceived decline of Roman virtue on the wealth acquired from newly conquered Carthage and Greece. Such views were readily available to the classically trained Spenser. He might well have employed such arguments—but chose not to.

Writing at a time before any value was placed on multiculturalism, universal rights, or the autonomy of indigenous peoples, “diversity” within a state was not a sign of its progress but a potential cause of its decay. Even the religious “tolerance” of John Locke—a noted liberal thinker—two centuries later did not include atheists or Muslims under the umbrella of that tolerance. The anachronistic desire to judge Spenser according to multiculturalist or postcolonial values leads to my second observation. This one also derives from the classics—namely, the examples set by antiquity. Colonialism was not something stumbled upon with Ireland or the discovery of the New World—it has existed literally through the entirety of recorded history. And the brutality Spenser advocated in regard to Ireland had wide precedent.

The pity and pathos of the fall of Troy, for example, would today have served as the rallying cry for anti-colonialism, but the Greek world, while recognizing the tragedy of the event, nevertheless engaged in warfare and conquest. Calls for “mercy” often went unheeded. Euripides’s play Trojan Women objected to the Athenian actions to the island of Delos during the Peloponnesian war. Delos was a neutral city-state, small in size, but the Athenians wished to conquer it in order to intimidate the Spartans. The city-state was conquered, eventually; its men killed, its women and children enslaved—the standard Greek practice for cities defeated in war. Early during the Peloponnesian War, Thucydides relates a story of how the Athenian Assembly decided to put a rebellious polis in its empire to the sword, sent off a small force to do so—and repented of its decision two days later. Fortunately, their message reached the navy in time to forestall a slaughter, but on such slender threads did ancient imperial policy hang. Rome was even harsher. Julius Caesar nearly depopulated Gaul in his subjugation of that province, and Carthage was leveled to the ground and its fields sown with salt so that nothing might grow there again. As for the forced relocation Spenser advocated, these too have their historical precedents—most famously with the Babylonian captivity of the Jews. What is important is not that the Elizabethans might find Spenser’s views shocking (many certainly did—otherwise Eudoxus would not have been necessary), but that such shock or horror cannot be seen in the same way as in a world that has witnessed both the Holocaust and de-colonization.

Indeed, Catherine G. Canino makes the argument—which fits nicely with my own general point—that the massacre of the Spanish garrison at Smerwick would not have earned Lord Grey the censure accorded him by Irenius in A View. In other words Irenius, in defending Lord Grey’s actions, is actually the source of the Lord Grey’s reputation as a “bloody” man. According to state papers and personal correspondence during the period, Grey was never censured, whether in Ireland, England, or the continent. Elizabeth’s well-known letter to Grey mentioning his “happy success against the invaders” and “wishing only that those who have been spared had been reserved for her to have extended either justice or mercy” is more congratulations than condemnation—despite being frequently cited as indicating condemnation (qtd. in Canino 7). Canino notes that foreign reaction to Smerwick also seems muted. Overall, while Grey was criticized and maligned by many, which eventually led to his recall,

this criticism was not, as the View states, because of his representation as a ‘bloody’ man. The state papers clearly demonstrate that Grey was under suspicion of mishandling or overspending state funds; his recall, and virtually all of Elizabeth’s decisions about Ireland, were not caused so much by moral outrage as by simple economics. (Canino 8)

Unfortunately, Canino cites this as evidence supporting Jean Brink’s view questioning the authorship of A View. To be fair, although Canino herself think Spenser’s authorship of A View unlikely, she also offers two potential alternative explanations: either Spenser might
Machiavelli and Xenophon; or, Machiavelli’s reading of Scipio reading Xenophon

A key section of *The Prince* might be the third chapter, “Of Mixed Princedoms” (by which Machiavelli means adding newly conquered lands to the inherited kingdom). It seems to pertain most directly to the English situation in Ireland. The previous chapter had been “Of Hereditary Princedoms,” a vastly shorter chapter indicative of Machiavelli’s relative disinterest in that topic. According to Machiavelli, hereditary princedoms are easy to maintain, because “the very antiquity and continuance of [the prince’s] rule will efface the memories and causes which lead to innovation” (2)—meaning that people are likely to have forgotten the various acts of evil that must be done in order to subjugate a new province. Machiavelli might also have said that, in such princedoms, it is easier for a prince to practice those virtues as praised by the poets and the philosophers and as incarnated by Marcus Aurelius—ruler of the hereditary kingdom *par excellence*, Rome during the *Rax Romana*.

Yet mixed princedoms abound in difficulties. Not only will the people one has harmed become enemies, but so potentially will the people one has helped—if such allies could once open their gates to a foreign conqueror, they might do so again. A greater difficulty, Machiavelli notes, is when the acquired kingdom differs from the imperial kingdom in matters of language, usages, and laws—differences that Irenius amply demonstrates in *A View* after allegedly proving their “barbaric” Scythian origins. In such a situation, says Machiavelli, a “great good fortune, as well as address, is needed to overcome” these obstacles (3). And it is important to note that while “great good fortune” and “address” are necessary—implying a distinction between a controlling Fate outside the self and the prince’s own personal virtù—elsewhere in *The Prince* Machiavelli seems to collapse two terms into one—that is, virtù simply, without any exterior guiding fate. One of Machiavelli’s most famous sayings is the maxim that “Fortune is a woman who to be kept under must be beaten and roughly handled, and we see that she suffers herself to be more readily mastered by those who so treat her than by those who are more timid in their approaches” (68). Yet this saying comes only at the end of *The Prince*, long after demonstrating the character and necessity of virtù. So Machiavelli’s initial distinction between *fortuna* and *virtù* is only a façade, a sop to ancient political thought that held man to be partially helpless against what he could not control. Under my interpretation, what Machiavelli really intends here is to show how princes can always subjugate new kingdoms that differ from the original kingdom in matters of language, usages, and laws.

The easiest way to pacify a mixed princedom, continues Machiavelli, is for the prince to dwell there himself. He gives the example of the Turks. Dwelling in a province tends to solve problems before they arise; it also ensures that the province “is not pillaged by [the prince’s] officers” (4). Such a relocation would not have been palatable for Elizabeth of course, though colonization might have succeeded better if she had. According to Nicholas Canny in *Making Ireland British*, a key reason England never succeeded in making Ireland “British” was the greed of low-level British officials called “servitors” who, in their rapacity for new “plantation” lands, basically sabotaged attempts to assimilate the Irish. Ardently Protestant in their sympathies, these servitors—using Spenser’s political tract as a rallying cry—permanently alienated the native Catholic Irish.

Otherwise, if princes will not abide in the new kingdom, they might also establish colonies, a proposal strongly championed by Irenius. 8 A problem emerges even here, however. As Machiavelli says, the only people harmed by colonies are the displaced natives. Those “who are thus injured form but a small part of the community, and remaining scattered and poor can never become dangerous” (4). As Irenius points out, however, dispossessed Irish can become problematic, since the bogs and marshes can provide shelter for potential rebels, and even their attire—such as the Gaelic mantle—can prove dangerous to the colonizer because of its immense utility. Irenius, in his practical experience of Ireland, knows that the dispossessed can be a significant problem.

Yet here we have encountered a faux statement by Machiavelli, a case of misdirection. Famously, Machiavelli later states that “men will sooner forget the death of their father than the loss of their patrimony” (44)—basically asserting the primacy of wealth over kinship, meaning that confiscating the lands of natives is the most potent means of radicalizing them against a new prince. Yet Machiavelli contradicts the “colonies are safe options” principle even within the same chapter. When Machiavelli discusses King Louis IX’s failure in Italy, for example, he lists five blunders committed by that king, such as aggrandizing another foreign power (Pope Alexander VI), dividing his new princedom with yet another power (Spain), and so forth. No sooner does Machiavelli recount these errors, however, then he dismisses them. “[A]ll these blunders might not have proved disastrous to him while he lived, had he not added to them a sixth in depriving the Venetians of their dominions” (7). So while colonies can successfully aid in the subjugation of a new princedom, dispossessed natives like the Venetians or the Irish are a problem—perhaps the most important problem.

Having brought attention to this problem, however, Machiavelli once again grows coy. The natural maneuver at this point would be to explain new Louis might have successfully deprived the Venetians of their dominions. Machiavelli instead changes the topic; he

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7 By “address” Machiavelli means how a prince handles or addresses a situation.

8 Machiavelli also disparages garrisons as too costly, but Irenius seems to have understood that objection when he, several times, answers Eudoxus’s concerns about cost by saying that the garrisons should live off the rest of the land they occupy.
moves onto a discussion concerning the idea that it is better (following Roman practice) to engage in war sooner rather than later. Machiavelli hereby shows his reluctance to make his points explicit. Yet given his statements about how easily hereditary princes maintain their princedoms (since the people have “forgotten” the measures taken to subjugate the principality originally), Irenius seems to have successfully grasped Machiavelli’s meaning when he advocates for extermination. Claims that colonies are worthwhile consequences with negligible consequences do not fool Irenius; those consequences urgently require handling.

A clearer example of Machiavelli’s ultimate goal may be gleaned from the following passage:

“Because it would have been useless and dangerous for Pertinax and Alexander, being new princes, to imitate Marcus, who was heir to the principality; and likewise it would have been utterly destructive to Caracalla, Commodus, and Maximinus to have imitated Severus, they not having sufficient valour to enable them to tread in his footsteps. (55)

The passage comes from the chapter, “That One Should Avoid Being Despised And Hated.” A great disparity lies between the two examples: Marcus Aurelius (the beloved emperor) and Septimus Severus (a brutal but successful one). Many princes with virtù have attempted to imitate either one or the other, but those who failed to successfully imitate Marcus did so because they were not the heirs of princedom—truth recognized by Pertinax and Alexander, who therefore did not attempt to cultivate the same virtues of Marcus. Yet, Machiavelli continues, of those princes who failed to successfully imitate Severus, their failure was not due to some external circumstance (such as the misfortune not to inherit a principality), but to a failure of personal virtù. In other words, a prince may fail to imitate Marcus Aurelius if he lacks either virtù or an inherited kingdom, but princes who fail to imitate Severus fail only through lacking virtù. In a prince, morality is a luxury, nothing more—neither necessary nor even desirable. Princely morality is superfluous. As such, Machiavelli has no special theoretical space for it within a truly modern political philosophy.

The superfluity of morality in politics leads us, slowly, into Machiavelli’s reading of Xenophon. In the Renaissance, Xenophon enjoyed a high reputation, more so than now, and Machiavelli discusses him more often than he does Plato, Aristotle, and Cicero combined. According to W.R. Newell, Xenophon was the closest of all the ancient political thinkers to the Italian political philosopher, Xenophon alone of ancient thinkers “allowed the ambition for limitless rule to unfold in all its grandeur” (121). Whereas Plato and Aristotle sought to limit the desire for acquisitiveness, Xenophon took it seriously as a political principle. Yet where Machiavelli disagreed with Xenophon was in Xenophon’s failure to emancipate himself completely from the distinction between illegitimate and legitimate, tyrant and king, base and noble, vice and virtue. Often taken as the portrait of the ideal prince, Xenophon’s Cyropaedia contains some ambivalence towards the Persian monarch: “This mixture of admiration for Cyrus and reservations about him makes Xenophon unwilling to depict Cyrus either as an out-and-out tyrant or as morally blameless” (126).

Although Machiavelli approves of Xenophon’s approbation of ambition, he must also distinguish between a textual Cyrus and a real Cyrus—viz., the actual prince versus the literary prince created by Xenophon. Whereas Achilles, Alexander, and Caesar had all imitated forebears, Scipio along had imitated not a forebear but the textual Cyrus:

And whoever reads the life of Cyrus, written by Xenophon, will recognize afterwards in the life of Scipio how that imitation was his glory, and in how in chastity, affability, humanity, and liberality Scipio conformed to those things which have been written of Cyrus by Xenophon. (Machiavelli 66)

And it was commonly accepted that Scipio did greatly admire Xenophon. Cicero described the education of Cyrus as a “model of the just empire” and the constant guide of Scipio (Newell 110). But the problem is that those qualities described by Xenophon are not the sorts of qualities that enable one to acquire new princedoms, as Machiavelli well understood. Scipio’s career in the province of Spain was not successful until he adopted more “brutal” practices. We see such disjunction between politicial literature and political reality repeatedly in Machiavelli. Marcus Aurelius succeeded only because he inherited his kingdom; King Louis IX lost his kingdoms in Italy because he “kept faith” with the foreign powers he invited to share power there. And, as Spenser’s Irenius no doubt realizes, having deprived native Irish of their estates in order to plant English colonies, the noblest virtues of a prince—chastity, affability, humanity, and liberality—cannot be practiced safely. Unlike the English themselves—a people, once conquered by the Romans, who have forgotten the concrete measures taken by the Romans to subjugate them successfully—

9 Many scholars have wondered at the apparent discrepancy in Cyropaedia of presenting the “ideal” ruler, only to show the collapse of that ruler’s empire in the final chapter. James Tatum argues that Xenophon suffered from a divided mind. According to Tatum, the “gap between the political and historical world of the Cyropaedia and the one in which Xenophon’s authorial desire to preserve the integrity of the text he created” (224). For a different view, see Christopher Nadon’s Xenophon’s Prince: Republic and Empire in the Cyropaedia. Nadon argues that Cyrus was far from Xenophon’s ideal ruler. Dante, Petrarch, and Boccaccio had all referred to Cyrus as a “rapacious” king, and it was only in the fifteenth century that he began appearing “in a number of mirrors of princes” as an ideal ruler” (13). Nonetheless, Nadon argues that Machiavelli read Xenophon from within the civic-humanist tradition and, therefore, as illegitimately idealizing a political figure. “Instead of recording what Cyrus must have done in order to succeed, Xenophon, in his naivety, imagined rather what he thought a good prince ought to do. He thereby misled Scipio as to the kind of duties imposed by the necessities faced by real generals and statesmen” (16). For Machiavelli had imagined that young Scipio had read the Cyropaedia cursorily, noticing only the fairy tale Cyrus on the surface of the text without seeing the treacherous, grasping, deceitful Cyrus at the core. Following Leo Strauss, Nadon believes that Xenophon wrote esoterically, containing a safe “surface” meaning and hidden yet dangerous “inner” meaning—a mode of writing that Machiavelli recognized and practiced himself. The civic-humanist tradition of a Philip Sidney, who praised teachers of virtue in general—and Xenophon over Plato specifically, because the former wrote poetry with philosophy in contrast to writing philosophy simply—is therefore subverted. In a way, my argument is that Spenser’s political science is a subversion of his poetry (and vice versa).

10 All the difference in the world exists between remembering intellectually the process of colonization, and remembering it psychologically.
evict them from their ancestral lands. *This is* the essential point about Machiavelli’s reading of Xenophon. As Newell says, Scipio (initially) followed the textual Cyrus, but a ruler such as Hannibal followed the *real* Cyrus—who, like Hannibal, had to rule a wide variety of peoples with different languages and different customs. (Newell notes that Machiavelli’s interpretation of Xenophon’s Cyrus is possibly polemically sugar-coated, since Xenophon does portray his Cyrus as inspiring fear.)

Machiavelli’s understanding of Xenophon offers, I believe, a way to grasp the seeming disparity between Spenser’s art and Spenser’s political science. Spenser’s art owed a great debt to classical models, however so much he revised and expanded them. Not only does Spenser attempt to portray the “twelve private moral virtues” in the ideal realm of Faerie, but he—like Xenophon—cannot completely emancipate his art from distinctions between the noble and the base or between virtue and vice. Even Book V of the *Faerie Queen*, which defends Lord Grey in the figure of Artegall, remains beholden to the distinctions between tyranny and legitimate rule, right and wrong, and justice and injustice that belong to classical political philosophy. Granorto, for example, is explicitly called “tyrant” (v.xii.25). Artegall himself studied “true justice how to deale / And day and night employ’d his busie paine” (v.xii.26). True justice. The word “justice” does not occur anywhere in The *Prince*, however. Justice—true or otherwise—has no place within Machiavelli’s political philosophy, nor does the term “tyrant.” It is precisely this same sort of “emancipation” from classical political philosophy that finds its way into *A View*, however. By my count, excluding titles like “Justice of the Peace,” the concept of justice or injustice appears as an abstract general concept acting as a foundational legal principle only four times in the text. The words “just” and “unjust” appear more frequently, but only as individual attributes or deeds. Every instance is spoken by Irenius—not the moral and trustworthy Eudoxus, significantly. By the latter half of the book, though, all instances of “justice” and even most of the instances for “just” disappear. . . except in relation to Lord Grey, whom Spenser (and Irenius?) have a stake in defending. (Incidentally, the defense of Lord Grey is where Eudoxus’s own references to justness grow most forceful and frequent.) “Tyranny” or “tyrant” appears absolutely nowhere in *A View*. So it seems safe to say that Spenser, in contrast to his art, felt comfortable in phasing out an important concept like justice from his political tract, except where it might polemically serve Irenius’s needs. Spenser, seeing the practical problems of colonial rule, of annexing onto an old principedom a *new* principedom differing in laws and customs, adopts the modern attitude that his artistry cannot theoretically accept.

**Conclusion**

According to Leo Strauss, Machiavelli’s great innovation in political philosophy is that Machiavelli—the paramount “teacher of evil” (9)—had proclaimed “openly and triumphantly a corrupting doctrine that ancient writers had taught covertly or with all signs of repugnance” (10). We have seen how Machiavelli can be deliberately coy with his doctrines, deliberately contradicting himself in certain places, avoiding stating his true meaning explicitly in others, and generally talking around certain issues that he simply expects his readers to intuit. What *Spenser* does in *A View* is proclaim a Machiavellian teaching with an openness that even the famed Italian hesitated to use.*A View* is remarkably straightforward in its policies of extermination, famine, cultural destruction, and forced relocation. Rather than writing esoterically, Spenser ameliorates the shockingness of his proposals via the dialogue form, a rhetorical device situating those views within the humanist tradition. It is intriguing to note that Spenser mentions Machiavelli only once, at the very end of his text—and the reference is not to *The Prince* but to *Discourses on Livy*, Machiavelli’s republican tract. So, whereas Machiavelli chooses to couch his true teaching in misdirection and innuendo, Spenser proclaims that teaching openly—but attempts to soften its horror under more “liberal” auspices. Spenser’s reputation as a moral poet, we might also suppose, perhaps partially insulated him against the same contemporary English opprobrium applied to Machiavelli himself, whom they believed to be an atheist and the worst kind of cynic.

Ultimately, I have argued for a fundamental split in how we should read Spenser. His poetry harkens back to classical moral writing, brought to Spenser by his admiration for Sir Philip Sidney; however, his political science shows a divisive break with ancient political philosophy. The incompatibility of the two positions shows the influence of two entirely different traditions of thought (ancient and modern) and two entirely different genres of writing (poetry and political science). Perhaps my particular position does not absolve Spenser from blame, although that is not really my intent. My greatest worry is that a modern moral framework might blind our judgment to methods of valuing and interpreting that have since become obscured by the centuries—Spenser’s insight into Machiavelli’s esoteric writing may seem implausible today, but only because esoteric writing has ceased to be necessary within modern liberal democracy. Now, on whether Spenser’s humanist- *realpolitik* or Machiavelli esoteric- *realpolitik* is the more invidious or subversive method, that I leave up to the individual reader. Needless to say, for an age steeped in universal human rights, an age that too well remembers the Holocaust and decolonization, neither method is entirely palatable. But that is a modern perspective. Even if we lament Spenser as a poet of the state, as Yeats does, we should also acknowledge that he possessed

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11 When “Machiavelli wants to emphasize the need to use fraud, he buttresses his argument with Xenophon’s version of Cyrus. When he wants to emphasize the need to use force, however, he negates Xenophon’s version in favor of his own. The implication is that while Xenophon teaches well enough the need for fraud, he does not make his readers sufficiently aware of the need to use force.” (124-25).

12 The first two instances are the most significant, and they both occur relatively early in the text: “laws ought to be fashioned unto the manners and conditions of the people” so as to not “pervert justice to extreme justice” (20); “true justice puniseth nothing but the evil act or wicked word” (30). These two cases are the only places where Irenius comes close to formulating a theoretical concept of justice. The next two instances of the term are less global in scope. First, in the scoffing words of Irenius, the *Irish* “complain she hath no justice” due to the partiality of non-Irish magistrates (31), and the last reference is a politically charged for Irenius, criticising Thomas Butler, eleventh Earl of Ormond, against whom Spenser may have had a grudge for his role in having Lord Grey recalled in 1582 (37). The term justice appears nowhere in the following three-fourths of the text.

13 For example, see Plato’s treatment of Thrasymachus and Callicles, or Thucydide’s dialogue between the Melians and the Athenian envoys.
enough freedom of mind and intellectual acumen not to mix his poetry with his politics. Perhaps the best that can be said for now is that we should agree with Nicholas Canny's assessment that *A View* ranks as “a social and political statement of the first importance” (‘Spenser’ 203).
Impact of Deworming Treatments on Intestinal Parasite Load in Equines from Middle Tennessee

Ellen Goertzen

Abstract

In this study fecal egg counts were performed on horses in six barns in Middle Tennessee to assess parasite load and the effectiveness of deworming programs. Samples were collected and tested before and after deworming and results found through the McMaster technique were compared with currently practiced deworming programs. Results showed the presence of parasites in all barns, though parasite load varied with a number of factors such as consistency of treatment, deworming frequency, and products used. All deworming products were found to be effective. This research provides insight to a more informed alternative deworming protocol, based on actual parasite load, than is typically used throughout the horse industry today. Future studies are suggested to compare the effectiveness of rotating products vs. use of a single product, and evaluating parasite load of stallions vs. mares or geldings.
I. Introduction

Internal parasites are a recurring health issue in all horses. These parasites live in organs, body cavities, and tissues, using the host animal as their source of nutrition. Though low levels of parasites cause no significant harm, a small percentage of horses may develop a high level of parasitemia. Symptoms of a parasite infestation include poor growth, poor hair coat quality, weight loss, decreased feed efficiency, colic, diarrhea, pneumonia, and even death (Peregrine et al. 2014).

The most common types of parasites are large and small strongyles, ascarids, tapeworms, pinworms, and bots. While all of these types can present health concerns for horses, small strongyles are potentially the most difficult to eradicate and pose the most serious problems, and make up 95-100% of the eggs seen in fecal tests. Small strongyle larvae burrow into the intestinal lining and can remain encysted and dormant for months. While in this stage, the larvae are not affected by most treatments, and can cause significant damage to the intestinal lining as they emerge from their encysted state (Peregrine et al. 2014).

Rather than becoming encysted, large strongyle larvae migrate through blood vessels to the arteries in the intestinal tract, where they block blood supply and can cause blood clots to form. The eggs are passed in feces, where they hatch into larvae and continue the life cycle. Ascarids, commonly known as roundworms, are a health issue in horses less than 2 years of age, but older horses develop a natural immunity. Tapeworms and bots can also cause major health concerns, while pinworms are considered a minor health threat (Traversa et al. 2007).

Routine treatment is available for all of these parasites in the form of oral deworming pastes containing various drugs to target specific parasites. Pastes are administered using syringes that can be bought in most farm supply stores. Horse owners typically follow a specific program, which may vary significantly between different barns. Most horse owners design their program based on assumption of parasite load, and the treatment being prophylactic rather than to eradicate a known problem. Typical deworming programs involve treating all animals on the property every 6-10 weeks. However, treatment this frequent may contribute to an increase in parasite resistance to dewormers. According to Peregrine et al., resistance to all types of dewormers has increased in the past ten years (2014). This suggests a need for a new approach involving deworming less frequently, in accordance with actual parasite load as determined by fecal egg count tests.

Several broad-spectrum drugs are used to treat for parasites, including ivermectin, moxidectin, praziquantel, pyrantel pamoate, pyrantel tartrate, fenbendazole, and oxibendazole. They function by interrupting the life cycle of the parasites (AAEP 2013). Table 1 lists common drugs and some of their most common brand names.

Table 1. Common anthelmintics, brand names, and parasites treated.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Common product</th>
<th>Targeted Parasites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin</td>
<td>Zimectrin, IverCare, Bimectin, EquiLan, Rotectin 1, EquiMax and imecterin Gold (ivermectin)</td>
<td>large and small strongyles, ascarids, pinworms, bots</td>
</tr>
<tr>
<td>Moxidectin</td>
<td>Quest</td>
<td>large and small strongyles (in encysted state), ascarids, pinworms, bots</td>
</tr>
<tr>
<td>Praziquantel (in addition to)</td>
<td>Quest plus (moxidectin); EquiMax and imecterin Gold (ivermectin)</td>
<td>large and small strongyles (in encysted state), bots, tapeworms</td>
</tr>
<tr>
<td>Pyrantel Pamoate</td>
<td>Strongid, Strongid-T, Rotectin P, StrongyleCare, Exodox</td>
<td>large and small strongyles, ascarids, some pinworms</td>
</tr>
<tr>
<td>Pyrantel Tartrate</td>
<td>Strongid C2X, Continues, Pellet-Care P.</td>
<td>large and small strongyles, ascarids, pinworms</td>
</tr>
<tr>
<td>Fenbendazole</td>
<td>Panacur, Safe-Guard</td>
<td>large and small strongyles, ascarids, pinworms</td>
</tr>
<tr>
<td>Oxibendazole</td>
<td>Anthelcide EQ</td>
<td>large and small strongyles, ascarids, pinworms, threadworms</td>
</tr>
</tbody>
</table>


Praziquantel is the only drug found to be highly effective (SmartpakEquine.com). Pyrantel tartrate is the only feed-through dewormer, in which a small dose is mixed into the horse's feed every day. This type of dewormer was not investigated in this study.

Deworming dosage is calculated based on the horse’s weight. Horse dewormers come in a disposable oral syringe, the shaft of which is notchted and has a small rotating piece that can be used to adjust the dose. A calibrated scale is the only accurate way to determine a horse’s weight, but is not available to most horse owners; alternative ways to estimate weight include weight tapes, measurement calculations, or eyeball estimations.

Another product some horse owners use to deworm is diatomaceous earth mixed with their daily feed. Theoretically, the “scrubbing action” of the diatoms sufficiently injures the parasites. Proponents claim that it causes a significant reduction in parasites, healthy weight gain, and does not cause parasite resistance to dewormers. While diatomaceous earth is marketed as a completely natural product that contains no chemicals, there have been few if any scientific studies to confirm its effectiveness or recommended dosage for deworming.

Deworming programs usually involve treatment every 6–10 weeks, typically rotating the drug used. Due to an increase in parasite resistance to deworming drugs, some veterinarians currently advise deworming less often. According to the American Association of Equine Practitioners, over-use of dewormers increases the rate at which parasites develop resistance (2013). A common mentality among horse owners is to completely eradicate all parasites in the barn, deworming all horses often enough to be sure that there is no risk. The negative
effects of this approach include unnecessary expense for the owners, increased parasite resistance, and often administering drugs to horses that have no need for them. It has been noted that horses have a some ability to develop immunity, and low parasite population may in fact help horses maintain that immunity (Baudena 2003). Therefore, the goal of horse owners should not be to eradicate parasites entirely by overuse of drugs, but to minimize parasite load to an acceptable level.

Owners can take measures other than dewormers to minimize parasite load. Horses should be turned out on pasture with a ratio of 1 horse per 2 acres, allowing them to graze and deposit manure in separate regions. On pasture space that is too small, horses are forced to eat and defecate in the same area, increasing the amount of parasite eggs or larvae ingested. If this is the only possible turnout situation, manure can be removed from pasture at least weekly. According to the American Association of Equine Practitioners, parasites do not typically survive cold winters or hot, dry summers, so it is unnecessary to deworm horses during these times of year (2013).

Not all horses are equally susceptible to parasites; whether this is immune- or behavior-related is unknown (Baudena 2003). Therefore, the best way to determine the parasite load of individual horses is to conduct routine fecal tests on each animal. This would allow owners to classify horses as high, intermediate, or low egg shedders, depending on their count of eggs-per-gram (EPG) of fecal matter. High loads may appear either because the horse was not dewormed in a long period of time, because it is naturally susceptible to parasites, or parasites display resistance to treatment. Typically, adult small strongyle eggs compose nearly 100% of eggs seen in fecal tests (Kaplan & Nielsen 2010).

Horses on a regular deworming schedule should be tested before and after deworming to determine effectiveness. Horses that are not regularly dewormed should be tested before and after deworming for two or three successive dewwormings. Owners can use the results of fecal tests to design a deworming program for their barn in which they deworm horses according to their need. It is important to base a program on the individual horse because 20% of horses in a herd carry 80% of the parasite load (Haffner, 2012). For purposes of this study, recommendations were made that high contaminators be treated 4 times yearly, intermediate contaminators 3 times yearly, and low contaminators twice yearly.

The purpose of this study is to survey and determine parasite load in horses in barns in and around Murfreesboro, TN, in which the deworming programs differ. Results and the effectiveness of current deworming practices will be analyzed, and a program based on the data will be designed for each barn. It was my hypothesis that barns that deworm relatively frequently will be expected to show minimal parasite load, while barns with infrequent, inconsistent, or no deworming program will show a relatively high parasite load. Results for individual horses may vary due to behavioral or intrinsic qualities, but the overall trend of each barn is expected to be consistent with that hypothesis.

II. Materials and Methods

Collection of Data

Data was collected from six barns in the Middle Tennessee area. For barns that followed a deworming program, details were noted about the program such as what products were used, dates of treatment, and dosage. The lack of a deworming program was also noted. For barns with more than 20 horses, a representative sample was tested. For barns with less than 20 horses, all horses were tested, though the number of horses with two samples varies due to horses being moved on or off the property during the period of this study. Table 2 lists some general information about the barns.

Table 2. Deworming programs in each barn.

<table>
<thead>
<tr>
<th>Barn</th>
<th># of Horses</th>
<th>Frequency of Deworming</th>
<th>Rotate Dewormers*</th>
<th>Initial (Before Deworming) Collection Date</th>
<th>Final (After Deworming) Collection Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>24</td>
<td>8 weeks</td>
<td>yes</td>
<td>2/28</td>
<td>3/16</td>
</tr>
<tr>
<td>B</td>
<td>70</td>
<td>8 weeks</td>
<td>no</td>
<td>2/15</td>
<td>2/29</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>n/a*</td>
<td>n/a*</td>
<td>2/15, 3/28</td>
<td>4/13</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>twice yearly</td>
<td>no</td>
<td>2/10</td>
<td>n/a*</td>
</tr>
<tr>
<td>E</td>
<td>20</td>
<td>twice yearly</td>
<td>yes</td>
<td>4/15</td>
<td>4/28</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>twice yearly</td>
<td>yes</td>
<td>4/21</td>
<td>5/4</td>
</tr>
</tbody>
</table>

*n/a: not available

Each barn was surveyed either by phone or in person for general information. The questions asked were:

- How many horses are housed at your facility, and how many are on the same deworming program?
- Do the horses generally have a similar level of exercise and turnout?
- What is the turnout situation? Are the horses usually stalled, in pasture, or both?
- About how many horses are turned out in each pasture, and what is the estimated size of those pastures?
- Do horses on turnout have access to pasture, or are they on a dry lot? Is hay provided?
- How often are the horses dewormed?
- Have you ever done a fecal egg count on any of the horses?
- Do you ever remove manure from pastures? If so, how often?
- Do you practice any rotational stocking in pastures?
- How do you determine the amount of dewormer each horse gets? Do you estimate weight, use weight tapes, use a scale, or give 1 tube per horse?
- Data for each horse was noted including name, age if known, sex, body condition score, location, and deworming history.

Fecal material for each horse was collected in a Ziploc bag and labeled with a sharpie. Notes and other information were recorded in a notebook. Material was collected 1-2 days before deworming, and again 10-14 days after deworming, a length of time recommended by the American Association of Equine Practitioners to evaluate effectiveness of deworming.
Impact of Deworming Treatments on Intestinal Parasite Load in Equines from Middle Tennessee

Medium contaminators should be treated these two times plus an additional treatment, because they may not appear on a fecal test of a horse infected with tapeworms. Barn D was able to complete only the “before deworming” testing before withdrawing from the study.

Parasite Identification

Fecal eggs-per-gram (EPG) tests, or fecal counts, were performed for each sample using a McMaster slide kit (Chalex Corp., Wallowa, OR). This test determines approximate parasite load based on counting parasite eggs and multiplying by a factor of 25.

Frozen samples in sealed plastic bags were thawed under hot water. First, 26 ml of Fecatex (a liquid that promotes egg flotation and concentration) was added to the vial, up to the first line. Then, 4 g of fecal material were added and mixed thoroughly, bringing the mixture up to the second line of the vial at 30 ml. The mixture was poured through a sieve into a paper cup to sift out large fibers and other material. The mixture was drawn up into a syringe and injected into the two chambers of the McMaster slide, so that each chamber was full and there were no air bubbles. The slide was examined under 10x power, magnifying the eggs 100 times. Each chamber was examined separately and the egg counts totaled. At this magnification, the width of each column of the grid could be easily seen, and eggs were counted by column. Total eggs counted in each sample were recorded. Each chamber holds 0.15 ml of the mixture, for a total volume of 0.3 ml per slide. Because the mixture started with 4 g fecal material, the egg count is multiplied by 25 to determine the approximate number of eggs per gram of fecal material ("Paracount-EPG Fecal Analysis Kit, 2012.

Parasite eggs were identified based on appearance, based on a publication by Utah State University Cooperative Education (Evans, 2009). Large and small strongyle eggs are identical in appearance, but that is not significant considering all dewormers treat both types of strongyles. Strongyle eggs were the only type seen in fecal egg count tests performed in this study.

Each horse was classified as a low, medium, or high contaminator based on their fecal egg count results, on a scale utilized by Kaplan and Nielsen (2010). The contamination levels are:

- 0-199 epg: low contaminator
- 200-499 epg: medium contaminator
- 500+: high contaminator.

After identification of parasites for each barn, recommendations were made suited to each barn based on results of their individual horses. It was recommended that barns deworm low contaminators in early spring and late fall with a dewormer that treats tapeworms, because they may not appear on a fecal test of a horse infected with tapeworms. Medium contaminators should be treated these two times plus an additional treatment in the summer. High contaminators should be treated as such plus another additional treatment in the summer, and dewormers should be rotated.

III. Results and Statistical Analysis

Raw Data and Results

Results showed that parasite eggs were recovered from 55% of the total horses tested. In this study, fecal material from a total of sixty horses residing at six different barns was examined for the presence of parasite eggs. Of all horses examined, 33 (55%) were positive for the presence of parasite eggs. The overall parasite burden was divided into three categories (low, medium, high). Information about the horses and egg recovery for each of the 6 barns tested in this study are provided in Tables 4-9 (Appendix A). Horses that tested positive for parasites were present in each barn studied. Bar graphs comparing the relative egg burden of each horse before and after deworming treatment are listed in Figures 5-10.

In Barn A (Table 4), 2 of the 12 horses tested positive for parasites (16.7%), an average of 23 eggs per horse before treatment and 4 eggs per horse after treatment, an 82.6% reduction in total parasite load. Both the positive horses were classified as low contaminators. A bar graph with horse names and egg counts before and after deworming treatment is provided in Figure 5.

In Barn B (Table 5), 9 of the 20 horses tested positive for parasites (45%), an average of 454 eggs per horse before treatment and 0.8 eggs per horse after treatment, a 99.8% reduction in total parasite load. Here, 6 were classified as high contaminators, 1 was medium, and 2 were low. A corresponding bar graph of parasite positive horses is provided in Figure 6.

In Barn C (Table 6), all of the 5 horses tested positive for parasites (100%), with an average of 820 eggs per horse before treatment and 0 eggs per horse after treatment, a 100% reduction in total parasite load. Four were classified on high contaminators and 1 was medium. A corresponding bar graph of parasite positive horses is provided in Figure 7.

In Barn D (Table 7), 6 of the 8 horses tested positive for parasites (75%), with an average of 397 eggs per horse before treatment. In this case, 3 horses were high contaminators, 2 were medium, and 1 was low. A corresponding bar graph of parasite positive horses is provided in Figure 8.

In Barn E (Table 8), 6 of the 10 horses tested positive for parasites (60%), with an average of 263 eggs per horse before treatment and 0 eggs per horse after treatment, a 100% reduction in total parasite load. Two horses were high contaminators, 2 were medium, and 2 were low. A corresponding bar graph of parasite positive horses is provided in Figure 9.

In Barn F (Table 9), all 5 horses tested positive for parasites (100%), with an average of 1295 eggs per horse before treatment and 0 eggs per horse after treatment, a 100% reduction in parasite load. Here, 3 horses were high contaminators, and the remaining 2 were low. A corresponding bar graph of parasite positive horses is provided in Figure 10.
Information about horse care procedures (turnout, stocking rate, manure removal in pastures) and previous parasite deworming procedures are provided in Table 10. In Barns A and B, the majority of the horses were negative for parasites. These barns had the highest population of horses on the property at 24 and 70, respectively. Other than these two data points, there appeared to be no correlation between number of horses and percentage of horses positive for parasites. Barn A showed the lowest percentage of parasite positive horses (12.5%) and B showed the second lowest percentage (45%). The deworming programs at these two barns were similar, treating all horses every 8 weeks. Barn A rotated deworming products, while Barn B used the same products for each treatment. A corresponding bar graph is provided in Figure 11.

Factors that did not seem to correlate with parasite load include number of hours per day of turnout, stocking rate, and manure removal. A bar graph corresponding with the number of hours turned outside per day is provided in Figure 12. Stocking rate also did not seem to correlate with parasite burden; Barn F, with the lowest stocking rate of 0.09, showed 100% parasite infection. Barn A, which had the highest stocking rate of 3.8, had the lowest parasite burden of just 12.5%. Other than these two data points, there appeared to be no correlation between stocking rate and parasite load. A corresponding bar graph is provided in Figure 13. Barns D and E practiced removal of manure from pastures, but the majority of horses in each of these barns were positive for parasites, which was also the case in Barns C and F, which did not practice manure removal. Barns A and B had less than 50% parasite load, but also did not practice manure removal.

**Statistical Analysis**

**Total means and standard deviations**

The average eggs per horse before treatment for all barns combined was 428.75 (± 683.44). The average eggs per horse after treatment for all barns combined was 1.44 (± 5.89). This data is shown in Figure 1.

**Figure 1: Means and standard deviations for all barns combined**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sum</th>
<th>Mean</th>
<th>Std Dev</th>
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</thead>
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<tr>
<td>epgbefore</td>
<td>25725.00</td>
<td>428.75</td>
<td>683.44</td>
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</table>

**Pairwise Comparisons of all Barns**

Proc anova in SAS shows that at least one of the barns is significantly different in parasite load before treatment (\( p = 0.0078 \)). Further analysis by Tukey’s adjustment for multiple comparison shows that before treatment parasite loads are significantly different between Barns A and F (\( p = 0.0040 \)), and Barns E and F (\( p = 0.0403 \)). This data is shown in Figures 2 and 3.
Comparison of Barn A and Barn B

A comparison of Barns A and B was of interest due to their similarities in deworming protocol. There does appear to be a trend in the raw data that Barn A had a lower parasite load before treatment than Barn B. However, proc glm in SAS showed that this difference was not significant (p = 0.0559). This data is shown in Figure 4.

Figure 4: Parasite load before treatment in Barns A and B

![Distribution of eggs before treatment](image)

Parasite load before treatment averaged over sex

Proc glm in SAS showed that parasite load differences between mares and geldings were not significant (p = 0.2462). The stallion at Barn B had the only significant difference between sexes, showing a higher parasite load than the mares and geldings at Barn B (p = 0.0065).

Table 3: Parasite load before treatment averaged over sex

<table>
<thead>
<tr>
<th>Barn</th>
<th>M (mares)</th>
<th>G (geldings)</th>
<th>S (stallions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>21 ± 51 (n = 6)</td>
<td>25 ± 61 (n = 6)</td>
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<tr>
<td>B</td>
<td>650 ± 764 (n = 4)</td>
<td>257 ± 487 (n = 15)</td>
<td>2625 ± 0 (n = 1)</td>
</tr>
<tr>
<td>C</td>
<td>525 ± 35 (n = 2)</td>
<td>1017 ± 713 (n = 3)</td>
<td>n/a</td>
</tr>
<tr>
<td>D</td>
<td>279 ± 269 (n = 7)</td>
<td>0 ± 0 (n = 1)</td>
<td>1225 ± 0 (n = 1)</td>
</tr>
<tr>
<td>E</td>
<td>412 ± 487 (n = 4)</td>
<td>163 ± 199 (n = 6)</td>
<td>n/a</td>
</tr>
<tr>
<td>F</td>
<td>1608 ± 1565 (n = 3)</td>
<td>825 ± 955 (n = 2)</td>
<td>n/a</td>
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</tbody>
</table>

IV. Discussion

Parasite infection was prevalent in each barn in this study. In all 6 barns, parasites were found in varying amounts. The average eggs per horse before treatment for all barns combined was 428.75 (± 683.44) (Figure 1). This mean falls in the “intermediate contaminator” category of egg-shedders, supporting the conclusion that horses in the mid-South region typically have a moderate parasite load. Parasites are in fact a significant issue that must be treated aggressively to produce parasite-free horses. The average eggs per horse after treatment for all barns combined was 1.44 (± 5.89), which can be considered equal to 0 due to the large standard deviation. Basic trends from the raw data appear to show that barns that dewormed relatively frequently had minimal parasite loads, and barns with infrequent or no deworming program had relatively high parasite loads. However, further statistical analysis shows minimal differences between barns.

One might expect Barns C and D, which had no regular deworming program, to show higher parasite load before treatment than the other barns. Surprisingly, the only significant differences between barns were Barns A and F, and Barns E and F (Figure 2 and 3). These results may indicate some natural immunity of horses that were not routinely dewormed, or even some parasite resistance in horses that are regularly dewormed.

Barns A and B were of interest because both had a very similar deworming program. Because both programs included recurring treatments every 8 weeks, the “before treatment” samples can be assumed equal to “8 weeks after treatment” values and therefore of interest when comparing effectiveness of these two barns. The only differences between these barns are products used rotation of products vs. single product and location of the barn. Barn A rotated products, treating with a different drug each deworming, while Barn B used the same drug (moxidectin) every time, with the addition of praziquantel every third deworming. The author recognizes that location may in fact be an important factor, but due to the observational nature of this study, one must assume location is non-significant in order to evaluate differences between products used. There does appear to be a trend that Barn A had a lower parasite load before treatment than Barn B (Figure 4). However, proc glm in SAS showed that this difference was not significant (p = 0.0559). Further studies are needed to evaluate the benefits of deworming programs that rotate products vs. use a single product.
Sex of the horses was considered a potential factor in determining parasite load before treatment. Proc glm showed that mares and geldings did not differ significantly in parasite load before treatment (p = 0.2462). The stallion at Barn B did show a significantly higher load than the mares or geldings at Barn B (p = 0.0065), but this effect can not be validated considering there was only one stallion at Barn B. The stallion at Barn D did not show a significantly higher parasite load than the mares or geldings at Barn D (Table 3). Based on these statistics, this study concludes that sex is not an important factor in determining parasite load. However, raw data suggests that both stallions in this study had higher parasite loads than mares or geldings, so further studies may be of interest to evaluate this conclusion.

In some cases, parasite infection did appear to affect the health of the horses. A few of the horses in Barn C had long, rough hair coats and pot-bellied appearance. One of the horses, a recent rescue, was very thin at a body condition score of 3, and appeared to be in poor health condition. It also carried one of the heaviest parasite burdens in the study at 1750 eggs-per-gram before deworming; however, this difference is not supported by statistical analysis. Horses in Barn D were dewormed twice yearly with diatomaceous earth, a remedy that is considered by many veterinarians to be ineffective (Haffner, 2012). However, these horses had a better physical appearance and their health seemed unaffected by the parasite burden. It is well known that well-fed, otherwise healthy animals tolerate parasite burden better than poorly fed or otherwise unhealthy animals. The affect of parasites on the horses’ health may depend on many other factors such as age, duration of infection, nutrition, and environment.

Treating all horses without knowledge of their contaminator level in an unnecessary expense. Also, deworming programs depend on horse owners’ preferences of whether they want to completely eradicate parasites, or maintain low levels. Low levels may be the most ideal goal, as overuse of dewormers may lead to parasite resistance and more costly treatments. Results from this study suggested that in the mid-South region, an aggressive deworming program can prove effective. This is despite potential parasite resistance and a temperate climate which favors egg viability in the environment. However, a deworming program can be made more efficient by performing fecal tests on all horses to assess their need of treatment.

References
### Appendix A. Results Tables and Figures

#### Table 4. Fecal egg counts for 12 horses at Barn A.

<table>
<thead>
<tr>
<th>Horse ID</th>
<th>Age (Y)</th>
<th>Sex</th>
<th>BCS</th>
<th>Count x 25 before</th>
<th>Count x 25 after</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annie</td>
<td>7</td>
<td>M</td>
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<td>Cheyenne</td>
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<tr>
<td>Duke</td>
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<td>G</td>
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<td>0</td>
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<tr>
<td>Flower</td>
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<td>M</td>
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<td>0</td>
<td>0</td>
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</tr>
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<td>0</td>
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<td>G</td>
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<td>Lady</td>
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<td>M</td>
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<td>0</td>
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</tr>
<tr>
<td>Nick</td>
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<td>G</td>
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<td>Penny</td>
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<td>G</td>
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<tr>
<td>Shebe</td>
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<td>M</td>
<td>5</td>
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</tr>
<tr>
<td>Spike</td>
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<td>G</td>
<td>5</td>
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</table>

**Figure 5. Fecal egg counts for 12 horses at Barn A.**

#### Table 5. Fecal egg counts for 20 horses at Barn B.

<table>
<thead>
<tr>
<th>Horse ID</th>
<th>Age (Y)</th>
<th>Sex</th>
<th>BCS</th>
<th>Count x 25 before</th>
<th>Count x 25 after</th>
<th>Classification</th>
</tr>
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<tbody>
<tr>
<td>Ava</td>
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<td>Butler</td>
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<td>G</td>
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<td>Calaway</td>
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<td>G</td>
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</tr>
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<td>Doc</td>
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<td>Embrace</td>
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<td>Gabe</td>
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<td>G</td>
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<tr>
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**Figure 6. Fecal egg counts for 20 horses at Barn B.**
Table 6. Fecal egg count results for 5 horses at Barn C.

<table>
<thead>
<tr>
<th>Horse ID</th>
<th>Age</th>
<th>Sex</th>
<th>BCS</th>
<th>Count x 25 before</th>
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<td>Legs</td>
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<td>Big Eddie</td>
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<td>G</td>
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<td>high</td>
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<td>Bonnie</td>
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<td>M</td>
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<td>550</td>
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<td>Doo-dah</td>
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<td>975</td>
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<td>Little Eddie</td>
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<td>325</td>
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Figure 7. Fecal egg count results for 5 horses at Barn C.

Table 7. Fecal egg count results for 8 horses at Barn D.

<table>
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<th>Horse ID</th>
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<td>Kolita</td>
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</table>

Figure 8. Fecal egg count results for 8 horses at Barn D.
Table 8. Fecal egg count results for 10 horses at Barn E.

<table>
<thead>
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<th>Age (Y)</th>
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<td>Bailey</td>
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<td>8</td>
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</tr>
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<tr>
<td>Noa</td>
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<td>Skip</td>
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<tr>
<td>Tucker</td>
<td>9</td>
<td>G</td>
<td>6</td>
<td>375</td>
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Figure 9. Fecal egg count results for 10 horses at Barn E.

Table 9. Fecal egg count results for 5 horses at Barn F.

<table>
<thead>
<tr>
<th>Horse ID</th>
<th>Age</th>
<th>Sex</th>
<th>BCS</th>
<th>Count x 25 before</th>
<th>Count x 25 after</th>
<th>Classification</th>
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<td>Dixie</td>
<td>11</td>
<td>M</td>
<td>8</td>
<td>1500</td>
<td>0</td>
<td>high</td>
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<tr>
<td>Dolly</td>
<td>15</td>
<td>M</td>
<td>6</td>
<td>100</td>
<td>0</td>
<td>low</td>
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<tr>
<td>Doobie</td>
<td>5</td>
<td>G</td>
<td>6</td>
<td>1500</td>
<td>0</td>
<td>high</td>
</tr>
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<td>Lacey</td>
<td>5</td>
<td>M</td>
<td>8</td>
<td>3225</td>
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<td>Scout</td>
<td>9</td>
<td>G</td>
<td>8</td>
<td>150</td>
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<td>low</td>
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</table>

Figure 10. Fecal egg count results for 5 horses at Barn F.
Impact of Deworming Treatments on Intestinal Parasite Load in Equines from Middle Tennessee

Figure 11. The number of horses for all barns vs. the percentage of these horses that tested positive for parasites

Figure 12. The average hours of turnout for horses in each barn vs. the percentage of these horses that tested positive for parasites

Figure 13. The average stocking rate in pastures for each barn vs. the percentage of these horses that tested positive for parasites

Figure 14. The frequency of deworming in each barn vs. the percentage of these horses that tested positive for parasites
### Escaping Eden: Milton, Melancholy, and Radcliffe’s Gothicism

Sarah Gray-Panesi

**Abstract**

Alison Milbank begins her article, “Milton, Melancholy, and the Sublime in the ‘Female’ Gothic from Radcliffe to Le Fanu” by establishing that the “emotional centre” of the Female Gothic “is melancholy, and its primary source Milton’s ‘Il Penseroso’” (143). However, neither Milbank, nor any other scholars examine the relationship between Milton’s “Il Penseroso” and the Gothic. This paper explores one of the more pressing questions arising from Milbank’s article: in precisely what ways does the influence of Milton’s “Il Penseroso” manifest itself in Ann Radcliffe’s novels? Milbank opens the door for such an examination with close readings of several of Radcliffe’s poems interspersed throughout her first four novels; however, this essay picks up where Milbank leaves off by providing an examination of the scenes surrounding these poems to elucidate the extent to which Radcliffe’s conception of melancholy depends upon Milton’s. This project illustrates that while many of Radcliffe’s scenes read as re-writings of Milton’s Paradise Lost and A Mask Presented at Ludlow Castle, they have their foundations firmly laid in the Companion Poems and especially in “Il Penseroso.”

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#### Table 10. Information about horse care procedures provided by Barns A-F

<table>
<thead>
<tr>
<th>Barn</th>
<th>No. of horses</th>
<th>Turnout (hrs/day)</th>
<th>Stocking rate (ave. horses/acre)</th>
<th>Ever done FEC?</th>
<th>Manure Removal (pastures)</th>
<th>Frequency of Deworming</th>
<th>Products Used</th>
<th>Dosage</th>
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<tr>
<td>A</td>
<td>24</td>
<td>12</td>
<td>3.8</td>
<td>yes</td>
<td>no</td>
<td>8 week</td>
<td>rotate Ivermectin and Pyrantel Pamoate</td>
<td>1 tube per horse</td>
</tr>
<tr>
<td>B</td>
<td>70</td>
<td>2-6</td>
<td>1.5</td>
<td>no</td>
<td>no</td>
<td>8 weeks</td>
<td>Moxidectin, adding Praziquantel every 3rd deworming</td>
<td>1 tube per horse</td>
</tr>
<tr>
<td>C</td>
<td>5</td>
<td>16</td>
<td>1.0</td>
<td>no</td>
<td>no</td>
<td>never</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>D</td>
<td>8</td>
<td>24</td>
<td>1.0</td>
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<td>yes</td>
<td>twice yearly</td>
<td>diatomaceous earth (mixed into feed)</td>
<td></td>
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<tr>
<td>E</td>
<td>20</td>
<td>14</td>
<td>0.5</td>
<td>no</td>
<td>yes</td>
<td>twice yearly</td>
<td>rotate Ivermectin and Ivermectin plus Pyrantel, Pamoate and Praziquantel</td>
<td>1 tube per horse</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>12</td>
<td>0.09</td>
<td>no</td>
<td>no</td>
<td>twice yearly</td>
<td>rotate Ivermectin and Montelcortin plus Praziquantel</td>
<td>1 tube per horse</td>
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The moment Sandra Gilbert and Susan Gubar's pivotal feminist Gothic study *The Madwoman in the Attic* appeared in 1979, Milton studies experienced a sea change that continues to influence scholarship today. Gilbert's brazen attack on Milton's Eve in her chapter “Milton's Bogey: Patriarchal Poetry and Women Readers” inspired a number of articles and book length studies aimed at repairing the damage done to Milton by Gilbert's claim that he deliberately aligns Eve not only with Sin but also with Satan. 1 Gilbert's new “unholy trinity,” appearing when feminist discourse itself came under fire, inspired decades of study, which still attempts to answer questions raised in Gilbert and Gubar's *Attic*, not the least of which is whether Milton was a misogynist, a philologist, or simply a product of his times. 2 To say nothing of the doors opened for feminist Milton studies, though, Gilbert's chapter at the very least forced scholars to reconsider Milton's influence on later authors, both male and female. Their explorations—surely much to Gilbert's chagrin—discover a poet and polemicist whose several works were not only respected but also imitated, adapted, and alluded to in countless eighteenth-century and Romantic poems, plays, novels, and political texts.

Recognizing that scholars will likely never answer the question of Milton's misogyny, a significant body of criticism instead attempts to rehabilitate Eve—and Milton with her—via readings and analyses in response to *The Madwoman in the Attic*, while another body of criticism addresses Milton's "bogey" itself as Gilbert defines it: "a Word of power, and the Word is Milton's." 3 My study joins the latter group. By exploring the extent to which Milton was less a bogey than a benefactor, especially for authors such as Ann Radcliffe, who effectively built their aesthetic principles using Milton's poetry as a blueprint. Gilbert would have us believe Milton's very manuscripts acted as creative roadblocks not only for the nineteenth-century authors with whom her study is concerned, but also for eighteenth-century writers, and especially for women poets and novelists of both centuries. Gilbert claims that the "sensitive female reader" would have recognized the "shadowy" gestures toward "connections, parallels, and doublings among Satan, Eve, and Sin" in *Paradise Lost* and felt the "historical dispossession and degradation of the female principle," as well as the subsequent creative oppression elicited by Milton's epic. 4 However, even a cursory examination of Radcliffe's novels reveals she did not labor under the pall of Milton's so-called bogey. On the contrary, Milton's presence in Radcliffe's fiction is salutary and inspirational, not only for her heroines, but also for her readers.

A few scholars already have begun examining Milton's influence on Radcliffe: Maggie Kilgour establishes Radcliffe's Female Gothic plot in *The Mysteries of Udolpho* as a retelling of Milton's *A Masque Presented at Ludlow Castle* (*Comus*), Anne Williams outlines the same plot as a retelling of *Paradise Lost*s "fortunate fall," and Alison Milbank gives Milton and *Paradise Lost* almost sole credit for inspiring Radcliffe's model for the Female Gothic heroine in all her novels. 5 However, when we consider that for the past two decades only a few book chapters investigate in any detail the relationship between Milton and Radcliffe, it becomes clear that this subject requires deeper scrutiny. The problem is not one of association; the problem is a lack of variety in association. The above studies are promising in that they point toward the importance of Milton's lyric poetry for Radcliffe's aesthetic, but they are also limiting in that they quickly retract such postulations in order to return focus to Milton's epic. It is only when we expand the scope of study to include Milton's shorter poetry, especially "L'Allegro" and "Il Penseroso," with their emphases on mood and landscape, that we can recognize the extent to which Milton inspires Radcliffe's fiction.

Admittedly, Radcliffe is more often aligned with Shakespeare than with Milton, which was often the case with eighteenth-century women writers, since Shakespeare, like most women at the time, was not formally educated. Also, in addition to receiving the moniker "The Shakespeare of Romance Writers" based on her tendency toward poetic landscape description, Radcliffe unapologetically mines Shakespeare's work for the bulk of her epiphrases. 6 While scholarly connections between Radcliffe and Shakespeare are thus easily explained, her connection with Milton requires significantly more study. Both connections, however, suffer from narrow readings privileging only a few works as possible influences for Radcliffe's fiction. In Milton's case, that influence is *Paradise Lost*. Annette Wheeler Caffarelli, though, is one of the first—and unfortunately one of the last—to recognize and explore what "is often noticed but never explained" about Radcliffe's relationship with Milton: "almost all of Radcliffe's many Miltonic mottos and quotations are taken from the shorter works... . But Milton's poem on the transgression of Eve is conspicuously absent from Radcliffe's program of references." 7 Why, then, this preoccupation with establishing *Paradise Lost* as primogenitor of the Gothic? Caffarelli suggests Wordsworth's "mistaken assertion" that *L'Allegro* and *Il Penseroso* were little known in the eighteenth century provides one possible explanation, but another more likely reason for this alignment arises from Radcliffe's reliance upon Edmund Burke's theories of sublimity and beauty in his

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2 The Feminist Sex Wars occurring in the late 70s and early 80s resulted in polarized feminist views characteristic of third wave feminism. Gilbert remarks in her chapter that Milton was a "known misogynist."

3 Gilbert and Gubar, "Milton's Bogey," 192. Joseph Wittreich's *Feminist Milton* is a prime example of a response to Gilbert and Gubar's text. Gilbert notes early in her chapter that Virginia Woolf's journal contained an undefined reference to "Milton's bogey." This chapter is Gilbert's attempt at defining the bogey and how it influenced 18th- and 19th-century women writers.


5 See Maggie Kilgour's *The Rise of the Gothic Novel* (1995), Anne Williams's *The Art of Darkness* (1995), and Alison Milbank's "Milton, Melancholy and the Sublime" (1994) as well as her introduction to Radcliffe's *The Castle of Athlin and Dornaway* (1996 and 1995). Readers may note that these studies are somewhat dated; however, they do represent the most "recent" work on the topic at hand.

6 Nathan Drake provided this nickname in *Literary Hours* (1800).

Philosophical Enquiry (1757). Radcliffe discusses Burke’s theories in the prologue to her posthumously published Gaston de Blondeville (1826). This prologue, which first appeared separately in the New Monthly Magazine under the title “On the Supernatural in Poetry,” contains Radcliffe’s only commentary on aesthetic theory:

> Terror and horror are so far opposite that the first expands the soul, and awakens the faculties to a high degree of life; the other contracts, freezes, and nearly annihilates them. I apprehend, that neither Shakespeare [sic] nor Milton by their fictions, nor Mr. Burke by his reasoning, anywhere looked to positive horror as a source of the sublime, though they all agree that terror is a very high one; and where lies the great difference between horror and terror, but in the uncertainty and obscurity, that accompany the first, respecting the dreaded evil? 8

Here, Radcliffe places her three most prominent influences—Shakespeare, Milton, and Burke—in conversation with one another in order to comment on the importance of distinguishing between objects of terror and horror in poetry. To exemplify the differences between the two sensations, Radcliffe employs Milton’s Satan, depicted in Book IV of Paradise Lost with “horror” on his brow, to explain that even though Milton chooses the term “horror,” “this image imparts more of terror than of horror; for it is not distinctly pictured forth, but is seen in glimpses through obscuring shades.” 9 This distinction not only establishes the importance of obscurity for Radcliffe’s terror aesthetic but also gestures toward Burke’s comments on obscurity in his Philosophical Enquiry. In fact, Radcliffe’s aesthetic can be read as a response to Burke’s theory of the sublime.

Burke establishes obscurity as the only means by which an object may become truly terrific and thereby achieve absolute sublimity. As long as a given object can be known to its fullest extent, can be seen clearly, it cannot be sublime. Burke illustrates his point using the darkness of night as his prime example of how otherwise mundane objects might inspire fear/terror when obscured from sight. Most importantly, Burke identifies Milton as the only writer who “understood the secret of heightening, or of setting terrible things . . . in their strongest light by the force of a judicious obscurity.” 10 However, Burke employs the portrait of Death in Book II of Paradise Lost to ground his aesthetic theory:

> The other shape, Of shape it might be call’d that shape had none Distinguishable in member, joint, or limb, Or substance might be call’d that shadow seem’d For each seem’d either; black it stood as Night,

Fierce as ten Furies, terrible as Hell, And shook a dreadful Dart; what seem’d his head The likeness of a Kingly Crown had on. 11

For Burke, Milton’s image of Death is the ur-sublime. Rather than disagreeing with Burke, though, Radcliffe uses her discussion of Milton’s Satan to prove that even when Milton employs the term “horror,” he does so while leaving all other characteristics to the reader’s imagination. But, unlike Burke, Radcliffe is not crafting new aesthetic theories; rather, she uses her prologue to expand upon an aspect of sublimity which Burke—ironically—allows to remain obscured: the contrasting roles that terror and horror play in eliciting or precluding sublimity. Radcliffe chooses Milton’s depiction of Satan hemmed round by the Angelic Squadron because it places the reader outside the circle of angels, straining for a clear view of the “Spear and Shield” that Satan “seem’d” to hold. 12 Radcliffe’s example safely separates the reader from Satan by an Angelic Squadron. This throws into contrast Burke’s example, which provides no such barrier between the reader and Death. In short, Radcliffe subtly deploys Burke’s own theories against him. In the most quoted section his Philosophical Enquiry, “Of the Sublime,” Burke states, “When danger or pain press too nearly, they are incapable of giving any delight.” 13 On the one hand, Radcliffe’s tactical scene selection allows her to ensure she provides the distance necessary to achieve sublimity and, on the other hand, illustrates that she may understand Burke’s aesthetic theory better than he.

Unfortunately, employing examples from Paradise Lost in “On the Supernatural in Poetry,” tactical though they may be, establishes the epic as Radcliffe’s prime source of Miltonic inspiration for many academics. Discussions of the above aesthetic theories are now central to any examination of Radcliffe’s conception of sublimity, and scholars have continually allowed the examples Radcliffe uses to outline her theory—Hamlet, Macbeth, and Paradise Lost—to problematize connections with any other texts or authors. However, though Radcliffe establishes sublimity and its presence in these three works as a pivotal concern in her work, scholars must not fall prey to the assumption that these few directly referenced works are the only ones useful for further analysis. Furthermore, we must not allow such assumptions to preclude our attempts to engage with and analyze other aesthetic concerns within her work. Instead, the paucity of Radcliffe scholarship in general should have researchers battling for every opportunity to shed new light on her life and work.

The pitfalls for Gothic scholars of narrowly focusing on Paradise Lost become evident in such works as Alison Milbank’s “Milton, Melancholy and the Sublime” and her introduction to Radcliffe’s very little read and often forgotten first novel, The Castles of Athlin and Dunbayne (1798). 14 In both of these studies, Milbank establishes that the

11 Milton, Paradise Lost, Book 2, lines 666-673.
12 Milton, Paradise Lost, Book 4, lines 977-990.
13 Burke, A Philosophical Enquiry, 36.
14 Milbank is the only scholar to deal repeatedly and in any depth with Milton’s influence on Radcliffe.
“emotional centre” of the Female Gothic “is melancholy, and its primary source Milton’s ‘Il Penseroso’”.

The goddess leads the poet first to contemplation in a garden, to a wilder landscape, to tales of tragedy and ancient chivalry, and lastly to ‘the studious cloisters pale’ of an ancient abbey, and a hermit’s cell. This perambulation sets off the chain of associations between landscape, the medieval past and its religious architecture that will engender the Gothic novel, but it also defines a mood that will dominate eighteenth-century nature poetry of sad and solitary meditation.15

At this point in “Milton, Melancholy and the Sublime,” Milbank notes that “Il Penseroso’s” melancholy functions as a foundation for many of the most well-known Gothic writers, including Radcliffe.16 However, she does not examine the relationship between “Il Penseroso” and the Gothic any further. Instead, she insists that even though “the word ‘melancholy’ only occurs a couple of times in Paradise Lost, the condition is one of the consequences of the Fall, so that the reader’s attitude to the depiction of the delights of Eden is melancholic, since what is described has been lost.”17 Thus, having established this “connection” between the Gothic and Milton’s epic, Milbank uses her theory of loss to add to the ever-growing library of psychoanalytic readings associated with Gothic fiction. She treats “Il Penseroso” as a model for the Gothic “mood” in a similar fashion in her introduction to The Castles of Athlin and Dunbayne. Here, Milbank opens with a Freudian/Kristeva psychoanalysis of the Gothic which, for her, proves Eden’s presence as loss in Radcliffe’s text and the Gothic in general. However, mid-study, she pauses to remind readers that Milton’s “‘Il Penseroso’ is the ‘common buried source’ in the graveyard poets’ twilight poems and therefore in the Gothic.”18 But Milbank quickly notes that even though “Il Penseroso” was vastly popular in the early eighteenth century, “so also was Paradise Lost, which also has some powerful evening scenes,” and returns again to the Garden of Eden.19 In these two studies—which unfortunately comprise the bulk of direct comparative studies between Milton and Radcliffe—we witness the back-pedaling required to maintain Paradise Lost as the primary source of Gothic melancholy.

While Milbank’s and other scholars’ seeming refusal to recognize Milton’s “Il Penseroso” as a significant influence on Radcliffe is interesting, their work nonetheless establishes a foundation upon which to raise such a project. Cafarelli, Milbank, Kilgour, and Williams provide a starting point. Kilgour, Cafarelli, and Milbank all recognize that the unnamed Lady of Comus almost certainly provides Radcliffe with her model for the Female Gothic heroine.20 Moreover, they each mention “Il Penseroso’s” central role in establishing the Gothic’s melancholic atmosphere.21 Chloe Chard investigates this atmosphere and its debt to the graveyard poets and Milton in her introduction to Radcliffe’s The Romance of the Forest (1791), noting that Radcliffe’s allusions to such poems as Collins’s “Ode to Evening” and Thomson’s “Seasons” themselves gesture back even farther to their own legacy in Milton’s “‘Il Penseroso.”22

Contrasting Chard’s introduction with Milbank’s arguments in “Milton, Melancholy and the Sublime” illustrates in greater detail the problems that arise from restricting Radcliffe’s possible sphere of influence only to Paradise Lost. Unlike Chard, who examines several scenes and postulates several possible influences, Milbank explores one poem, “Stanzas,” composed by Adeline, the novel’s heroine, as she watches the sun set over a lake.23 Milbank determines that the masculine sun descending into the feminine lake represents Radcliffe’s retelling of Adam and Eve’s sexual union as described in Book IV of Paradise Lost. However, while one may hear soft echoes of Eden when the lines are excised from the scene in which Adeline composes them, by replacing them in their proper context, the lines reclaim their associations with Milton’s “L’Allegro” and “Il Penseroso” as Radcliffe almost certainly intended.

The scene in question focuses on Adeline as she explores the home of her new protector, La Luc. As Gothic heroines are wont to do, she rambles “alone through scenes, whose solitary grandeur assisted and soothed the melancholy of her heart.”24 Owing to La Luc’s well-stocked library, Adeline frequently takes “a volume of Shakespeare [sic] or Milton, and, having gained some wild eminence,” sits beneath the trees and allows the breeze and “the visions of the poet to lull her to forgetfulness of grief.”25 During one of these solitary strolls, Adeline comes to a lake at sunset behind which sets a ruined castle in the mountains. A group of travelers sail in a pleasure boat on the water while one in their party plays a French horn. Listening to the music and watching the scene, Adeline finds herself inspired to compose the “Stanzas”26 to which Milbank refers:

Now down the western steep slow sinks the sun,
And paints with yellow gleam the tufted woods;
While here the mountain-shadows, broad and dan,
Sweep o’er the chrysal mirror of the floods.

21 Indeed, it is not uncommon for studies involving Milton and Radcliffe to mention the relationship between “Il Penseroso” and Gothic melancholy in passing. However, none explores this relationship in close detail.
23 Interpreting poetry in her novels was standard practice for Radcliffe, especially in The Romance of the Forest and The Mysteries of Udolpho.

16 Milbank also points out the “Graveyard” poets—usually listed as Young, Thomson, Beattie, Gray, and Collins—as key influences for Radcliffe and the Gothic. A list which, when Shakespeare and Milton are added, covers the majority of poets Radcliffe quotes in her epigraphs.
19 Milbank, Introduction, xvii-xix.
In the soft blush of light’s reflected power,
The ridgy rock, the woods that crown its steep,
Th’ illumin’d battlement, and darker tower,
On the smooth wave in trembling beauty sleep.

How sweet that strain of melancholy horn!
That floats along the slowly-ebbing wave,
And up the far-receding mountains borne,
Returns a dying close from Echo’s cave!

Hail! Shadowy forms of still, expressive Eve!
Your pensive graces stealing on my heart,
Bid all the fine-attun’d emotions live,
And Fancy all her loveliest dreams impart.

Returned to their proper context, Radcliffe’s lines point directly to Milton’s “Il Penseroso” in mood, and “L’Allegro” in subject. Granted, Milbank notes the similarities between Milton’s “Towers and Battlements it sees / Bosom’d high in tufted Trees” and Radcliffe’s battlement and darker tower; however, she focuses her attention on Milton’s inclusion in “L’Allegro” of the word “bosom’d” in order to point toward a sexual reading of both Radcliffe’s and Milton’s poems. To be sure, one notes a certain bawdiness in Milton’s association of the “[b]osom’d” towers and battlements with a “beauty” who may lie within “[t]he Cynosure of neighboring eyes.” However, Milbank’s attempt to establish the same sexual undertones in Radcliffe’s “Stanzas” serves only to illustrate the problems that arise when scholars refuse to consider alternative influences for a given text. It makes more sense that in a poem describing a landscape, the writer would turn to poetry of similar content for inspiration. The time of day and landscape, rather than recalling Adam and Eve’s sexual union, recall the “twilight groves” of Milton’s “Il Penseroso”:

Thee Chantress oft the Woods among,
I woo to hear they Even-Song;
And missing thee, I walk unseen
On the dry smooth-shaven Green,

Like one that had been led astray
Through the Heav’n’s wide pathless way;

Oft on a Plat of rising ground,
I hear the far-off Curfew sound,

Over some wide-water’d shor,
Swinging slow with sullen roar;

There in close covert by some Brook,
Where no profaner eye may look,

And the Waters murmuring
With such consort as they keep,
Entice the dewy-feather’d Sleep

These selected lines from Milton’s melancholy poem share too many similarities with Radcliffe’s later “Stanzas” to be ignored. Both poems haunt the same liminal space between day and night in which the soft light plays upon water; both feature a far-off musical sound—Radcliffe’s French horn and Milton’s curfew bell—and both close with the image of waves lapping against the evening shore and lulling the pensive wanderer to restful sleep. Indeed, Adeline is even engaging in the same “wandering” as Milton’s speaker in “Il Penseroso” when she finds the location that inspires her poem.

While examining the effects of de- and re-contextualization on Radcliffe’s “Stanzas” is enlightening, exploring the remaining poems in Radcliffe’s work proves equally interesting. Indeed, if we are searching for ready indices of Milton’s melancholy in Radcliffe’s fiction—and Milbank would have us believe she is—why would we not turn our attention to Radcliffe’s poem “To Melancholy” ostensibly composed by her heroine Emily St. Aubert in her most well-known novel, The Mysteries of Udolpho? One need not read far into this composition to discover its Miltonic roots:

| Spirit of love and sorrow—hail! |
| Thy solemn voice from far I hear, |
| Mingling with ev’n’ngs dying gale: |
| Hail, with this sadly-pleasing tear! |

Radcliffe’s invocation of the melancholy spirit echoes Milton’s, even to the repeated “hail.” The scene that inspires Emily to compose these lines also recalls Milton’s “Il Penseroso.” As the novel nears conclusion, Emily wanders to the foot of a ruined watch-tower where her lover, Valancourt, would listen to her play her lute. On this particular evening, Emily ascends to the chamber at the top of the tower where she watches the sun set over the Pyrenees. While melancholy already saturates this scene—Emily believes her love has forsaken her for the more transitive pleasure of Paris and has come here to lament her loss—Radcliffe inserts a detail that undeniably connects this scene to Milton’s “Il Penseroso.” As Emily looks out of the tower, she sees not only the mountains in the

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26 Radcliffe, The Romance of the Forest, 262–263.
28 Ibid., lines 79-80.
29 Milton, “Il Penseroso,” lines 64-76.
distance, but also “the wood-tops beneath” her window. Situated in a “high lonely Tow’r” from which she calls upon the “lonely spirit” of melancholy to “awake thy lute” and “let thy song / Lead me through all they sacred haunt,” Emily now embodies Milton’s Penseroso.32

Admittedly, Radcliffe’s “To Melancholy” rather blatantly imitates Milton’s “Il Penseroso,” but it also illustrates the level to which Milton influences Radcliffe’s conception of melancholy. Once aligned with the speaker in Milton’s poem, Emily calls upon the melancholy muse to guide her through “pathless” woods where “the cold moon, with trembling eye, / Darts her long beams the leaves between.”33 Further still, Radcliffe gestures toward Milton’s “Even-Song” and “far-off Curnew,” which his speaker hears during his wanderings as Emily hears the “dirges faintly swell . . . from the pillar’d cloister’s cell” as well as the “sad chimes of vesper sound.”34 A heavy-handed imitation to be sure, but it would be difficult to construe Radcliffe’s “To Melancholy” as anything other than an imitation of Milton’s “Il Penseroso.”

While Radcliffe’s “To Melancholy” offers the most obvious allusion to Milton’s “Il Penseroso,” it is certainly not the only one in Radcliffe’s oeuvre, nor does she restrict her allusions to the melancholy aspect of Milton’s companion poems. As early as The Castles of Athlin and Dunbayne, readers hear echoes of Milton’s “L’Allegro” in the poem “Morning,” in which Radcliffe summons Aurora after the rising sun dispels twilight “And melts thy shadows swift away!”35 And though Milbank chooses “Stanzas” from The Romance of the Forest to illustrate melancholy in Radcliffe’s Gothic, Adeline’s poem from the same novel, “Night,” written as “the dusk came silently on, and the scene assumed a solemn grandeur” invokes the “Queen of the solemn thought—mysterious Night!” and determines, after the style of Milton’s Prolusion “Whether Day or Night is the More Excellent,” that night is better than day.36 Further still, even as Radcliffe asserts the value of night over day in The Romance of the Forest, Emily declares in The Mysteries of Udolpho’s “To Autumn” that “more than mirth I prize” the melancholy tear shed remembering happier times, again echoing Milton’s “Il Penseroso.”37

Interestingly, while Radcliffe continues her practice of inserting epigraphs for each chapter in her final novel, The Italian, her heroine, Ellena, does not compose a single poem. Radcliffe does not cease her program of Miltonic allusions in this novel, choosing epigraphs from Lycidas, Comus, and “On the Morning of Christ’s Nativity.” However, she does seem to move away from associating anything but the mood of the piece with Milton’s “Il Penseroso.” Strangely, The Italian, Radcliffe’s only novel written after she had actually had the opportunity to see the scenery she had written about for so long, is conspicuously an “indoor” tale. Ellena spends the majority of the novel at the mercy of Radcliffe’s most Satanic villain, Schedoni. Perhaps the most intriguing aspect of Radcliffe’s The Italian, though, aside from directly confronting the “evils” of the Catholic Church and the Inquisition, is its repeated allusions to Paradise Lost. Perhaps coincidentally, The Italian, though it sold well, was also one of her least popular novels. But the mysteries of this novel are for another study.

Though this study questions scholars’—and especially Milbank’s—tendency to imbue Milton’s Paradise Lost with undue influence over Radcliffe’s fiction, one must concede they do so for a laudable purpose: to help draw eighteenth-century women writers out from under the shadow of Milton’s so-called bogy. Furthermore, rather than attempting to suggest that Radcliffe was not influenced by Milton’s epic, this study hopefully illustrates the extent to which, as Milbank herself states, “Milton was important to literary women of the eighteenth century because of his status as a sublime poet, the very quality that The Madwoman in the Attic regards as a blockage to female creativity.”38 What scholars must remember, though, is that this sublimity manifested itself both in Milton’s epic poetry and in his lyric poetry, and we will only begin fully to understand the extent of his influence on the Gothic when we expand the critical scope to include not only his epic, but also his shorter works. For Radcliffe, to whom landscape description became a poetry of its own, “L’Allegro” and “Il Penseroso” provided a much richer tapestry than Paradise Lost on which to paint her Gothic Garden of Eden.

33 Radcliffe, The Mysteries of Udolpho, 666.
34 Radcliffe, The Mysteries of Udolpho, 666.
36 Radcliffe, The Romance of the Forest, 83-84.
37 Radcliffe, The Mysteries of Udolpho, 592.
Defining Nineteenth-Century Womanhood: The Cult of Marmee and Little Women

Sarah Rivas

Abstract

This paper explores the character of Marmee in Louisa May Alcott’s Little Women in order to illustrate Marmee’s influence on her daughters and the message concerning womanhood and femininity evoked by the novel as a whole. The Cult of Marmee—an eclectic mixture of Barbara Welter’s “Cult of True Womanhood,” feminism, spirituality, transcendentalism, and social reform—drives the plot of Little Women by becoming the standard from which the four March sisters construct their individual identities. This paper establishes Marmee as the primary influence on the March sisters, and therefore as the primary influence on the novel’s plot, while exploring the five elements of the Cult of Marmee as they relate to the novel’s characters and to real nineteenth-century women. Ultimately, any rigid conclusion regarding the novel as feminist or antifeminist must be grounded in an understanding of the novel’s historical context. Alcott offers an imperfect picture of liberated womanhood; in spite of this, however, Little Women’s message of hope for female independence and strength should not be ignored.

Bibliography


O h, my girls, however long you may live, I never can wish you a greater happiness than this!” These are the final words in one of the most beloved children’s stories of all time—Louisa May Alcott’s *Little Women* (380). Mrs. March, or Marmee, speaks these words to her daughters in a family-centered happy ending that has long delighted girls and women alike. Meg, Jo, and Amy are happily married with families of their own, and they seem content to carry on the legacy begun by their mother Marmee. The trials and joys of the four March sisters culminate in domesticity and matrimony, even for rambunctious Jo. But what does it all mean? Is *Little Women* simply a confirmation of rather repressive nineteenth-century gender roles, or is it a subversive text meant to inspire young girls to independence and self-sufficiency? This remains perhaps the most controversial debate connected with *Little Women*. Remarkably, throughout this critical debate, Marmee has been largely ignored; however, her philosophies influence each of the four girls’ actions, and this influence causes them to make the decisions that ultimately drive the novel’s plot. The existing feminist debate concerning *Little Women* stems in part from inconsistencies in Marmee’s philosophy, leaving readers to wonder exactly what Marmee believes. Nevertheless, what Marmee believes may be one of the most important elements of the novel. The Cult of Marmee—an eclectic mixture of Barbara Welter’s the “Cult of True Womanhood,” feminism, spirituality, transcendentalism, and social reform—drives the plot of *Little Women* by becoming the standard from which the four March sisters construct their individual identities. Critics, including Gregory K. Eiselein and Anne Phillips, cite Marmee as a fictional construction of Abba Alcott, Louisa’s own mother (196). As a result, much of the scholarly attention paid to Marmee remains almost exclusively autobiographical in nature. Madeleine Stern’s biography *Louisa May Alcott* (1985) provides the most scholarly information on which to base autobiographical interpretations of the novel. However, these interpretations, while helpful, do not explore Marmee’s philosophies through a close reading of the text of *Little Women* itself, an exploration necessary for understanding the themes and messages conveyed throughout the novel. In spite of this seeming critical neglect, multiple critics do agree that the mother figure is central to the nineteenth-century home, and, therefore, central to the nineteenth-century domestic novel. Eiselein and Phillips call Marmee an “omnipotent presence” (197), while Nina Auerbach asserts the absolute authority of the Victorian mother within her domestic sphere, particularly as far as her daughters are concerned (7). Because of her position of authority, Marmee’s beliefs must be carefully examined in order to better understand her influence over her daughters.

*Little Women* is the coming-of-age story of four sisters—Meg, Jo, Beth, and Amy March. When the novel begins, the sisters’ beloved father Mr. March is serving away from home as a chaplain in the Union army. In his absence, Marmee educates and cares for her daughters despite limited financial resources. The sisters become close friends with Laurie, the grandson of their next-door neighbor, and together they experience the trials and joys of growing up in the mid-nineteenth century. As the novel progresses, Mr. March is wounded in the war, and Marmee leaves to care for him. While Marmee is away, Beth contracts scarlet fever, and though she begins to recover, she never fully regains her strength. Later, Mr. Brooke, Laurie’s tutor, falls in love with Meg, much to the consternation of her sister Jo. The two marry, and Jo eventually moves to New York to pursue a career in writing. While there, she meets a German professor, Frederick Bhaer, whom she marries at the end of the novel. Tragically, Beth’s illness takes a turn for the worse, and she dies soon after Jo returns from New York. Meanwhile, Amy, who has matured significantly since the novel’s opening, spends time in France where she falls in love with Laurie. At the novel’s end, each of the three surviving sisters marries and has children, and Jo opens a school for boys in lieu of pursuing a literary career.

Throughout the novel, Meg, Jo, Beth, and Amy do not seem to question Marmee’s goodness, wisdom, or absolute authority. They voluntarily appeal to her for guidance of all kinds and look to her as their disciplinarian. When Meg attends a party with the Moffats, she dresses up and flirts gaily, causing Laurie to disapprove of her actions. Meg feels remorse, and soon after her return home says to her mother, “Marmee, I want to ‘fess’” (82). Meg voluntarily confesses her perceived fault without prior threat of punishment to her mother, her moral authority. Mrs. March shows no surprise at this voluntary admission, but calmly responds, “I thought so; what is it, dear?” (82). This scene reveals that Marmee’s authority follows Meg wherever she goes, and this principle holds true for each of the four sisters.

Despite their perception of Marmee as primary moral authority, the March sisters seem to adore her more than anyone else in the novel. In chapter one, the girls decide to devote their Christmas money exclusively to Marmee. They surprise her with a slew of presents, choosing to honor her instead of buying gifts for themselves (14). This adoration continues after the girls marry. As soon as Meg and John Brooke say their vows, Meg offers her mother, instead of John, her first kiss as a married woman: “It wasn’t at all the thing, I’m afraid, but the minute she was fairly married, Meg cried, ‘The first kiss for Marmee!’” (200). This illustrates only one of several incidents in the text in which Marmee is equated with a male lover. While talking to Jo near the end of the second half of the novel, Marmee encourages her to wait patiently until “the best lover of all comes to give you your reward,” meaning a male romantic lover (341). Jo declares in reply, “Mothers are the best lovers in the world,” though she then admits she would “like to try all kinds” (341). Though Jo is interested in a romantic relationship, her interest does not supersede her adoration and reverence for her mother. Marmee occupies the central place in her daughters’ experiences, and her ideas and philosophies serve as the model from which the girls construct their own. Therefore, Marmee’s ideology becomes a sort of religion, or cult, which her daughters follow faithfully. The Cult of Marmee extends its influence through each chapter in the novel.

The first aspect of the Cult of Marmee derives from Welter’s “Cult of True Womanhood,” defined as a combination of piety, purity, submissiveness, and domesticity (152). Upper and middle-class nineteenth-century women were expected to cultivate these four virtues in order to become a “true” woman. Men and women alike actively promoted the tenets of this cult, and Marmee is no exception. As Welter asserts, “If anyone, male or female, dared to tamper with the complex of virtues which made up True Womanhood, he was damned immediately...
as an enemy of God, of civilization, and of the Republic” (152). Marmee adheres rather closely to three of these tenets—purity, submissiveness (to Mr. March), and domesticity. However, though Marmee is quite spiritual, she does not actively practice conventional Christianity. For many nineteenth-century Christians, particularly Calvinists, attending weekly Sunday services was central to the implementation of their faith. In Little Women, there is no mention of the March family attending Sunday services even though Welter cites piety, or religion, as “the core of woman’s virtue” (152). Therefore, by not adhering to this tenet of the Cult of True Womanhood in the traditional sense, Marmee subverts established gender roles. However, Marmee does practice an unconventional form of moral piety loosely associated with Christianity, the third aspect of the Cult of Marmee termed “spirituality” for the purposes of this discussion. 41

Though Marmee does not adhere to the virtue of piety in the Cult of True Womanhood, she confirms the remaining three virtues at various moments in the text, including purity. According to Welter, purity is “essential” to the nineteenth-century woman; without it, a woman becomes “unnatural and unfeminine” (154). This virtue remains somewhat concealed throughout the pages of Little Women, but its implications are present in the text. As Welter asserts, “The marriage night was the single great event of a woman’s life, when she bestowed her greatest treasure upon her husband, and from that time on was completely dependent upon him, an empty vessel” (154-5). Although Marmee does not explicitly address the issue of virginity, she does stress the monumental importance of marriage in a woman’s life during a conversation with Meg and Jo: “To be loved and chosen by a good man is the best and sweetest thing which can happen to a woman; and I sincerely hope my girls may know this beautiful experience” (Alcott 84). In this statement Marmee implies that her daughters’ life experiences will be incomplete unless they are “chosen” by a good man, an interesting word choice that highlights the girls’ lack of agency. 42 The underlying message, of course, is that one is not “chosen” by a “good” man unless one is a “good” girl; for nineteenth-century proponents of the Cult of True Womanhood, being “good” means being pure, saving oneself for the “beautiful experience” of marriage Marmee describes.

Though Marmee does not hesitate to exercise authority over her daughters, she seems to defer to Mr. March on any issue that extends outside the bounds of the home, implementing the virtue of submissiveness outlined by Welter as “the most feminine virtue” (158). Marmee’s submissiveness most strongly demonstrates itself in questions of morality. After Amy falls through the frozen pond while chasing Jo and Laurie, Jo discusses her faults, most notably her anger, with her mother. Marmee confesses that she too struggles with anger, to which Jo replies, “Why, you are never angry!” (Alcott 68). Marmee asserts that she has tried to “cure” her anger for forty years, causing Jo to exclaim, “Poor mother! what helped you then?” Marmee replies, “Your father, Jo. He never loses patience,—never doubts or complains,—but always hopes, and works, and waits so cheerfully, that one is ashamed to do otherwise before him” (69). Marmee does not view Mr. March as her moral equal; instead, he is her superior, and she looks to him for acceptable patterns of behavior. Her deferral is itself a submissive act, though the fact that she defers to him on questions of morality, generally understood as a feminine concern in the nineteenth century, shows her submission even in a matter where she could legitimately assume authority. Her submission reinforces the idea of Mr. March as the moral superior; notably, Mr. March’s faults and shortcomings are not discussed in the novel, while Marmee and the sisters’ faults are discussed at length.

Just as Marmee confirms the virtue of submissiveness, she also stresses to her daughters the importance of domesticity in multiple, rather humorous incidents throughout Little Women. In chapter eleven, “Experiments,” the girls decide to take a weeklong break from their work, with Marmee’s permission. Unfortunately, their experiment does not produce the hoped-for result of continual rest and enjoyment; on the contrary, Beth’s little bird Pip dies from neglect, Jo makes a dreadful supper, Amy damages a white frock by sitting in the grass, and Meg ruins some of her clothes by careless mending (92-8). Mrs. March allows the girls to follow this experiment to its conclusion, using their failure as a teaching moment. Marmee suggests to Jo, “Suppose you learn plain cooking; that’s a useful accomplishment, which no woman should be without” (99). Jo’s culinary failures, though humorous even to Marmee, will not serve her well as a nineteenth-century young lady, and Marmee is acutely aware of this. Jo must cultivate characteristics of domesticity in order to meet societal expectations and save herself from embarrassment and isolation. However, domestic competency is not enough; the girls must learn to work together for the good of all. Practicing collaborative labor teaches them how to manage their own homes: “Don’t you feel that it is pleasanter to help one another, to have daily duties which make leisure sweet when it comes, and to bear or forbear, that home may be comfortable and lovely to us all?” (99). The women of the house are responsible for making home “comfortable and lovely,” and the March sisters must practice keeping house before they are given homes of their own.

Ironically, these elements of the Cult of True Womanhood are paired throughout the text with elements of radical feminist ideology, sometimes in the same scene. In fact, immediately after Mrs. March tells Meg and Jo that being “chosen by a good man” will be “the best and sweetest thing” that can happen to them, she tells the girls, “better be happy old maids than unhappy wives, or unmarried girls, running about to find husbands” (84). Marmee insinuates that her girls’ happiness remains more important to her than their marriage prospects, a reversal from the dominant nineteenth-century philosophy that women contributed little to society unless they were married and could have children. Her assertion is decidedly feminist, even though an arguably sexist statement precedes it. However, the fact that Marmee’s three surviving daughters do marry and pursue almost entirely domestic interests at the end of the novel seems to contradict this feminist declaration. In spite of this, Marmee’s assertion, “better be happy old maids than unhappy wives,” seems to undercut her previous statement that female fulfillment is ultimately derived from being chosen by a worthy man (84).

Later, Marmee more convincingly espouses feminist ideas when she encourages her daughter Meg to be proactive and take responsibility for her marriage and her personal education. After Meg’s marriage to John Brooke, she absorbs herself in the care of their two small children and neglects her relationship with her husband. As a result, John chooses to...
visit friends in the evening instead of coming home, and Meg laments that she “might as well be a widow” (306). Mrs. March tells her to involve John in the children’s upbringing, and she exhorts Meg to “take an interest in whatever John likes, talk with him, let him read to you, exchange ideas, and help each other in that way. Don’t shut yourself up in a bandbox because you are a woman, but understand what is going on, and educate yourself” (308). Marmee promotes mental equality and the exchange of ideas in marriage, bringing together the traditionally female sphere of the home and the traditionally male sphere of the outside world. Sarah Elbert, author of A Hunger for Home, asserts that as far as Marmee is concerned, being a good wife requires proactivity and independence: “Docility is a fine quality in a daughter, even a sister, Alcott admits, but dangerous in a wife. Meg becomes dowdy and dependent…Mrs. March shares her domestic secret with her daughter: a good marriage is based on mutuality of interests and responsibilities” (203-4). After Meg begins including John in the children’s upbringing and seeks to engage his mind, he once again prefers to stay at home with her. They begin to share responsibilities, even domestic pursuits. According to Alcott, through teamwork Meg and John find “the key to…mutual helpfulness” (313). This idea of “mutual helpfulness” noticeably conflicts with the tenets of the Cult of True Womanhood.

Marmee also praises hard work as a means through which women can attain independence. After she suggests that Jo learn to cook, Marmee praises work as a source of independence: “Work is wholesome, and there is plenty for every one; it keeps us from ennui and mischief…and gives us a sense of power and independence better than money or fashion” (99). Though Marmee generally encourages her girls to accomplish domestic work, rather than pursuing any sort of work outside the home, she does recognize the importance of female contributions to society, even if these contributions are domestic in nature. In order to achieve independence, women must prove their value and worth. As Elbert eloquently states, “Accepting, even glorifying the importance of women’s domestic work, Alcott emphasizes that men are homeless without women…it follows that women have already proved themselves in the world; thus their ability to extend their sphere is unquestioned in Little Women” (202). Therefore, according to Elbert, domesticity can provide the doorway through which women become valued as contributing members of society, and Marmee most certainly encourages her daughters to contribute by proving that “domestic work is real work” (202). In so doing, Marmee encourages a feminist spirit in her daughters and inspires them a desire to contribute to society.

Coupled with this more liberal idea of female contributions to society is the more traditional concept of spirituality. For Marmee, spirituality is a mixture of Christianity and the idea that one should always strive to be as good as possible (particularly if one is a little girl). Though the March family, like Louisa May Alcott’s family, does not appear to attend weekly church services, Marmee still believes in God and invokes His help in times of need. After Marmee tells Jo about her struggle to control her anger, she tells her daughter to trust God and pray to Him: “The more you love and trust Him, the nearer you will feel to Him, and the less you will depend on human power and wisdom…Believe this heartily, and go to God with all your little cares, and hopes, and sins, and sorrows” (Alcott 70). In this passage, Marmee reveals her direct relationship with God, the “Heavenly Father,” though references to Christ, church, and other components of the Christian faith are absent from the text (70). Marmee undoubtedly believes in God, but the text does not clarify the exact nature of this belief. The God she references appears to be the Christian God, though she does not seem to practice Christianity in a traditional, Calvinist sense. “

Though Marmee makes a couple of direct references to God, she more often communicates the importance of moral virtue to her daughters, a communication laden with spiritual overtones; however, these overtones are not explicitly Christian. The first chapter of Little Women, “Playing Pilgrims,” outlines Marmee’s idea that the four sisters pretend they are on a journey to the Celestial City; in the hopes that this game will enable the girls to handle life’s everyday trials and challenges with grace and goodness: “Now, my little pilgrims, suppose you begin again, not in play but in earnest, and see how far on you can get before father comes home” (18). Though Pilgrim’s Progress is a decidedly Christian text, in Little Women it becomes more of a guidebook for living a moral life. “The rest of the novel takes on some allegoric characteristics as the March sisters embark on their journey through life. According to Holly Blackford in her article “Vital Signs at Play: Objects as Vessels of Mother-Daughter Discourse in Louisa May Alcott’s Little Women,” Marmee repurposes Pilgrim’s Progress, a masculine text by a masculine author, using it to illustrate her daughters’ journey towards mature femininity (5). Blackford then argues, “The Pilgrim’s Progress stands in for the absent father in the March house. It is a cultural metaphor for both Christian progress and individual child development” (6). In many ways, Pilgrim’s Progress provides the crux on which the novel itself hinges. The girls’ sense of the spiritual and moral journey that they are taking drives the plot, and Alcott includes explicit allusions to Pilgrim’s Progress throughout the text.

Marmee’s sense of morality and spirituality is strongly tied to the idea of “mending a fault,” or purging one’s character of vices, no matter how insignificant they may seem (Alcott 61). After Amy’s contraband limes are discovered at school, Mr. Davis strikes her, and Marmee decides to withdraw Amy from school (after consulting Mr. March, of course). However, though she does not condone Mr. Davis’s method of punishment, Marmee does encourage Amy to mend her faults: “You are getting to be altogether too conceited and important, my dear, and it is quite time you set about correcting it” (61). Though Marmee’s words are somewhat “severe,” she firmly believes in the necessity of cultivating morality (61). She does not fail to stress the importance of good character in everyday moments, including story time; her daughters have come to expect this from their mother: “Tell another story, mother; one with a moral to it, like this. I like to think about them afterwards, if they are real, and not too preachy” (42). Because the March sisters adore Marmee, they are eager to hear whatever she has to say, and this makes them particularly receptive to her moral instruction.

Marmee’s instruction encompasses more than the morals contained in these didactic stories, however; Marmee also espouses ideas about education gleaned from the nineteenth-century Transcendentalists. This philosophy strongly influences other components of the
Cult, particularly feminism and spirituality. Transcendentalism embraced radical ideas that often overturned traditional notions of gender and religion. Bronson Alcott, Louisa's father, was one of the great Transcendentalists, cited by Jane Duran as a “forerunner...of the pragmatists” (232). His influence can be seen throughout the pages of *Little Women*, particularly concerning issues of education. Unlike his contemporary Henry David Thoreau, who advocated nature as the ideal source of education, Bronson believed that by cultivating an observant attitude, one could learn best from interacting with others. He also believed that classrooms could be just as effective as natural surroundings, though unfortunately true learning did not often occur in the public education system. Like Margaret Fuller, Bronson believed that “Education...is a continuous process” (Duran 238). This is a process that Marmee fully embraces, using the daily happenings in her daughters’ lives to teach them valuable lessons.

In *Little Women*, Marmee seeks to educate her daughters through their interactions with others. She adopts unconventional methods that take the girls outside of the classroom and into the real world for their education. According to Susan Laird, Marmee’s “curriculum...includes the complex art of learning from experience to love and survive, come what may” (297). Marmee allows her daughters to learn from experience multiple times in the novel. When Amy wants to throw a fashionable (and expensive) party, Mrs. March expresses her concern. Amy assures her that all will be well, offering to pay for it. Marmee agrees, in spite of her reservations: “Mrs. March knew that experience was an excellent teacher, and, when it was possible, she left her children to learn alone the lessons which she would gladly have taught them elsewhere” (Alcott 206). Without relinquishing her authority, Marmee employs a hands-off parenting method that strongly resembles Transcendentalist ideas about education.

Transcendentalism is not the only nineteenth-century philosophy that Marmee embraces. In keeping with the social reform movement that continued to gain momentum throughout the nineteenth century, Marmee also encourages her girls to engage in social activism. Interestingly, she does not encourage them to campaign for the female vote or prison reform; instead, she emphasizes local poverty and needs that are immediately accessible to her daughters, implying that they should waste no time in offering help to those who need it. In chapter two, “A Merry Christmas,” Marmee asks her girls to donate their breakfast to the Hummel family, a single mother with six children and not enough food to eat: “My girls, will you give them your breakfast as a Christmas present?” (Alcott 21). Though the girls look forward all year to Christmas breakfast as a special feast, they agree to part with the delicacies and content themselves with bread and milk for breakfast. The narrator notes, “when they went away, leaving comfort behind, I think there were not in all the city four merrier people than the hungry little girls who gave away their breakfasts” (22). In this scene, charity offers the girls a sense of self-fulfillment and satisfaction that further motivates them to give of themselves and their resources.

In chapter seventeen, the girls are asked to give of themselves in an episode that stresses the importance of social reform. The girls discuss which sister should visit the Hummel family, implying that the four girls have continued to care for the Hummels since the donation of their Christmas breakfasts. Meg claims she is too tired for a visit, and Jo complains that the weather will worsen her cold. Beth, who has visited the Hummels’ house every day to help care for their sick baby, ventures out yet again (141-2). Tragically, the Hummel baby passes away in her arms, and when Beth comes home, Jo finds her “sitting on the medicine chest, looking very grave, with red eyes, and a camphor bottle in her hand” (142). Beth has contracted scarlet fever from her contact with the sick baby; Meg and Jo, who have had the fever before, are immune (143). Had Meg and Jo visited the Hummels themselves, taking responsibility for their charitable duties, Beth would not have contracted the fever, which ultimately causes her death. Though this consequence may seem extreme, Meg and Jo's refusal to perform the duties suggested to them by their mother causes their sister's death, a morbid but integral part of the plot of *Little Women*.

The Cult of Marmee combines several, often conflicting, ideologies, including the Cult of True Womanhood, feminism, spirituality, transcendentalism, and social reform. These five components are a complex mixture of common nineteenth-century philosophies and subversive ideas reminiscent of modern thought. However, these components overlap and complement one another in ways that go beyond the scope of this study. Further research is necessary fully to explore the elements of the Cult of Marmee and their interactions with one another, as well as their place in nineteenth-century thought and culture. Perhaps most importantly, scholars and critics should remember that *Little Women* is indeed a product of another time, as Barbara Sicherman notes in her article “Reading *Little Women*: the Many Lives of a Text.” Applying twenty-first century definitions of feminism or social activism is unfair to Alcott’s progressive, but still by modern standards conservative, text.

Perhaps the most significant legacy of *Little Women* is its message of equality for the many women and girls who have read it since its publication. As Richard H. Brodhead, author of “Starting Out in the 1860s: Alcott, Authorship, and the Postbellum Literary Field,” notes, “*Little Women* tolerates deviations from normative gender identities unknown to earlier works in the domestic genre” (624). Clearly, *Little Women* contains revolutionary, subversive ideas. However, Brodhead identifies *Little Women* as a domestic novel, a quintessentially nineteenth-century literary form. Perhaps Brodhead has pinpointed the reason that Marmee seems to contradict herself, and scholars and critics cannot seem to agree on the underlying message of this novel: Alcott espoused radical ideas, but she was also a product of the Victorian Age. Joining some of the earliest feminist causes, Alcott advocated equality in marriage and independence for women. Though she did not push these concepts to their ultimate conclusion, as modern feminists might wish, she thought more openly about social and gender-related issues than many of her peers. Marmee, too, remains progressive while concurrently choosing to espouse certain Victorian ideals. Perhaps this paradox is most evident in the character of Jo, who at the novel’s end is happily married with many boys to care for. She appears to have abandoned her writing and declares, “the life I wanted then seems selfish, lonely and cold to me now. I haven’t given up the hope that I may write a good book yet, but I can wait, and I’m sure it will be all the better for such
experiences and illustrations as these” (Alcott 379). Though Jo longs for complete fulfillment and professional achievement, she, like Marmee, is content to work hard and wait. Like her mother, Jo has accepted both the joys and difficulties of nineteenth-century womanhood, and through her and her sisters the Cult of Marmee will live on.

**Notes**


**Works Cited**


Robert Frost’s “The Road Not Taken”: Regret in the Human Psyche - A Critical Essay

Luke Judkins

Abstract

This critical essay argues that Robert Frost’s poem, “The Road Not Taken” is not a poem about taking a road less traveled but about regret and the state of the human psyche during the process of decision. Frost argues against indecisiveness and regret via the speaker’s battle to decide between two virtually identical roads—neither one more or less traveled than the other. Readers should look beyond the last two lines of Frost’s poem in order to develop a structured perspective concerning Frost’s point. Historical contextualization provides readers with a sense of the biographical elements of the poem, written in 1916 and inspired by his friend Edward Thomas. Thomas was indecisive about which path to take when they both proceeded into nature for a walk, giving Frost a beginning for the speaker in the poem. Close analysis of each stanza, reveals that Frost’s “The Road Not Taken” has psychological implications of regret and uncertainty regarding decision-making and provides a solution by having the speaker immediately imagining himself in the future romanticizing his choice.
Since its publication, Robert Frost's (1874-1963) masterpiece "The Road Not Taken" (1916) has been subjected to much misconstrued analysis, which has led to its being stereotyped as a poem about "following his [the speaker's] instinct, choosing the road less traveled by" (Booth 1057 and Sampley 197). As such, choosing the right, less traveled "road" in life leads to a beneficial future. Although taking a more tedious or moral "road" may provide a great future, this does not seem to be Frost's focus in "The Road Not Taken." In fact, Frost seems, instead, to allude to the psychological struggle inherent in decision-making. Furthermore, he illustrates through a speaker—who not only comes to an important decision in his life but who also imagines himself in the future romanticizing his "good" decision—an alternative to the regret often associated with difficult decisions. Breaking the poem down by stanza, one can see that Frost wishes to reveal to his readers a possible strategy for overcoming regret.

Frost's original inspiration for "The Road Not Taken" came from his friend Edward Thomas. Frost once said in a letter to Louis Untermeyer, "I'll bet not half a dozen people can tell you who was hit and where he was hit in my 'Road Not Taken'" (Pritchard 128). The "he" Frost refers to is none other than Thomas, because when the two would take walks together, Thomas "castigated himself for not having taken another path than the one they took" (Pritchard 128). Frost sent "The Road Not Taken" to Thomas to inform him of his habits through his mischievous style in the poem. However, Thomas missed the meaning of the poem and did not realize the poem was about him, Thomas, and many critics since the poem's composition, did not see Frost's attempts to provide a solution for regret by allowing the speaker to face and overcome his regretful thoughts and continue with his journey.

In the introductory stanza, Frost provides readers with his setting, his speaker, and the intellectual qualities of his speaker. Frost also manipulates metaphors in his poem in order to achieve his purpose. Readers often assume his symbols of the "roads" and the "traveler" as not merely a traveler in the woods but as a person on a journey through life. Frost uses the scenario of the "life-altering" decision to relate not only to Thomas but to his readers as well. In reality, life presents many choices that sometimes are in an "either-or" context as the speaker finds himself within the first line of our poem. Frost describes this situation with a fork in the road for the purposes of pointing out the human qualities in the speaker; thus, he further attempts to relate the speaker to his readers. The speaker must make a choice between the two roads on his journey and is sorry that he "could not travel both" (Frost 2). The desire for extracting ourselves from our human situations to overpower them is a common trait of human psychology, as Frost demonstrates here; however, the speaker cannot travel both and still be human and "be one traveler" (3). He must choose. Therefore, as is common practice, he attempts to look down the first road as far as he can, beginning to rationalize which one is better (4). However, as he does not have the power of overcoming his circumstances, he cannot see what each path may hold for him; thus, he is subordinate to the world about him (5). Frost must first set up the human qualities in the speaker by his limited sight of the roads (into the future) and the important occurrence of the choice in the opening stanza before pressing on to his primary focus of human psychology in decision-making.

In the second stanza, the speaker further analyzes his choice. I must call attention to Frost uses the term wanted to describe the second road, as it "was grassy and wanted wear" (8). However, this term is ambiguous in the sense that it can mean both "to be lacking" ("Want," def. 1a) and "to desire or wish for" ("Want," def. 5a). Frost was almost certainly aware of this ambiguity. If one employs the definition "to desire," the speaker is personifying the second road, suggesting that it wants him to travel it. However, inanimate objects do not want things; rather, this is the speaker revealing a hidden desire for the second road without directly expressing it. This is another instance where readers see that the Frost's focus is the human psyche. However, if one interprets the term as "to be lacking," then this might change the focus of the line from the speaker's psychological condition to the condition of the road, which also becomes an important feature in Frost's perspective since the speaker describes both roads as identical. Either interpretation of the term "wanted" leads readers to the possibility that Frost's objective is to draw parallels between the speaker's psychological condition and the condition of the roads, which are both significant and crucial later in the poem.

Frost uses descriptive and weighted lines both here at the midpoint of the poem and at the end of the poem in order to contrast the two ideas he presents in them. Frost's form here gives us a more focused idea of his objective by ensuring the significance of the last two lines in the stanza. Although one knows that the speaker takes the second road (6-7), one also knows that there is no difference between it and the first road in terms of deterioration; neither shows more wear than the other (9-10). If Frost is aware of the ambiguity of wanted, the term more arguably refers to a personification of the speaker's desire to take the second road. The first road lies in nature's wood and responds neutrally to the speaker; it has not made an impression upon the speaker as wanting or otherwise. Recalling the understanding that the roads are both the same, strong implications arise that Frost wants his readers to see the first stage of the speaker's justification for his choice of the second road amidst indecision.

Once Frost sets up the indecision and mental qualities of the speaker, he intensifies his expression of choice by the third stanza. One now knows by connection that there is no difference between either road. In this stanza, Frost presents his readers with another reference to the roads' appearances, yet this time he refines the setting by mentioning that it is morning (11). In addition, "no step had trodden black" the leaves on the ground, indicating that it is likely fall (12). This statement builds the speaker's character by metaphorically depicting the speaker's declining stage of life, which might explain the speaker's wisdom and knowledge of himself, as we will see in the last stanza. Otherwise, this might be a further reference to Frost's friend, Thomas, and the time(s) that they would walk together during the fall. Both views support Frost's objective of illustrating how regret affects the
human psyche. Nevertheless, more importantly in this stanza, the speaker conducts a second stage of justification for his choice of the second road by convincing himself that he “kept the first for another day” even though he knows “how way leads on to way,” and he will never return to that point, that choice, in his journey again (13-14). Usually when one attempts to rationalize a choice in this way, one is attempting to relieve guilt or feelings of doubt regarding one’s choice. The speaker purges his worries and curiosities from his mind temporarily by comforting himself with something he knows is not true. The last line in this stanza adds a sense of regret to the speaker’s tone by revealing his doubts that his travels will ever return him to this place in his journey again. The speaker knows he cannot relive a defining moment such as this and must choose to keep moving forward.

Probably the most crucial word to an efficient reading of this poem occurs in the last stanza and provides support for my interpretation of Frost’s argument against regret—“sigh” (16). Many readers focus more on the over-popularized last two lines of the poem, “I took the one less traveled by/And that has made all the difference,” and read them with a positive and inspirational meaning, missing the fact that the poem rests on the single word, sigh (19-20). The word sigh can denote a number of conflicting feelings, “especially indicating or expressing dejection, weariness, longing, pain, or relief” (“Sigh,” def. 1). Whether “sigh” is construed as positive or negative leads to varying interpretations of the poem. That is, whether the speaker rejoices with a sigh of relief about his achievement, regrets with a sigh of pain his choice, or sighs with dejection, since he withholds the truth of the roads’ conditions from himself. By examining the speaker’s psychological patterns thus far, we can see that he must have some sense of regret about what he has chosen considering his previous efforts to rationalize and wishes to take the more traveled road, and it seems as though all three views of sigh will be evident in the speaker.

It is interesting to notice that the speaker seems to hold a certain expectation for a destination he will reach by stating “Somewhere ages and ages hence,” when the speaker mentions no destination but seems to expect a point of reflection with a sigh for his past, far into his future (17). Arguably, the speaker does seem to recognize the importance of the decision of the road he took and notices it was a fundamental point in his journey, potentially making the choice either worthwhile or pointless. Thus, the speaker calls more attention to romanticizing his choice in the future, since he has greater worries to consider. The speaker appears very intelligent and aware of how to manipulate his own psychological condition, because immediately after he makes his choice, he imagines himself far in the future romanticizing this moment by saying he took “the one less traveled by” (19).

The reader is aware that both roads are essentially identical, apart from the speaker on his journey alone. Perhaps the psychology of decision-making that Frost wants to highlight for readers stems from the loneliness of the speaker on his journey. Nevertheless, whether he is telling someone else in the future or relishing his past to himself, there is still an underlying sense of regret and a need to romanticize that moment to overcome his regret and indecision. Frost knew Thomas’s desire to go back and choose the path they never took on their walks. To contrast Thomas with Frost’s speaker, the speaker seems to come to a point in his journey where he romanticizes and attempts to support his choice rather than regret it and chastise himself as Thomas did. The speaker imagines a stronger self who is able to overcome regret with a knowing sigh that the other road was not important in comparison to his choice. Understanding this, the sigh becomes slightly regretful with a suggestion of the personal knowledge that it was never the road less traveled that was important and he had created a myth about what caused all the difference in his life. It is particularly odd that the speaker should become sorrowful because of the road he chose. When he is actually imagining the future, he does not know what the second road may hold for him or whether it will be beneficial or not, but the speaker comes to realize this and imagines the scenario positively in order to assuage any doubt he has about making his choice. The reader sees that the speaker is actually pessimistic in several ways. The speaker wants to travel down both roads but cannot and thus regrets this; he also regrets his choice after he makes his decision, implying that he regrets his humanity and his subordination to the world around him. However, by imagining himself romanticizing his choice in the future, he is able to overcome his doubts, a significant accomplishment and, perhaps, a subtle implication from Frost that though his readers do not have direct power over circumstances, they do have power over themselves.

Frost informs readers of the psychological implications of decision-making and warns readers regarding their mindset in their individual lives by revealing the speaker’s regret and the methods the speaker uses to overcome that regret and make the choice. Frost attempts to convince readers not to regret our choices by providing a speaker who must make a choice and battle his own contested feelings regarding it, and who uses his imagination to overcome doubt and indecision. Even though the sigh may still evidence some regret on the speaker’s part, it also reveals that the speaker recognizes the true condition of the roads and that he is relieved that he chose to live no longer with regret and indecision by setting this goal for himself in the future. When he states that he chose the less traveled path “And that has made all the difference” (20), Frost uses that not to refer to the choice (19), as might be traditionally thought by readers and critics, but to refer to the change in the speaker’s implied state of mind in the previous line. Removing the doubt associated with choice has made all the difference as the speaker attempts to let go of any regret by confidently imagining himself in the future, relishing in his power over his journey, and as a result, conquering his inner pessimist along the way.

Robert Frost’s “The Road Not Taken” has another meaning, contrary to popular theories that tend to focus on the last two lines of the poem. Understanding that the poem
was written with a particular “traveler,” Edward Thomas, in mind allows us to interpret the poem’s emphasis on psychological processes and importance of overcoming regret. By providing us with a speaker who comes to terms with his humanity and attempts to purge regret and the doubt associated with choosing the second road over the first, Frost alludes to the psychology of human decision-making and argues against the regret of irrevocable decisions by proposing a solution to overcome regret.

Works Cited
Abstract

This paper examines the ways in which Baz Luhrmann’s William Shakespeare’s Romeo + Juliet explores the gender concerns addressed in the original play. Luhrmann’s film picks up on the theme of performativity—a term that this paper uses in the manner of Judith Butler—that runs throughout Romeo and Juliet and foregrounds the ways in which Romeo and Juliet perform a feminine and masculine gender, respectively. Their first meeting in the text acts as the impetus for a permanent performance; they are agents of change in each other’s lives. Romeo chooses a feminine performance to inhabit more fully the identity of the Petrarchan lover that he prefers, while Juliet enacts masculinity to gain more agency over her own life. Luhrmann takes this preoccupation of the text and amplifies it in his film. His changes and casting choices also help to highlight the issues of performativity; Leonardo DiCaprio’s more feminine appearance and Claire Danes’s peculiar mix of naivété and intelligence telegraph the message Luhrmann hopes to send. In addition, Luhrmann chooses to make the families part of rival gangs who divide the city based on race and socioeconomic class. Juliet’s family is Hispanic, which adds another layer to her defiance of patriarchal values. In the past, the film has been dismissed by many scholars as “just a teen film,” but it is clear that Luhrmann’s careful attention to the thematic concerns of the text demand a reconsideration of the film’s place in adaptation studies.
Baz Luhrmann has had a difficult time as an adapter of Shakespeare. At first glance, he has a number of strikes against his name: to produce 1996’s William Shakespeare’s Romeo + Juliet, he teamed up with fellow Australian Rupert Murdoch, someone who has been quite vocal in his anti-English establishment opinions; Luhrmann has spent his career making spectacles, some of which have fairly silly-sounding plots; and most importantly, because he relies on both mise en scène and dialogue to tell his stories, his style requires a great deal of audience attention to the film rather than knowledge of the play. In a Luhrmann film, there is as much silent acting as loquaciousness. He feels that much can be accomplished with a look, an evocative setting, or creative editing. This is a potentially problematic pairing with some of the greatest speeches an actor can deliver.

Because Luhrmann is so atypical in terms of Shakespeare adaptations, he had a number of naysayers from the beginning—and, though he has gained some important critical attention, an overwhelming number of scholars are still decrying Luhrmann’s contribution. What these critics fail to recognize, however, is that by updating the setting to make it more familiar to contemporary audiences, he places more emphasis on the intricacies of the story. Luhrmann’s adaptation is concerned with the words Shakespeare gave us and what they tell us about his characters; the goal is to replicate these people and their concerns as accurately as possible. Though some critics may disagree, Luhrmann succeeds in the majority of his efforts—his water imagery and exploration of Romeo and Juliet’s religion of love are highlights—but his best connection to the text is the way in which the film explores gender. Though William Shakespeare’s Romeo + Juliet is generally either dismissed by critics or simply examined in light of its clear postmodernity, the real value of the film lies in its interest in performativity.¹

Whether or not he did it consciously, Romeo and Juliet was an opportune place for Shakespeare to explore gender concerns; any text that deals with teenagers and their attempts to carve out their own identities independent from their parents and larger societies will engage gender performance at some point. It forms the basis of a number of teen television dramas today; in fact, some series are exclusively concerned with how their characters negotiate gender. While the play may not seem at first glance to engage gender performance in any significant way, a closer examination of Romeo and Juliet leads to some interesting conclusions. First, consider Romeo: though his name has become synonymous with a romantic, daring lover—a young man who would do anything for his beloved, even risk death—his actions in the play do not present him as such. Though he has lost. It never occurs to him to accept what he cannot change and move on. In fact, his hopeless infatuation for his lady “most essential characteristic of Shakespeare’s Romeo and Juliet” (Pearson 291), who not only rejects him, but is quite severe in doing so. As a result, Romeo spends much of much of Act I complaining—and not creatively. We can infer that these verses are subpar because Romeo’s love for Rosaline is not true. Still, Benvolio—and the audience—is subjected to them in the first scene.

**ROMEO:** Here’s much to do with hate, but more with love.

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¹ I am, of course, using Judith Butler’s Gender Trouble as my reference point, particularly her ideas about gender being a “stylized repetition of acts” (179) that is real only to the extent that it is performed.
of his love for Juliet; for Romeo, love leads to effeminacy rather than a more masculine performance, something that is commented on throughout the play. His first meeting with Tybalt after his marriage to Juliet is tinged with Romeo’s reluctance to fight, for which he blames Juliet: “O sweet Juliet, / Thy beauty hath made me effeminate / And in my temper softened valour’s steel!” (3.1.115-17). Friar Laurence is frustrated with Romeo’s reactions to distress, noting with disappointment Romeo’s tears and immature behavior over his banishment and Juliet’s reaction to Tybalt’s death when, as a newly married man, he should be concerned with protecting his wife, not weeping over the injustices done to their love. Romeo’s attempt to stab himself proves to be the Friar’s breaking point.

FRIAR LAURENCE: Hold thy desperate hand! Art thou a man? Thy form cries out thou art. Thy tears are womanish, thy wild acts denote The unreasonable fury of a beast. Unseemly woman in a seeming man, And ill-beseeming beast in seeming both! Thou hast amazed me. By my holy order, I thought thy disposition better tempered.

Fie, fie, thou sham'st thy shape, thy love, thy wit, Which, like a usurer, abound'st in all, And usest none in that true use indeed Which should bebeck thy shape, thy love, thy wit. Thy noble shape is but a form of wax Diggessing from the valour of a man.... (3.3.107-26)

Friar Laurence sees Romeo as casting off a preferred masculine performance for a feminine one. This weeping and moping around is “womanish” and unbecoming; it even denotes a possibility of hermaphroditism as Romeo becomes an “unseemly woman in a seeming man.” Most importantly, Romeo rejects his divine formation—as someone graced with powerful appearances in his first scenes. However, when he meets Romeo, her rhetorical skills emerge in full force. Falling in love with Romeo sets her free; she is no longer a daughter but a young woman contemplating marriage. She feels like an adult and therefore be careful not to challenge her father’s wishes overtly, so her cleverness makes rare but intelligent enough to understand that her world is one of patriarchal power, and she must be careful not to challenge her father’s wishes overtly, so her cleverness makes rare but powerful appearances in her first scenes. However, when she meets Romeo, her rhetorical skills emerge in full force. Falling in love with Romeo sets her free; she is no longer a daughter but a young woman contemplating marriage. She feels like an adult and therefore should finally be herself. Her first conversation with Romeo is a battle of wits, during which the audience is treated to some of Shakespeare’s most interesting conceits. Romeo begins his pursuit by comparing Juliet to an object of worship, calling her a “holy shrine” (1.5.92); while Elizabethan society would expect his beloved to simply accept the object position and listen, Juliet breaks into Romeo’s speech with her own contributions, admonishing her “good pilgrim” (1.5.96) and eventually helping to form a sonnet that is enriched by her continuation of the religion of love conceit. Juliet’s masculine skill with words is obvious to Romeo, and he encourages her to exhibit it in their courtship.

However, there is one aspect of Juliet’s oral dexterity of which Romeo does not seem to be aware. Mary Bly has pointed out that, after meeting Romeo, Juliet’s rhetorical skill involves another unfeminine aspect: erotic innuendo. Generally, when this is exhibited by women, it is reserved for more marginal characters, like the Nurse, who seems to fall back on it as a matter of course; after all, she swears by her “maidenshead at twelve year only a very small degree. From her first entrance, Juliet is shown to be inwardly resistant to her parents’ wishes while outwardly acquiescing to their requests; her mother must call for her multiple times before she appears, apparently frustrated to have been pulled away from what she was doing. Still, she responds prettily to Lady Capulet’s questions about courtship, while using her rhetorical skill never actually to agree to marriage itself. Her answer to her mother—“I’ll look to like, if looking liking move / But no more deep will I endart mine eye / Than your consent gives strength to make it fly” (1.3.98-100)—is just a nod to convention. Lady Capulet, spun by Juliet and the Nurse’s quick wits, forgets that her original purpose was to persuade Juliet to look favorably upon Paris. This is how Juliet has to deal with her parents; she is powerless in this society, but she still knows what she wants. Marriage is on her horizon, but she wants to choose for herself.

Juliet’s rhetorical ability is clearly her most masculine trait, and it is one in which she seems to develop and delight, though in Shakespeare’s time, it was patently unfeminine. Lynette Hunter and Peter Lichtenfels explain that Juliet’s own skill with words and rhetoric would mark her out, in Elizabethan society, as having masculine traits. Such skill was supposed to be found and encouraged only in men, and one argument is that it was recognized that men were socially formed, while women were “natural.” A person being “natural” does not need rhetorical devices to present themselves. On the other hand, this is a convenient theory to prevent women from entering into social discourse. (134-35) Juliet knows very well that her wit will be seen as unnatural on her part, and because her safety is entirely predicated on being a good, natural daughter, she goes through her life only exhibiting that wit when she needs to steer her parents in another direction. Juliet is intelligent enough to understand that her world is one of patriarchal power, and she must be careful not to challenge her father’s wishes overtly, so her cleverness makes rare but powerful appearances in her first scenes. However, when she meets Romeo, her rhetorical skills emerge in full force. Falling in love with Romeo sets her free; she is no longer a daughter but a young woman contemplating marriage. She feels like an adult and therefore should finally be herself. Her first conversation with Romeo is a battle of wits, during which the audience is treated to some of Shakespeare’s most interesting conceits. Romeo begins his pursuit by comparing Juliet to an object of worship, calling her a “holy shrine” (1.5.92); while Elizabethan society would expect his beloved to simply accept the object position and listen, Juliet breaks into Romeo’s speech with her own contributions, admonishing her “good pilgrim” (1.5.96) and eventually helping to form a sonnet that is enriched by her continuation of the religion of love conceit. Juliet’s masculine skill with words is obvious to Romeo, and he encourages her to exhibit it in their courtship.

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old” (1.3.2)—the last time she had one—to attest to Lady Capulet that she has already bid Juliet to attend her mother. This type of wit is certainly not typical of young, virginal heroines, as it would be unbecoming for a lady of the aristocracy to speak this way. Why, then, is Juliet’s masculine expression of desire appropriate? Bly’s interrogation of the text proves helpful here: “If a blunt expression of lust is an inappropriate statement for a virginal heroine, what is the position of a witty expression of desire? The nature of the expression is clearly important…. If desire is revealed in clever puns, does that wit protect the heroine from a charge of immodesty?” (53). It could be argued that because these erotic puns are an expression of Juliet’s wit and made in soliloquy, they are not potentially immodest; after all, Romeo speaks of Juliet in more worshipful terms, calling her beauty “too rich for use” (1.5.46). Juliet obviously disagrees. It is Juliet’s masculine rhetorical ability that allows for a more overt gender performance, so that lines such as “What’s Montague? It is nor hand nor foot, / Nor arm nor face nor any other part / Belonging to a man” (2.2.39-41) can be delivered with a knowing smile without hurting Juliet’s status as virginal heroine. At this point in the play, the audience is a little more comfortable with Juliet’s more masculine tendencies and she can exhibit them comfortably in her next encounter with Romeo.

In the window scene, Juliet’s unconventional performance of gender comes into full focus. While Romeo seeks Juliet out, it is she who rules their conversation. Her masculine mindset steers the scene and the speeches they make to each other. While Romeo simply intended to come woo Juliet, she wants something more permanent and makes sure she gets it. Juliet is mature enough to know that she cannot risk her father’s wrath for a mere dalliance. She tests Romeo to see if he is the man he hopes he is, a man who truly loves her for who she is and who will accept her performance of masculinity, rather than the flighty lover he appears to be. She begins by using her words to feminize Romeo; Hunter and Lichtenfels note that her lines feature metaphors that tie him to common symbols of women’s sexuality and frailty, the rose and the moon (134). When these prove acceptable to Romeo, Juliet moves to a more assertive position, telling Romeo what must happen to get what she wants, she must enact a masculine gender performance; this is true even measured ones, though even she falls prey to too-quick reactions. Still, she understands that nor foot, / Nor arm nor face nor any other part / Belonging to a man” (2.2.39-41) can be delivered with a knowing smile without hurting Juliet’s status as virginal heroine. At this point in the play, the audience is a little more comfortable with Juliet’s more masculine tendencies and she can exhibit them comfortably in her next encounter with Romeo.

Juliet chooses to enact her chosen gender more powerfully after she meets Romeo—when she finally finds something she wants for herself. After her marriage, she does not abandon this behavior; in fact, her actions more directly mirror those of the men in her life, though she marries those decisions with the maturity most of them lack. While Romeo will risk all for love, Juliet is more careful in her pursuit of happiness. Romeo’s immaturity leads him to engage in some fairly dangerous behavior; climbing up to the window of the daughter of his family’s sworn enemy is not the smartest thing to do. Juliet reminds him of this, but Romeo shrugs off her warnings.

Good night, good night. Parting is such sweet sorrow
That I shall say goodnight till it be morrow. (2.2.176-85)

Shakespeare’s bird imagery places Romeo and Juliet firmly in their categories; she is the masculine, assertive partner while he is more passive and feminine, a relationship that Hunter and Lichtenfels call “part of a reciprocal relation that challenges accepted gender definitions of male and female” (134). Juliet’s performance has become cemented. Her love for Romeo has confirmed her desire to perform a masculine performance regularly and she does so throughout the rest of the play.

Juliet’s expression of desire is appropriate because she is not a compliant subject; she is an agent in her own life. The Friar also points out that this agency is a necessity. Whereas he encourages Romeo to act as the man God made him, the Friar admonishes Juliet to avoid “womanish fear” (4.1.119) in her deception of her parents. For him, masculine performance seems to be the only way for those who defy Veronese society to survive it.

Baz Luhrmann’s William Shakespeare’s Romeo + Juliet takes a similar position and develops these aspects of Romeo and Juliet’s performances of gender. Though the film is often dismissed for what critics see as a refusal properly to adapt the play—the updated
setting and the guns are generally the targets of this criticism—it does have a place in the
canon of adaptations of Shakespeare. Patricia Tatsuoja asserts that the anachronistic
elements actually qualify Luhrmann's work as a good adaptation, writing that "directors
must also place Romeo and Juliet ... in a social context that illuminates their characters
and mediates between the Renaissance play and the target audience—and between the
Renaissance play and the extended audience watching in film archives and videotape" (135).
Douglas Brode agrees, explaining that films such as Luhrmann's do important
cultural work, bringing Shakespeare back down to the people and proving that his stories
are timeless (57). Why, then, are some critics still reluctant to recognize the film as a good
adaptation?

The answer lies in prejudice against the teen film, a category that outwardly traces the
many attempts contemporary teenagers make to amuse themselves or rebel against
their parents but is truly, at its core, devoted to portraying various ways in which young
people struggle to create an adult identity. William Shakespeare's Romeo + Juliet, a multi-
genre postmodern piece, fits into this genre much more neatly than any other. Luhrmann
creates a world that feels like Miami, Los Angeles, and Mexico City all at once and is
characterized by gang violence, drug use, and excess. Above all, however, this world feels
real to teenagers—not real in terms of spectacle and theatricality, but in how it deals with
the limitations of a world built to satisfy one's parents rather than oneself and the ways
in which teenagers work to define themselves apart from their families. Romeo and Juliet
struggle against outside forces that control their lives but care little about the effect it has
on them; in response, they come to their own understanding of what it means to be a
functional adult. In showing this, Luhrmann handles the thematic material of the text quite
deftly; from casting to final editing, the film examines a number of integral issues in Romeo and Juliet, though none perhaps as well as gender performance.

Because William Shakespeare's Romeo + Juliet was marketed as a teen film, even its
preproduction was crafted to appeal to teenage girls—the genre's primary focus—so that
they would anticipate the film's release, regardless of its Shakespearean source. By casting
teen idol Leonardo DiCaprio as Romeo, Luhrmann ensured that teenage girls would track
the film throughout its production and flock to its premiere. However bankable DiCaprio
was at the time—and still is—the real impulse in casting him lies in his physicality. In 1995,
DiCaprio was twenty-one years old and still looked like a teenager, something that
would continue well into his twenties; part of his appeal in the 1990s was that he fit into
the prevailing aesthetic created by designers like Calvin Klein, who used male models
with androgynous looks. Until his late twenties and early thirties, DiCaprio kept a rather
natural color. The combination of Mihok as Romeo's blood relative and Brian Dennehy as Ted Montague—
3 It should be noted that Benvolio's hair is an orangish red; while still bright, it seems to be actor Dash Mihok's
natural color. The combination of Mihok as Romeo's blood relative and Brian Dennehy as Ted Montague—
each parent has been given a first name; Romeo's mother is called Caroline—leads one to speculation that the
Montagues are meant to be an Irish gang in contrast to the Capulets' clear Hispanic origins.

4 Luhrmann and Pearce's screenplay misspells Samson's name and puts him and Gregory on the side of the
Montagues are meant to be an Irish gang in contrast to the Capulets' clear Hispanic origins.

Residual black eye, presumably from a previous fight with the Capulets.

Took by the poeticism of his own lacklustre words, Romeo even jots them down
characterised its star.... This is, in effect, the first moment of peace in the film.

Taken by the poeticism of his own lacklustre words, Romeo even jots them down
in a notebook for future reference. (232)

The staging of this scene makes it clear that Romeo would have been terribly out of place in
the gas station gunfight. Even his costuming marks him differently; his friends had opened the film with a shoot-out sequence reminiscent of a John Woo
film or a Sergio Leone spaghetti Western—using guns and boasting to emphasize their
masculinity—Romeo's first scene shows him in a rather opposite way. In Shakespeare on
Film, Judith Buchanan identifies the moments that can be coded as feminine in this scene:
Sentimentally lit by the dawn light, he sits perched on the edge of a broad
stage lost in an indulgent reverie as, in internalised voice-over, he rehearse
his paradoxical platitudes about his love for Rosaline.... It is a moment that
iconises the particular variety of fragile, almost androgynous, sex appeal that
characterised its star.... This is, in effect, the first moment of peace in the film.
Frier Laurence—their everyday clothes are shorts and unbuttoned Hawaiian shirts. Other than his suit, the only thing that codes him as masculine—particularly in the teen film tradition—is that while he broods about Rosaline, a slim cigarette hangs from his mouth, a traditional signifier of a “bad boy.” This seems to be mere posturing, a gesture toward a more traditional masculinity while he indulges in feminine reflection; the cigarettes only reappear when he writes in his journal again in exile in Mantua.

While the play presents Romeo as different, even special, this film also shows Romeo to be fundamentally opposed to the other male characters’ performance of masculinity from his first appearance. He is much more comfortable alone in the Sycamore Grove beach playground than he is in his interactions with other men, even with his group of friends. Even though it is obvious that they love each other, there is always a tension between Romeo and the Montague gang, particularly with Mercutio. Harold Perrineau adds an underlying tone of rage to Mercutio’s character so that every decision Romeo makes that does not express the prevailing type of masculinity leads to conflict between the two of them. Mercutio’s reactions are always too big for the current situation; when the Nurse comes to Sycamore Grove to give Romeo a message from Juliet, Romeo leaves his friends for a moment to speak with her. Mercutio deems a gunshot in the air the necessary means of regaining Romeo’s attention. The disappointed look he receives in response makes it clear what Romeo thinks about Mercutio’s posturing and bravado. Even when Romeo is not around, his friends are shown to be enacting a problematic masculinity. This showy, antagonistic expression causes nothing but trouble, as evidenced by the opening scene. Without Romeo as an indicator of how the audience should feel about this fight, Luhrmann inserts comedy to show the absurdity of the gang’s conflict; Sampson tries to war valiantly, but in attempting to hide from Abra’s gunshots, he takes refuge in a car full of women, one of whom beats him about the head with her purse because of the trouble he is causing her. This is no way to express one’s masculinity, and because—with the exception of Friar Laurence—this is Romeo’s example, he chooses to eschew their performance altogether and pursue a more feminine style.

This tension between Romeo and other male characters is also explored in the additions and deletions that Luhrmann makes to the text. One of the most significant changes comes in Romeo’s confrontation with Tybalt; this scene is given an entirely different tone. While the text specifies that Romeo fights Tybalt on the strength of his “fire-eyed fury” (3.1.126) at Mercutio’s death and makes quick work of the struggle between them, DiCaprio’s Romeo is powered by grief and the incident stretches over three minutes, a significant length for a filmic version of this scene. Until this point, he has taken a great deal of abuse from Tybalt—not just the verbal abuse the play indicates, but a painful physical beating that leaves him with bruises, cuts, and cracked ribs. In Luhrmann’s vision, Romeo and Tybalt’s duel is marked by emotional pain; John Leguizamo even plays Tybalt as seemingly sorry for the outcome of his fight with Mercutio, as if Tybalt is just a young man playing at violence and not really aware of the potential effects of this feud.7 As Romeo pursues Tybalt in a high-speed car chase and catches up to him at the base of a statue reminiscent of Rio de Janeiro’s Christ the Redeemer, tears are streaming down Romeo’s face, left over from his weeping over Mercutio’s prone body. Even as he corners Tybalt, there is no shift to rage or even satisfaction; instead, DiCaprio’s eyes glitter with tears as he shoots Tybalt. He looks shocked, as if he had not realized he was emptying a clip into the young man. Another change comes in the tomb scene; whereas Romeo kills him in the text, this Paris does not make an appearance beyond his visit to the Friar to arrange his and Juliet’s wedding, and he is apparently alive by the end of the action. This removal of intentional, rage-driven violence further serves to feminize Romeo. Luhrmann’s changes show Romeo to be more comfortable with a more passive, feminine performance of gender.

Luhrmann’s Juliet also prefers an unusual expression of gender, though for different reasons. Unlike Romeo, she is not reacting to the performances around her but creating a performance that enables her to navigate her isolated world. William Shakespeare’s Romeo + Juliet makes Juliet the privileged only daughter of an Hispanic gangster, hidden away from the world and highly prized by her father for what she can bring him, not for who she is. In reaction to this, Juliet cultivates a masculine gender performance to help her in her dealings with others. As portrayed by Claire Danes, Juliet is a delicate beauty, generally costumed in white or an extremely childlike, innocent rendition of a Catholic uniform because this is the image her parents wish her to present. However, underneath is a young woman who is very certain about what she wants and how things should go; one could even term Danes’s portrayal stubborn. This is a natural understanding of the subtext of the screenplay; both of her parents are written as determined to get their way. Even her first appearance, after her mother runs throughout the mansion calling for her, is on her own terms. Juliet is in the bath, daydreaming under the water, and comes to her mother when she feels like it, a mildly irritated look on her face. She was busy, her expression says. Fulgencio and Gloria Capulet also seem to recognize their daughter’s rhetorical ability in Luhrmann’s vision; for example, when Juliet’s response to Gloria’s request to consider Paris is “I’ll look to like, if looking like move. But no more deep will I endart mine eye than your consent give strength to make it fly” (Luhrmann), Gloria huffs, rolls her eyes, and storms out, realizing that Juliet is evading her question. It is clear that though the play’s Juliet has a great deal of verbal acumen, this Juliet has willed her words against her parents many times. Gloria does not seem surprised at Juliet’s response. Juliet’s moments of submissiveness are just for show; she is more comfortable directing her own life.

The most interesting aspect of Danes’s performance, however, is that her Juliet is both the most innocent and one of the most mature characters in the film, something that grows from her decisive nature—and by extension, her masculine gender expression. Luhrmann

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5 They are Dole and Giabana Hawaiian shirts, however. Still, the only time Romeo’s Hawaiian shirt is unbuttoned is when he plays a form of solitary baseball during his banishment in Mantua.

6 This is very interesting in light of the film’s portrayal of Mercutio as a drag queen; the organization of his party performance makes it clear that he does this often. However, this topic deserves its own examination elsewhere.

7 His earlier gunfight only left a Montague wounded in the shoulder. Tybalt and Benvolio are shown in a standoff before Captain Prince calls an end to the brawl.
illuminates Juliet’s difference through a number of filmic techniques, the most common of which is to situate her first appearances among people with loud, frantic personalities; Romeo receives this treatment to a lesser degree because Benvolio is a calmer presence. In her examination of the film for The Cambridge Companion to Shakespeare on Film, Barbara Tatspaugh offers a careful reading of Romeo and Juliet’s relationship, contending that Romeo and Juliet alone possess a stillness and serenity, which Luhrmann conveys through symbols associated with them (the tiny cross Juliet wears on a chain about her neck and an engraved ring), by filming their scenes in softer focus and longer sequences, by making their theme a lyrical torch song and by contrasting their love with the absence of love in Verona Beach and Sycamore Grove. (143)

Romeo does have a certain serenity in his character, though this is sometimes disrupted in Juliet’s presence, and he does not begin the second act as innocently as Juliet. He enters her father’s party in an ecstasy haze and has to retreat to the washroom to clear his head. After dunking his head in a sink full of water, Romeo looks up and sees Juliet through the aquarium that separates two rooms. Now that he has been cleansed—baptized, really—he is worthy of Juliet’s presence. Still, he is presented as clumsy in comparison to Juliet’s stillness and grace. In the balcony scene, Luhrmann highlights Juliet’s maturity and serenity in comparison to Romeo; whereas Juliet quietly descends from her room on the second floor in an elevator that opens out onto the pool area, Romeo comes to her window only after tripping the motion-sensored lights and breaking a lamp near the pool.8 He mistakenly begins his soliloquy to the Nurse and reels away in disgust, having to cling to the rose trellis or plunge two stories to the patio below. Romeo’s expressions in these moments are comic. In contrast, Juliet glides out of the elevator, sighing prettily and launching into a careful consideration of her situation. Romeo is frozen against the trellis, quietly asking himself whether or not he should interrupt her. This attitude makes sense in light of their earlier meeting, where Juliet makes it clear that her opinions on their relationship’s direction matter just as much as his—truthfully, they matter more.

After Juliet meets Romeo, he attempts to steer their interaction, as this is the accepted nature of courtship. Juliet, however, does not agree; she is accustomed to being in charge, something that Romeo sees bubbling to the surface even during her dance with Dave Paris. When he is able to get close enough to her to talk—holding her hand from the other side of the pillar she is resting against—she quickly responds to his teasing seduction, matching him line by line and delighting him with her quick mind. However, Romeo is also a seventeen-year-old boy, and Luhrmann adds more physical intimacy to their flirtation, having Romeo try to kiss her in the middle of the courtship sonnet, before the text indicates it should happen. Juliet reinforces her assertive personality here as well, denying him this kiss because she is not finished talking. She is interested in Romeo physically, too, dashing about the party to find a secluded place to extend their time together. Later, during the balcony scene, Romeo seems to feel this initial agreement extends to all of their time together, an inclination Juliet quickly squashes. Whenever he reaches for her, Juliet brings the conversation back to love. Ultimately, she wants adult interaction, not adolescent lust.

When Romeo asks, “O wilt thou leave me so unsatisfied?” (Luhrmann), Juliet gives him a mildly incredulous look, an amusing interpretation on Danel’s part.

Even in their more sedate conversation in this scene, Juliet emerges as the more mature partner, fully enacting masculinity in order to move her life in the direction she chooses. She has decided that she wants to marry Romeo, and she takes steps to make sure that happens. First, she moves into the typically male position of protector. Juliet’s home is atop a hill and surrounded by a large fence, trees, and various shrubs; this proves fairly easy for Romeo to scale, and though he makes a great deal of noise, Juliet is still surprised when he appears. This turns to fear when she realizes that the Capulets’ security cameras will have picked up Romeo’s visit, and she works to hide him from both the cameras and the guard that appears when they fall into the pool. Juliet tries to make Romeo realize the danger he is in, asking him how he even got inside her father’s compound. The actors’ delivery of these lines makes Romeo and Juliet’s attitudes clear. Danel’s tones are hushed and urgent, while DiCaprio loudly declares Romeo’s disbelief that the Capulet’s guards could keep him from her, only quieting when Juliet drags him underwater, hiding him from the security guard that hurries to check on her. It is only Juliet’s quick thinking that saves him. At the end of their encounter, she firmly gives him instructions on how their relationship might continue and Romeo simply smiles in acquiscece. He is perfectly all right with Juliet holding the reins if that is what it takes to be with her. The actors’ interpretations of the text serve to help illuminate the characters’ respective expressions of gender.

Luhrmann’s changes to the text give clues as to Juliet’s preferred gender performance as well. This is particularly evident in the events that follow her marriage, when her masculine expression becomes even clearer to those around her as she becomes more outwardly assertive. In the text, Juliet agonizes over what Tybalt’s death means for her and Romeo’s marriage, pouring her heart out to the Nurse. The film’s Juliet is alone for all of this, though the Nurse’s dialogue shows that she has witnessed at least some of Juliet’s mourning. But Juliet’s most revealing speech is done in secret—and internally, using a voiceover through Juliet’s prayers to the Virgin Mary. Juliet does not need a mediator for her thoughts; her own counsel is enough to help her understand her situation, though she hopes the Virgin hears her and offers aid. This comes up again in her confrontation with her father; Juliet is determined to be heard and knows that if her father will only listen to her, she might find a way out of this situation. To draw Fulgencio’s attention, Juliet treats him as he treats everyone else—she releases her opinions in anger, screaming at him while he screams at her. When tears come, she forces them away, wanting her father to notice only her assertive, masculine performance. Only when she is left alone with the Nurse does she cry in earnest; still, her first question to the Nurse regards what could be done to prevent these things.

This enactment of a more assertive, masculine performance is not limited to Juliet’s family. Her encounter with Friar Laurence is shortened when compared with the play, as is most of the film’s action, but what is interesting here are the words Luhrmann chooses

8 According to the director’s commentary, Leonardo DiCaprio did this accidentally, but Luhrmann found it so fitting that he kept it in the final cut of the film (Luhrmann, Martin, Pearce, and McAlpine).
to excise. Whereas in the play Juliet enters Laurence’s cell saying, “Come weep with me, past hope, past cure, past help” (4.1.45), Luhrmann’s Juliet begins by asking how she may circumvent her marriage to Paris. She storms into his cell angrily, pulling a gun from her purse and putting it to her temple—a much more startling action than the play’s simple showing of a knife, and a more masculine weapon in the world of the film. Pointing it at the Friar, she mirrors her cousin Tybalt’s posture with a firearm as she continues to rant, screaming in a way that the play does not call for

FRIAR LAURENCE: Hold, daughter!
JULIET: Be not so long to speak! I long to die!
FRIAR LAURENCE: I do spy a kind of hope, which craves as desperate an execution as that is desperate which we would prevent.
If, rather than to marry with this Paris, thou hast the strength of will to slay thyself, then it is likely thou wilt undertake a thing like death to chide away this shame. (Luhrmann)

Compare this to the original text, where Juliet, though armed with a knife, simply pleads with the Friar to find her any alternative to marrying Count Paris; the knife is a last resort.

JULIET: Be not so long to speak. I long to die,
If what thou speak’st speak not of remedy. (4.1.66-67)

Also, Luhrmann has made another small but crucial change in this scene. Friar Laurence does not tell Juliet to avoid “womanish tears,” but simply asks if she has the will to kill herself; in fact, in Romeo’s first visit, the Friar’s lines about Romeo’s mischosen gender performance are gone as well. This production does not need this interference from him; here, Romeo and Juliet’s chosen gender performances are not something that needs encouragement or permission.

In Baz Luhrmann’s William Shakespeare’s Romeo + Juliet, audiences are given an adaptation that attempts not simply to film the text, but bring it alive on screen. In pursuit of this, Luhrmann highlights the play’s thematic concerns, particularly the ways in which performativity is addressed. Shakespeare’s Romeo and Juliet are clearly marked for Elizabethan audiences as enacting unusual gender performances; Romeo’s passivity and posturing are indicative of a more feminine expression while Juliet’s performativity comes from a society that only grants agency and purpose to those who enact masculinity. Juliet’s rhetorical skills are her most obvious masculine attribute, and the feminized Romeo revels in her abilities and submits to her will. In Luhrmann’s adaptation, the physicality of Leonardo DiCaprio does much to lend credence to a more feminine performance, but the film itself also makes it clear that Romeo is rejecting the problematic masculinity he sees enacted among his friends in favor of enacting femininity, something he finds both more effective and comfortable. Romeo gladly lets Juliet steer him and their relationship, and she uses her inclination to masculine performance to help her navigate her closed, patriarchal world and exert her will where she sees fit. Ultimately, both Veronas cannot tolerate the performances that Romeo and Juliet choose; they are not set up to allow teenagers truthful expression, and the lovers die in their quest to pursue their relationship as well as a more honest gender performance.
The Link between Cardiovascular Disease and Periodontal Disease: A Literature Review

Holly Plemons

Abstract
Cardiovascular disease is the leading cause of death in the United States. According to the American Academy of Periodontology, one half of people over the age of thirty, approximately 64.7 million Americans, have periodontal disease. The purpose of this literature review is to examine existing studies that document a link between cardiovascular disease and periodontal disease in order to determine if the connection extends beyond shared risk factors. To further support the relationship of the heart and oral environment, research was reviewed to determine if the treatment and subsequent improvement of periodontal status would improve cardiovascular health. Research supports the relationship between the two conditions, although there is no evidence that has established a causal connection. Patients with periodontal disease have higher serum levels of inflammatory markers implicated in cardiovascular disease as compared to patients who are periodontally healthy. Elevated salivary amounts of periodontal pathogens have been found in patients with coronary artery disease when compared to patients without cardiovascular concerns. Nonsurgical treatment of periodontal disease has been shown to decrease the amount of inflammatory markers circulating in the bloodstream and to reduce the thickness of the coronary arteries. The systemic improvement from periodontal therapy is not permanent and supports the current standard of care, calling for long-term interventions. The established link between systemic and oral health adds urgency to the prevention, diagnosis, treatment, and maintenance of periodontal disease.

Works Cited
Introduction

According to the Centers for Disease Control and Prevention, cardiovascular disease is the leading cause of death in the United States. Many of the patients seen in dental offices have some type of cardiovascular disease, which require consideration in determining appropriate treatment. In recent years the interrelationship between the environment in the oral cavity and systemic diseases has become more heavily disputed in an effort to give patients the best chance at controlling both conditions. This established link is of great importance to healthcare providers and patients and influences the standard of care that is currently accepted. The significance of this topic is that by discovering how diseases affect each other, scientists may be able to develop treatment protocols that improve the prognosis for these conditions.

For the purposes of this research, cardiovascular disease will include any conditions that affect the heart or blood vessels. Periodontal disease is defined as “The inflammation and tissue destruction result in degradation of the attachment apparatus of the teeth, causing tooth loss” (Berent et al., 2009, p. 127). Periodontal disease is thought to be initiated by bacterial plaque and is impacted by the host immune response.

The purpose of this review is to examine the existing research on the relationship between periodontal disease and cardiovascular disease. The following research questions will be addressed:

- Does the evidence support a connection that is more than shared risk factors?
- Is there research that identifies a connection between the management of periodontal disease and improvements in the cardiovascular health of the subjects?

The independent variable in this study is periodontal disease. It will be evaluated for an effect, if any, on cardiovascular disease. Cardiovascular disease is the dependent variable as the research will indicate to what extent it is modified by the treatment of periodontal disease. The review will be organized first to address studies that provide data on the link between the conditions. Research that identifies the management of periodontal disease as a factor in the improvement of conditions that affect the heart and blood vessels will then be evaluated and listed to support the conclusions that a link does exist.

Discussion

In a study conducted by Kodovazenitis et al. (2011), the connection between periodontal disease and cardiovascular disease was investigated. The purpose of the study was to analyze the effect that periodontal disease had on C-reactive protein (CRP) levels found in patients with acute myocardial infections. CRP is an inflammatory marker that is not found in healthy individuals, circulates in the bloodstream, and appears in response to inflammation, infection, or injury. Increased levels of CRP lead to a greater risk of cardiovascular complications. The study subjects were selected from a group of 204 consecutive patients diagnosed with acute myocardial infarction (AMI) and 102 consecutive subjects without AMI at the First Cardiology Clinic of the Hippokration Hospital, University of Athens. The researchers excluded participants based on:

- diabetes mellitus
- hepatitis or HIV infection
- immunosuppressive therapy
- current pregnancy or lactation
- periodontal therapy in the preceding 6 months
- antibiotic therapy for 3 months prior to study entry
- tobacco use

The use of these exclusion criteria adds validity to the research by limiting the effect of common risk factors for cardiovascular disease. The state of the patients’ periodontiums was evaluated by one periodontist using criteria accepted widely across the dental profession. Using one specialist to examine patients provides measurements that are considerably more reliable when being compared. The subjects were required to complete questionnaires with regard to their medical and dental history. Periodontal disease was identified as being systemic in exposure when more than 30% of the sites examined had both clinical attachment loss greater than 3mm and probing depths above 4mm, these measurements illustrate how much damage has occurred to the supporting structures of the teeth. The data relating to the presence and amount of inflammatory markers for cardiovascular disease was gathered from blood samples collected from patients when they were admitted. The results showed that the contribution of periodontal disease to CRP elevations was strong, independent of other risk factors and consistent amongst a spectrum of PD measures evaluated. A strong correlation between the presence of periodontal disease and elevated levels of CRP was found in the analysis portion of the results. The findings showed that AMI patients had significantly higher mean CRP levels. The conclusions drawn by the researchers in this study support a connection between periodontal disease and inflammatory markers, specifically CRP.

The sampling method used provided a random way of selecting the study group and eliminated participants with risk factors that could have produced conflicting results. The analysis of the data showed definite significance in the relationship between the two variables and effectively supports a connection between the conditions.

An earlier study attempted to assess if a patient’s perception of their oral health status could be useful in determining if indicators for cardiovascular disease were present. A cross-sectional baseline sub study was conducted by Mochari et al. (2008). The purposes of this study were to “determine if self-reported oral health status is independently associated with inflammatory markers and if oral health assessment as part of CVD (cardiovascular disease) risk screening can identify at-risk individuals without traditional CVD risk factors” (Mochari et al., 2008, p.1509). The participants were already taking part in a study conducted by the National Heart, Lung, and Blood Institute's Family Intervention Trial for Heart Health. The participants were eligible if they were family members or cohabitants of patients hospitalized with CVD, were aged 20-79 years, did not have CVD or diabetes, and spoke either English or Spanish. There were 421 subjects in this study whose oral health condition was evaluated based on the answers they provided to questionnaires with regard...
to their oral health status which were designed to be predictive of clinical attachment loss and periodontitis. Questionnaires addressing dietary assessments and physical health were included further to screen the participants. BMI and blood pressure screenings were conducted by trained examiners using automated equipment. Blood specimens were taken and analyzed at the Columbia University Clinical and Translational Science Award Center. The data was collected using standardized forms and double entered, to prevent contamination based on human error, into a Microsoft Access Database. The results showed a statistically-significant difference in the amount of inflammatory markers for CVD, particularly Lp-Pla2 in patients with periodontal disease. According to Mochari et al. (2008), “The data supports a possible independent association between oral health and inflammation, suggesting that inflammation may be the factor in the relationship between oral health and CVD” (p. 1512). This association is shown by the increased amount of inflammatory markers found the blood samples obtained from patients with periodontal disease. The research showed that women were more likely than men to have increased levels of Lp-Pla2, while men had a higher likelihood of having elevated amounts of CRP. The research also disproved a connection between age, education level, and having health insurance with elevated levels of either inflammatory marker studied.

The results of this study are dependent on self-reported periodontal disease. This is a noteworthy limitation, as the true state of the participants’ oral health is not documented or quantified by any measurable standard. The participants in this study may not be indicative of the population as they were volunteers and may have characteristics unlike those of the rest of the population, such as an increased access to care.

The identification of shared risk factors for cardiovascular disease and periodontal disease has allowed researchers to eliminate or attempt to reduce the impact of these factors in the design of their studies. The ability to limit these variables, such as smoking and diabetes, provides research that more accurately measures the link between the conditions being evaluated. Berent et al. (2009), conducted a prospective epidemiologic study of patients undergoing coronary angiography, which is a procedure used to assess cardiovascular disease (CVD), including 466 patients in the research. The participants were admitted to the General Hospital in Wels by recommendation of their physicians to evaluate the presence and extent of CVD using scores to measure the amount of vascular stenosis, the narrowing of blood vessels that can restrict blood flow. Blood samples were collected from the participants and analyzed for inflammatory markers, specifically CRP. The periodontal health of the participants was evaluated using radiographs, and an examination by a dentist using the Community Periodontal Index of Treatment Needs (CPITN). This screening index was designed by the World Health Organization to assess the treatment needs of a community; scores of three (3) or above indicate the presence of periodontal disease. The participants were also interviewed with regard to their oral health behaviors at home by the dentist conducting the screenings. The results confirmed a significant association between periodontal disease and CVD, although it did not draw a correlation between measurable signs of periodontal disease and the severity of CVD. The results showed that the number of patients with confirmed CVD showed a higher prevalence of periodontal disease than those participants without CVD. According to Berent et al. (2009), “CPITN scores of at least 3 were observed in 38% of patients with CHD and 27% of patients without CHD” (p. 130).

This study made adjustments for shared risk factors, namely diabetes, smoking, and age. These confounding variables had the potential to interfere with the data, adjusting for them strengthens the validity of the findings. The extensive data collection process and standardized tests and indices used to quantify the presence and extent of disease also add a measure of reliability to the study. The aim of this study was to determine a correlation between CVD and PD, the method and treatment succeeded in demonstrating a link. The authors’ suggestion that further research be done to determine the effect of periodontal therapy on CVD status was a logical next step and increases the usefulness of this research.

Periodontal pathogens, microbes implicated in periodontal disease, have been identified and studied. Research to determine if these microbes are involved in cardiovascular disease helped to strengthen the link between oral and systemic health. Hyvarinen et al. (2012), described the purpose of the study they conducted at the Helsinki University Central Hospital, as investigating the “association between angiographically verified coronary artery disease (CAD) and salivary levels of four major periodontal pathogens” (p. 478). Periodontal pathogens are a group of bacteria with disease-causing potential and when present are the primary etiologic factors for the loss of supporting structures in the oral cavity. The participants were randomly selected from a group of patients enrolled in the Paragene study between June 2006 and March 2008. These participants were having a procedure, coronary angiography, done to diagnose coronary artery disease and the study group was made up of 492 patients. The methods used to acquire the necessary data included: coronary angiography to determine coronary artery disease; detailed periodontal evaluation including radiographs and full mouth probing with bleeding points to assess the extent of periodontal involvement; salivary sample and blood samples to evaluate for the presence and prevalence of major periodontal pathogens. According to Hyvarinen et al (2012), the results showed “that high salivary A. actinomycetemcomitans (Aa) levels are strongly associated with the risk of angiographically confirmed stable CAD” (p.482). Aa has been shown to be strongly associated with moderate-severe periodontal disease, and this study supported those findings. This study was not able to show a significant relationship between the other three major periodontal pathogens and CAD.

This research supports the theory that oral health is connected to cardiovascular status beyond shared risk factors because the bacteria responsible for periodontal disease were evaluated and measured. The results have an added measure of validity as they confirm previously-documented connections between periodontal pathogens and the severity of destruction clinically visible in the oral environment. This study has implications for the clinical management of periodontal disease as it supports the need to treat the condition to improve systemic health. The treatment of periodontal disease decreases the number of pathogens present, which leads to a suppression of the inflammatory response; the reduction
of inflammation has a positive effect on cardiovascular health. Treatment protocols for periodontal disease should be implemented with an eye to the systemic benefit.

Cardiovascular and periodontal diseases have an inflammatory component. During periods of active periodontal disease, inflammation exists in the oral tissues, which triggers a systemic reaction. Blum et al. (2007) investigated the connection between periodontal conditions and systemic inflammation as it relates to cardiovascular disease using a prospective case-controlled pilot study. The purpose of this study as stated by Blum (2007) was, “to determine whether periodontitis could be an infectious trigger to systemic inflammation, and whether conservative treatment could cure the local infection and reverse systemic inflammation” (p. 114). Participants were selected from patients referred to the Outpatient Dental Clinic of the Hospital where the study took place in Galilee, Israel. The study group was comprised of nine out of fifty patients who met the criteria of the study. Exclusion criteria included:

- history of smoking
- risk factors for cardiovascular disease particularly hypertension
- diabetes
- family history of cardiovascular conditions
- chronic inflammatory conditions
- cancer

The study group underwent a medical history review and physical examination by a team comprised of a periodontist and cardiologist. This information served as the baseline for the experiment and follow-up measurements were made after intervention with systemic antibiotics, Amoxicillin and Metronidazole, advanced oral hygiene instruction, and two to four sessions of scaling and root planing. Scaling and root planing is a nonsurgical procedure that employs manual and power instruments to free tooth and root surfaces from debris and bacteria. A control group of nine participants was used in this study and included participants not diagnosed with periodontal disease and deemed to be healthy. The results of this research showed that there were elevated levels of CRP in participants with periodontal disease as compared to those without evidence of periodontal disease. According to Blum et al. (2007), “periodontitis was improved in all 9 patients that completed 3 months of treatment” (p. 114). The results also showed a reduction in the levels of CRP post-treatment. Although there was a reduction in the inflammatory markers for cardiovascular disease with the treatment, the levels seen are still higher than those seen in healthy patients such as those in the control group. Blum et al. (2007), also drew the conclusion that treating periodontal disease, “may inhibit systemic inflammation and could be used as an important prevention tool” (p. 116). The results of this study help to support current treatment regimes that include oral hygiene instruction, instrumentation and chemotherapeutics to improve periodontal health.

This study used methods to increase the significance of the results by testing both a study and a control group and by using the same demographics and exclusion criteria for each. The results agree with previous research supported by the American Dental Association. The clinical application of this study supports the treatment of periodontal disease using nonsurgical interventions. Improvements seen in the periodontal status and systemic health of participants receiving treatment supports current treatment protocols.

Dental professionals believe that improving oral care practices will improve patients’ health. If these improvements impact systemic health as well as the oral cavity, then motivation and urgency to treat and maintain oral health will be increased. Frisbee et al. (2010), conducted a cross sectional convenience sample study of 115 subjects. The research hypothesis stated that better dental hygiene practices and more frequent preventive dental care would be associated with more favorable levels of systemic inflammation. The data for the analysis of inflammatory markers for cardiovascular disease was collected via blood samples taken from the subjects. The participants were required to complete a structured questionnaire that detailed their health and lifestyle focusing on their oral hygiene practices, dental health, and routine preventive dental care. Those participants who indicated better general oral health showed lower levels of CRP according to Frisbee (2010). Interestingly, the study also found a correlation between specific oral hygiene practices and cardiovascular disease risk factors. The statistics showed, “Less frequent brushing was associated with elevated total cholesterol and less frequent flossing was associated with elevated mean arterial pressure” (Frisbee, 2010, p. 179). Self-reported oral hygiene practices demonstrated an impact on important markers for cardiovascular disease and the analysis of the data provided support for the hypothesis. According to Frisbee et al. (2010), “Better self-reported, overall dental health was associated with lower levels of CRP” (p. 180). The conclusions drawn support from previous studies that have documented a relationship between CRP, aggressive, and localized periodontitis. It is also interesting to note that this study dealt with the non-clinical aspects of periodontal disease and that the increased levels of cardiovascular inflammatory markers were present at that point, before the clinical signs and symptoms of the disease were evident. Further research to pinpoint the stage at which cardiovascular health becomes affected may help develop better preventive strategies to reduce the negative systemic influence of periodontal disease.

This study used methods to analyze the data, specifically a multiple linear ordinary least squares regression, to allow the correlation strength of the data to be tested. One significant limitation of this study is that the oral hygiene status and practices were self-reported. The reliability of the participants’ responses on the questionnaires was assumed to be accurate and true with no criteria in place to test the amount or extent of their periodontal disease status. The volunteers used as the participants in this study are a possible source of bias as they may have characteristics unlike the rest of the population, such as increased health literacy. Further research is necessary to determine whether the systemic inflammation related to periodontal disease begins before the onset of clinically detectable disease, and if so at what point.

Further research conducted by Xu, F. and Lu, B. (2011), attempted to determine if periodontal disease had a higher prevalence in patients with cardiovascular disease. The research technique was a multistage cluster design study of 3,661 participants over the...
age of thirty who had received a periodontal examination from NHANES III mortality follow-up sample. The participants were classified as having moderate or severe periodontal disease using examination procedures obtained on the CDC website which are based on a numeric value for the amount of attachment loss present in the mouth. The stated purpose of the study was to evaluate the relationship of periodontal disease to cardiovascular disease. The study used data collected from the National Death Index records to determine the cause of death. The results of the data analysis showed that “men with severe PD still have an increased risk for CVD and all-cause mortality compared to men without PD in the younger group” (Xu & Lu, 2011, p.539). The results failed to show a relationship between periodontal disease and cardiovascular disease in older men and women.

The information gained through this study is limited as it was taken from post-mortem examinations of the participants. Periodontal disease has periods of activity and remission, the use of information from death certificates does not permit the distinction between current disease activity and the damage to the periodontium seen from disease potentially in a state of remission. The data contained in death certificates is also subject to error and this may impact the results of this study. The findings listed by Xu and Lu (2011), support the results of many other studies. The validity of this work is supported by comparison to research conducted by Kodovazenitis et al. (2011), which also documented an increase in the amount of CRP in participants with periodontal disease.

Current research has not proven that the connection between cardiovascular disease and periodontal disease encompasses all aspects of the disease process. Sridhar et al. (2009), conducted a study to evaluate the relationship between periodontitis, cardiovascular disease and serum lipid levels. The study included 120 participants who were divided into 4 groups sharing common traits. Group A were periodontally healthy patients without a diagnosed cardiovascular condition and served as the control group for the study. Group B consisted of participants with chronic periodontitis and no documented cardiovascular concerns. Group C participants displayed chronic periodontitis and coronary heart disease (CHD). Group D included those participants with CHD but no measurable signs of periodontitis. The inclusion criteria used for this study included subjects between 40 and 60 years of age, a minimum of 14 natural teeth present, clinical attachment of at least 1mm on 30% of teeth present, and CHD diagnosed with a coronary angiogram. Sridar et al. (2009), listed the exclusion criteria as:

- other systemic diseases
- non-ambulatory CHD patients
- use of drugs for hyperlipidemia(high cholesterol)
- antibiotic treatment for 4 weeks before the start of the study
- dental treatment 6 months before the start of the study
- tobacco use

Serum levels were measured from blood samples taken at fasting levels for all participants and evaluated for total cholesterol, low and high density lipoprotein, as well as triglyceride levels. The periodontal status was evaluated by an intra-oral examination which included Gingival Index, Oral Hygiene Index, Periodontal Disease Index scores, and attachment loss measurements. The results did not show a correlation between periodontitis and serum lipid levels, and the presence of elevated levels of triglycerides did not have an adverse effect on the attachment levels of the subjects. The results also concluded that there was not a significant difference in the serum levels of LDL levels in periodontally healthy patients as compared with patients with documented disease.

The use of indices accurately to diagnose participants used in this study adds to the validity of the results and the use of standard tests to measure serum levels of lipids also contributes to the reliability of the data collected by providing consistency. While this study did not show a correlation between periodontitis and serum lipid levels it did not disprove a link between cardiovascular disease and periodontitis. The use of a greater number of participants and evaluating other aspects of cardiovascular disease could further document the correlation between the two conditions.

During dental procedures, oral tissues are manipulated and bleeding frequently occurs. The impact that treating dental disease has on the systemic health has been studied. Minasslan et al. (2010), conducted a self-controlled case series to investigate whether invasive dental treatment affected the number of vascular events. Minasslan et al. (2010), stated the null hypothesis, which implies that two aspects in a study are not related, as “rates of vascular events remain constant from day to day and are not affected by exposure to invasive dental treatment” (p. 500). Stating a research goal in terms of a null hypothesis, encourages the study design to attempt to prove that theory. The participants were selected from the Medicaid database and included 1,152 patients admitted for hospitalization for ischemic stroke or myocardial infarction over the age of twenty years. The database listed the disease conditions using the International Classification of Diseases, Ninth Revision, Clinical Modification, classification system. The study collected data for twenty-four weeks before the first cardiovascular event and included only those subjects that had invasive dental treatment and a cardiovascular event during the observation period. Exclusion criteria used for this study included:

- history of diabetes
- hypertension
- coronary artery disease
- participants with prescriptions for antiplatelet or salicylate drugs

The information regarding invasive dental treatment was collected based on the Current Dental Terminology coding system and included procedures such as, periodontal therapy, invasive dental surgery, simple extractions, and complicated extractions. Each procedure was followed by twenty-four weeks of observation. The results demonstrated a significant increase in the number of vascular events in the four weeks following invasive dental procedures. The results also showed that the increased risk of cardiovascular complications following invasive dental procedures declined and reached baseline levels within six months. The data supports findings that periodontal therapy has the potential to increase the systemic inflammatory response, which can impair the function of the blood vessels for
a significant (approximately one week) period of time before returning to baseline levels as previously documented.

One notable limitation of this study is the use of the Medicaid population as these participants may have characteristics that may not be representative of the entire population, such as low socioeconomic status and a heavy proportion of disabilities. Another concern for the reliability of this study is that the use of over-the-counter medications with the potential to affect the cardiovascular system was not considered or addressed. The validity of the study is strengthened by the large number of participants, the length of the study, the uniform coding of the disease status for the participants as well as the outcome of their events.

The effect that treating periodontal disease has on cardiovascular disease is an important aspect of this link that has been evaluated. This research is significant because it attempts to justify the current treatment protocols accepted as standard of care in the dental profession. Piconi et al. (2009), attempted to “verify possible correlations between periodontal disease and atherosclerosis in the clinical setting” (p. 1197). The participants of this longitudinal study were thirty-five otherwise healthy subjects, with a mean age of 46.21 years, who were diagnosed with mild to moderate periodontal disease. The study took place at the Dental Clinic of the Luigi Sacco University Hospital in Milan, Italy. All participants were screened for medical conditions that could be confounding variables. Exclusion criteria for this group included:

- acute infectious diseases
- respiratory disease
- cardiovascular disease
- metabolic conditions
- kidney disease
- tumors
- antibiotic treatment in the previous 6 months

Baseline data was collected to determine the amount of inflammatory markers for cardiovascular disease present using blood samples and Echo-Doppler cardiology of the carotid artery. Periodontal status was evaluated using the Periodontal Screening and Recording Index (PSR), plaque scores, and bleeding points. The numbers and types of periodontal pathogens were measured by collecting and analyzing the crevicular fluid using paper points inserted into four sites per participant. The participants underwent periodontal therapy that included anti-infectives and non-surgical debridements that were completed by the fourth week. Data was then collected again at one, six, and twelve month intervals and compared. The results showed that the treatment applied to the participants caused a significant reduction in the total number of periodontal pathogens present. The treatment also resulted in a decrease in the amount of inflammatory markers for cardiovascular disease in the blood as well as the adhesion and activation proteins. The thickness of the intima-media, a measurement of the innermost two layers of the arterial wall, was also decreased after treatment. A reduction is a positive finding because the thicker the arterial wall, the more blood flow is reduced which contributes to cardiovascular complications.

This research further supports the link between periodontal pathogens that cause inflammation in the oral cavity and increased systemic inflammation that contributes to cardiovascular disease. Of concern is that the positive effects of treating periodontal disease are time-limited, as the levels of periodontal pathogens gradually increase within the twelve month period studied and indicate the necessity to provide continuous treatment to maintain improvements. The longitudinal method used in this research is verified by repeated observation of the variable over a long period of time. Using exclusion criteria to limit confounding variables strengthens the validity and the applied therapy was standardized and the measurements taken were reliable. This is notable because limiting the effect of shared risk factors for these diseases strengthens their relationship beyond common characteristics.

Conclusion

While a causal relationship between periodontal disease and cardiovascular disease has not been documented, a relationship does exist. Helfand et al. (2009) state, “Our review and meta-analyses suggest that periodontal disease is an independent, though relatively weak, risk factor for CHD” (p. 502). Cardiovascular and periodontal disease are both prevalent conditions with multifactorial etiologies. The value of assessing and treating periodontal disease is supported by this literature review as the correlation between periodontal disease and cardiovascular disease needs to be of concern for patients and healthcare practitioners. Luciak et al. (2007), suggest that early treatment might have a positive effect on the health of those at risk for periodontal conditions. The use of screening methods to detect periodontal conditions was found to be beneficial in this study. Nonsurgical treatment of periodontal disease has been shown to improve not only the oral health of patients but also their systemic health. According to Pickett (2012), treatment can reduce the clinical signs of the disease and decrease the systemic inflammatory response. The alteration of inflammatory markers with periodontal therapy is a significant finding and supports the need to address the condition. Lockhart et al. (2012), state that several cohort studies and randomized clinical trials have reported improvements in endothelial function and associated markers for inflammation among subjects who have undergone nonsurgical periodontal therapy, with or without systemic antibiotics. Of great concern for dental providers is the return to baseline levels of the bacterial burden and inflammatory markers over time. Long-term interventions need to be incorporated into treatment protocols to maintain the improvements seen with initial therapies. Kuo et al. (2007), support the treatment of periodontal diseases to improve systemic health. According to Kuo et al. (2007), prevention and management of periodontal diseases can have a significant impact on the improvement of cardiovascular function at a public health level.
The diseases reviewed here are complex and have many shared characteristics and a connection between periodontal disease and cardiovascular disease is supported. The data does not infer a causal relationship, merely a relationship that extends beyond shared risk factors. The treatment and management of periodontal disease has been shown to improve both systemic and oral health, having an impact on inflammatory markers for cardiovascular disease and decreasing the destructive bacteria that is harbored in periodontal pockets. The value of properly identifying and treating periodontal disease should not be understated, as it is a significant factor in the progression of cardiovascular disease, which is the leading cause of death in the United States. Current standards of treatment aim to reduce the presence and extent of periodontal disease and need to be continually updated with evidence based protocols. The management of periodontal disease needs to include long-term and continuous interventions to maintain improvements.

References


Joseph Cooper

Abstract

The development of faith-based missionary aviation is a post-World War II phenomenon. The war effort demonstrated the value, utility, and global reach of aviation to remote, underdeveloped areas of the world. With the beginnings of a worldwide infrastructure for aviation, Christian aviators realized aviation could increase the range and effectiveness of their efforts to reach the world for Christ (Mellis, 2006).

A qualitative, ethnographic study was conducted to document the activities of one faith-based aviation organization to gain an understanding of this little known aspect of civilian aviation. The study was conducted with Missionary Flights International (MFI) of Fort Pierce, Florida, which has been involved in faith-based missionary aviation since its inception in 1964.

A constant comparative method was utilized to identify common elements, themes and patterns; common threads woven throughout the fabric of the organization and its culture. With the use of triangulation, three sides of input data from interviews, questionnaires and observations, two general phenomena, aviation and missions, each with six related categories emerged, describing the organization. MFI provides twice a week service to the island of Hispaniola and the Republic of Haiti. In this in-depth study, insight and understanding were gained into the purpose of MFI, its daily routines and operations, and the challenges it faces in maintaining its flight services to Haiti.
INTRODUCTION

Aviation is an expeditious means by which people and cargo can be transported, especially in remote areas where traditional modes of transportation may not exist. Charitable aviation fills a gap where commercial aviation cannot be financially sustained. We are accustomed to measuring profits by looking at the financial bottom line, but there are many rewards of equal or greater importance that are not measured monetarily: missions accomplished, hurdles overcome, lives saved.

An exceptional example of this was the global response to the devastating January 12, 2010 earthquake in the Republic of Haiti. Haiti is frequently visited by epidemics, tropical storms and flooding. It is the poorest country in the Western Hemisphere and an area of great need. In 2010, Haiti was the epicenter of a severe earthquake from which its people have yet to recover. Nearly one hundred general aviation aircraft flew over 700 mercy flights, transporting 3,800 passengers and 1.4 million pounds of relief supplies in the days immediately after the earthquake, providing a lifeline to Haiti (National Business Aviation Association, 2010). Missionary Flights International of Fort Pierce, FL occupies a most unique niche in flying modernized DC-3s, the DC-3 TP aircraft for missionaries to the Republic of Haiti and the Dominican Republic on the island of Hispaniola in the Caribbean.

A qualitative, ethnographic study through cultural emersion into Missionary Flights International (MFI) was undertaken to gain an understanding of this little-known aspect of civilian aviation and to gain greater insight into the mission and purpose of MFI documenting the activities of this faith-based aviation organization, its daily routine, and the challenges they face in maintaining their flight service to Haiti. The ultimate goal of this study was to document the value of the faith-based aviation services of MFI, to highlight the organization; and to discover its operational methods. In so doing, this study hopes to create a picture, through an in-depth ethnographic study, of mission aviation.

Background

The development of faith-based mission aviation was largely a post-World War II phenomenon. At the end of WWII, Americans formed missionary aviation groups: Mission Aviation Fellowship (MAF), established in 1945 and Jungle Aviation and Radio Service (JAARS) established in 1948.

Formal education programs for the training of missionaries in aviation have existed since the 1940s and 1950s with Moody Aviation of the Moody Bible Institute and LeTourneau University of Longview, Texas. Many other flight and maintenance programs exist today in the United States for the training of mission aviators. Globally today there are “125 distinct, international and/or cross-cultural mission aviation programs...supported by more than 35 dedicated mission aviation training programs” (McGee, 2007, p. 1).

MFI was established in 1964 and in its early days flew Beech-18 aircraft from Florida to the Caribbean. In 1976, the organization acquired its first DC-3 from Moody Aviation—further evidence and belief in God’s providence that continues today (Beldin, 2007). A major event for MFI was their change from a FAA Part 91 operation to a Part 125 operation in 2008, which is discussed in further depth in this study’s results.

The DC-3 first flew for commercial airlines in 1935 and was known for its versatility, safety, dependability and ability to fly into unimproved airstrips. Over 12,000 DC-3/C-47s were produced by Douglas Aircraft Company, and 1,000 remain in service today. The plane was originally powered by the Pratt & Whitney R-1830-S1C3G Wasp radial piston engines. The updated turboprop version is powered by Pratt & Whitney PT6A-65AR turbine engines. Currently, MFI operates two DC-3 TP, DC-3 turboprops.

In addition to background information on the types of planes flown by MFI, it is important to have a brief understanding of the history, demographics and geography of the island of Hispaniola and the country of Haiti. Hispaniola, formerly Española, is the second largest island in the Caribbean in the West Indies between Cuba and Puerto Rico. The island is divided east and west into the Dominican Republic and the Republic of Haiti. The island’s strategic location in the Caribbean was essential to Spanish colonization of the region into Cuba, Mexico, Panama, and South America. The Spanish ceded the western third of Hispaniola in 1697 to France, which later gained independence in 1804 becoming the Republic of Haiti. The remainder of the island gained colonial independence in 1844 becoming the Dominican Republic.

Today Haiti, a nation of 8.7 million people is the most impoverished nation in the western hemisphere, clearly illustrated through per capita income, infant mortality rates and life expectancy data. Haiti is also a densely-populated country approximately the size of Maryland; it is largely deforested, with a significantly lower standard of living, income and life expectancy and significantly higher infant mortality and population density than its Dominican Republic or other Caribbean neighbors (Index Mundi, 2013). The 2010 earthquake that struck Haiti registered 7.0 on the Richter scale, and killed 316,000, injured 300,000 and left more than 1.3 million people homeless. The earthquake had an estimated economic cost of nearly $14 billion to this already impoverished nation (United States Geological Survey, 2013).

MFI had its first aircraft on the ground in Port-au-Prince within 24 hours of the earthquake. Soon, seven daily flights were ferrying essential, lifesaving cargos and provisions, including medical and rescue personnel to the island from Ft. Pierce (Snook, Budensiek, & Martin, 2010). In 2011, MFI’s DC-3s flew 1,600 hours and 275,000 miles, with an average of four flights per week to Haiti, the Dominican Republic and to the Bahamas, with 270,000 pounds of luggage and 230 tons of essential supplies and cargo with a similar amount flown in 2012 (Missionary Flights International, 2013).

RESEARCH AND DATA ANALYSIS METHODOLOGY

Grounded theory with a constant comparison method is a contemporary, dynamic approach to qualitative research which is a “bottom-up” method for the identification of emerging common and recurrent trends and themes from ongoing data analysis, ensuring development of hypothesis and theories about phenomena. A constant comparative method
was utilized to identify common elements, themes and patterns; common threads woven throughout the fabric of the organization and its culture. Figure 1 is an illustration of the triangulation research methods, based on a triangle with three sides of input data from interviews, questionnaires and observations.

**Figure 1.** Three sides of triangulation for the development of emerging phenomena.

**Data Collection and Analysis**

The author conducted a five-day visit to MFI in Ft. Pierce, Florida, in January, 2013, for on-ground observation of aviation management, aircraft preparation and loading, aircraft maintenance, flight operations and preparation with opportunity for interviews of staff and of clientele served by the organization and to observe and participate in ground and flight activities in Fort Pierce and in Haiti. MFI is a relatively small aviation operation with twenty-one paid employees and additional unpaid volunteers. It has personnel functioning in a wide spectrum of routine essential aviation activities. Departments at MFI include: Administration, Flight Operations, Maintenance Operations, Flight Planning/Loadmaster, Warehouse/Mailroom/Purchasing and Office/Clerical Support Staff. There were five prominent personnel categories at MFI to include those in administration, pilot/maintenance, warehouse/mailroom and purchasing, clerical office staff, and volunteers. The author undertook a directed, intentional and purposeful sampling of employees in each category for both the depth and scope of this inquiry. Over the course of four days nineteen formal interviews were conducted.

One day was dedicated to participating in flight operations with a roundtrip flight to Haiti as a member of the flight crew as the required flight attendant. Eight adult passengers expressed a willingness and interest to participate in a questionnaire process at a later date.

A similar-sized group of MFI customers, unknown to the researcher was surveyed through contact information provided by MFI, for another, independent data set for triangulation purposes. This group was asked the same questions as passengers on the January, 10, 2013 flights to and from Haiti. Commonly asked questions included the individual’s experience with MFI; for staff members, their personal experiences, responsibilities and perspectives on the organization and its customers. MFI’s clientele were questioned about their experience with the organization. In both cases, those questioned were given the opportunity to expand and develop their thoughts in germane areas.

Following the on-site visit, audio recordings and field notes were transcribed. Data from all sources were examined for common and repetitive themes. These themes were categorized, the frequency or commonality was noted and categories and related themes were also developed in keeping with the study’s design.

Data for this study about faith-based aviation and Missionary Flights International was derived from sources within the organization, and sources outside the organization. The internal data was from interviews in Fort Pierce, FL with MFI personnel and were a key source of primary information. The external data was from interviews with Fort Pierce Airport personnel; questionnaires completed by MFI customers; and from five days of field notes and observations with a critical source of external data from MFI customers by questionnaire. Thirteen of twenty questionnaires were completed for an overall response rate of sixty-five percent. At least four distinct and different data sources of information, allowing for triangulation, were derived for analysis to identify and establish core phenomena.

**RESULTS**

Utilizing a constant comparative method to initially identify potential core phenomena, recurring events and themes emerged and were identified.

**The Core Phenomena**

Ninety topics about faith-based aviation and Missionary Flights International were initially identified. These topics were further refined and concentrated into twelve categories. Each of these categories was significant and each was confirmed from a variety of data sources. Two core phenomena were identified: flight or aviation and missionaries in keeping with Missionary Flights International’s own definition: Missionary Flights International is not an airline. We do, however, strive to offer affiliated missions the kind of efficient service and professionalism expected of an airline operation. The Lord has led us to “Stand in the Gap” in meeting the air support needs of affiliated Biblical missions in the island fields of the West Indies, particularly Haiti, the Dominican Republic, and the Bahamas. (Missionary Flights International. 2013, para 1)
Table 1 illustrates the final categorization of two research phenomena, with twelve categories, six in under phenomenon.

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Table 1. Two Final Research Phenomena with Categories

The First Core Phenomenon: Aviation

Remarks about aviation consistently addressed the merits of aviation in overcoming geographic hurdles common to other forms of transportation. Likewise, the comment was often made about aviation being a remarkable tool in advancing the kingdom of God. Aviation is a time-saving means for missionaries in Haiti. Aviation is also a secure method of transporting personnel and cargo otherwise vulnerable to hostile inhabitants and hazardous road conditions. MFI’s service is reliable and dependable and constitutes a lifeline to the mainland for missionaries. They deliberately establish their charges at the lowest possible rates while meeting expenses. A roundtrip to any of their four destinations has a recommended donation of $450, or about half of a commercial fare.

Aircraft

MFI utilized the DC-3 radial aircraft from 1973 until 2011. The turboprop version, the DC-3 TP was first introduced to MFI in 2003, with complete conversion in 2011. The professional pilot and maintenance staff at MFI consistently remarked about the dependability and versatility of the aircraft, especially the turboprop version. As a tail dragger aircraft with large, robust main gear, the DC-3 is well suited for primitive landing fields. In essence, it is a simple, easily maintained aircraft. The DC-3 TP is more reliable, requiring only normally scheduled maintenance. The DC-3 TP can be put back into flight service after checking the engine oil and cleaning the galley. The turbine aircraft uses universally available Jet A fuel. Key to MFI’s operations is keeping the cost of travel and shipping for missionaries as low as possible. Considering current economics, no other aircraft option is viable.

Part 125 Flight and Maintenance Operations

MFI comes under stringent regulations by the FAA under Part 125 Operations requiring strict adherence to flight operations and maintenance procedures. Conversion to Part 125 Operations in 2008 accelerated change within MFI, with the creation of a Director of Operations and a Chief Pilot, development of standard operating procedures (SOPs) and flight and maintenance manuals to standardize operations, and greater stringency in training and record keeping. They are conscious of risk management and the importance of crew resource management (CRM) and safety management systems (SMS) programs. Under federal regulations, they are responsible for currency of their captain and first officer pilots (E. Hallquist, personal communications, January 9, 2013). Their move in 2005 to Fort Pierce from West Palm Beach, FL provided a spacious headquarters with a 35,000 square foot hangar with offices, maintenance and storage facilities and warehouses. The aircraft are housed in hangars, greatly reducing aircraft corrosion and greatly enhancing their maintenance and flight loading efforts. The director of MFI is aware of the limitations in having only two functional aircraft for routine operations and realize that with additional aircraft they could expand their missionary aviation services throughout the Caribbean (K. Gumpel, personal communication, January 9, 2013).

Flight Preparations

MFI has seen a continuously changing aviation environment, especially as an international operation post 9/11. There are greater concerns about safety and compliance with American and Haitian government immigration, customs procedures and regulations affecting every flight (E. Hallquist, personal communications, January 9, 2013). In shipping freight and cargo, they must adhere to safe practices and not ship hazardous or banned cargo (W. Norton, personal communication, January 8, 2013).

Missionary team leaders establish reservations several months to a year in advance for their groups. Planning software helps coordinate flight planning efforts merging reservation and cargo data with the number of passengers, onboard fuel requirements and the length of flight legs (W. Norton, personal communication, January 8, 2013). Passport, visa, general declarations and cargo and passenger manifests are submitted electronically in advance to the United States and Haitian governments. Prior permission must be granted for both the departure and arrival of all flights (S. Hengst, personal communication, January 11, 2013).

Professionalism

Richard Snook, MFI’s president and CEO, remarked of MFI’s desire to mimic a commercial airline operation with professionalism, adherence to regulations and aviation standards, and in their relationships with the FAA. A sense of professionalism was confirmed from external sources at the Fort Pierce Airport. MFI has an experienced cadre of pilots, each flying weekly and approximately 250 hours per year (K. Stratton, personal communications, January 9, 2013). Their pilots have from 5,000 to 25,000 hours of flight experience (R. Snook, personal communication, January 11, 2013). Multiple references were made to MFI’s commitment to the missionaries’ safety and welfare, through conducting emergency flights evacuating missionaries for catastrophes, medical emergencies and accidents and because of political unrest in Haiti.

All MFI customers surveyed confirmed a high degree of professionalism and competence in flight and office operations. They consistently remarked about MFI’s
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making life in Haiti more bearable. Not accomplish their mission in Haiti without MFI; MFI is their link to America, often consistently validated and confirmed by missionaries in the field. Many stated, they could accomplish their mission in Haiti without MFI; MFI is their link to America, often making life in Haiti more bearable.

The Second Core Phenomenon: Missions and Missionaries

Missions and missionaries were defined as the act of proclaiming the Gospel message in service and in love. Those within MFI consider themselves to be stateside missionaries.

To Serve

To serve as a calling or vocation is especially important within this organization in providing for the physical and spiritual needs of others. MFI’s president remarked, everyone, regardless of rank or responsibility has been called to MFI to serve. When interviewed, both paid staff and volunteers spoke of having been called to the mission field and of having been specifically led to MFI. When asked why they serve, volunteers and staff commonly responded that they have the spiritual gift of “helps”; feel called to bring relief and aid to others; and/or possess talents in aviation. When combined, MFI is the ideal platform from which to serve.

Service

MFI has continually developed and refined the services they offer missionaries and their missions. Their missionary services started in 1964 with the delivery of mail to missionaries in the Bahamas. All missionary organizations utilizing MFI’s services must qualify as affiliate members. Each application is reviewed for consistency with MFI’s own doctrinal statement. MFI supports over 300 missionary organizations with more than 750 permanent missionary families residing in Haiti and additional transient short-term missionaries.

MFI’s vision goes well beyond the provision of aviation services for transporting people and material. MFI has compiled a listing of fifteen important services they provide for missions and missionaries in Haiti including disaster relief, feeding programs, sea shipments, construction teams, youth groups, orphanages, agriculture, church building, education, evangelism, emergency evacuations, Christmas bags, well drilling, mail and package service and hospital and medical clinic support.

The greatest service MFI provides is best defined as a concierge service for missionaries. Twice weekly, MFI ships mail to each of its three hundred affiliates in Haiti at no cost. Packages and cargo are shipped at MFI’s costs. This is particularly noteworthy of a non-profit organization that annually hopes to break even financially. The value of this was consistently validated and confirmed by missionaries in the field. Many stated, they could not accomplish their mission in Haiti without MFI; MFI is their link to America, often making life in Haiti more bearable.

Evangelization and Prayer

Evangelization was defined as preaching and good works for spiritual conversion with prayer defined as conversation with God. A common and unifying denominator for those at MFI and the missionaries they serve is spiritual belief and faith. One missionary pilot remarked: “I do it for one reason, so that others may come to know Jesus Christ as their personal savior” (K. Gumpel, personal communication, January 9, 2013). MFI’s President remarked on their ultimate spiritual motivation:

We have a burden for Haiti and the unreached. It’s not about flying airplanes. Eternity is too important. It’s about reaching people. These old DC-3’s were once instruments of war. They are now instruments of peace. (R. Snook, personal communication, January 11, 2013).

MFI’s employees remarked of routinely seeking God’s wisdom and counsel in their operations. At the beginning of each week, those in the MFI community join together in prayer. Nearly two-thirds of the missionaries traveling to and from Haiti specifically mentioned reassurance with the flight crews’ routine of prayer for God’s protection before each flight.

Faith in God’s Provision, Support and Fund Raising

Not surprisingly, in any non-profit organization, fund raising is essential. Those at MFI depend upon charitable donations to sustain their organization and its efforts. Faith, provision and support were defined in this context of trusting God for His provision. Those at MFI are called to be good stewards. In a legal sense, MFI is the owner of the organization. In a biblical sense, they are stewards of the resources God has and continues to provide for them in serving others. Unique to faith-based organizations is the concept of support. Each missionary is responsible for raising his or her own support or salary. Individuals, families and churches have supported these missionaries, and the organization corporately with their consistent contributions (L. Campbell, personal communications, January 8, 2013). Those entering the MFI community must first spend several years developing this financial support before becoming part of the organization (R. Snook, personal communications, January 11, 2013).

This same principle is also applied to the organization. MFI must actively solicit support to sustain their flight operations. In 2013 one of their DC-3 aircraft was refurbished at an expense of well over one million dollars, a private foundation financed the engine overhaul of $900,000 (J. Karabens, personal communication, January 7, 2013). MFI’s operating budget of nearly four million dollars is provided entirely through financial donations and fund raising (H. Martin, personal communication, January 7, 2013). In 2012 MFI became debt free. As God provides additional people and additional aircraft, MFI plans to expand their services to Cuba, to Central and South America (L. Campbell, personal communication, January 8, 2013).

History and Culture
MFI has a rich culture in its fifty-year history. The missionary calling is common to all within the organization. They share a common desire to fulfill the Lord’s command to reach out “to the least of these” (Matt 25:40). Everyone’s position and contribution is equally important and valuable. As the CEO remarked: “We are in this together, to serve the Lord. That makes my job easy” (R. Snook, personal communication, January 11, 2013). The Director of Flight Operations remarked about their corporate culture when he said: “As Christians, there is a spiritual issue of maintaining good relationships. We are all committed to our faith and that has an impact on the organization” (E. Hallquist, personal communication, January 9, 2013).

Most members have been with the organization between ten and thirty years. To remain focused and refreshed in their service, each MFI missionary staff member and family is encouraged to spend time in Haiti, living and serving with a missionary family every two years.

Staff members know they are constantly sowing seeds, even in the setting of the drudgery and repetition of their aviation jobs. Their work is an act of spiritual service. “We do things well, even in the details because it’s an act of worship. It pleases God to do things well. Everything we do has a spiritual component” (E. Hallquist, personal communication, January 9, 2013).

Charity and generosity are important cultural element at MFI. Members are known for their service and commitment to the Fort Pierce Airport and community and for being responsible corporate citizens. Annually, tens of thousands of meals are prepared at MFI for the Save Our Starving Children food-packing event. MFI donates their spacious hangar for the airport’s annual open house, ATC safety seminars and fund raising auctions for the public schools.

People and Human Assets

People are essential and valued at MFI, and key to their daily success. Those at MFI have seen how God has provided the right people at the right time, in the short and long term. Multiple times the organization’s leadership expressed personal concerns for the welfare of each staff member. It is noted in the organization’s financial commitment to each staff member, its policy for short term mission trips to Haiti for each staff member, regular leave for support raising and compensatory time off following extended duty time. MFI’s people are cherished as a God-given resource. Many times short and long term missionaries commonly remarked about the caring, committed and kind nature of those at MFI as well as their shared cultural bonds.

Volunteers

Volunteers were defined as those who work without being financially compensated. They are essential and critical to the daily efforts of MFI, and are recognized as God given. A full-time staff person at MFI has the responsibility for coordinating volunteer services. There are tens of thousands of volunteer hours are served each year (J. Karabesh, personal communication, March 3, 2013). During the 2010 Haiti earthquake relief efforts, volunteers routinely served ten to twelve hours per day for months, greatly facilitating and multiplying MFI’s effective response (T. Long, personal communication, January 8, 2013). Volunteers serve sorting missionaries’ mail and cargo and loading aircraft. Fulltime seasonal volunteers assist annually during MFI’s busiest seasons.

DISCUSSION

In anthropology and sociology, the term fictive kinship is used to describe a family bound together by common ties of affection, concern, obligation and responsibility and not by bonds of blood or marriage (The Free Dictionary, 2013). This kinship is apparent in examining the data about Missionary Flights International with their shared common spiritual identify and purpose in achieving common goals. It was apparent that Missionary Flights International is a trust, a trust in a spiritual sense, in God having entrusted them with resources and opportunities. It is also a multi-generational time-honored trust with fifty years of traditions being passed from one generation to the next. People at MFI are deeply committed to their service of standing in the gap for God’s people made possible by God’s provision from a broad base of support for its operations and its missionaries.

SUMMARY

Missionary Flight International of Fort Pierce, Florida, is part of the post-WWII expansion of mission aviation into the third world. In 1964, the organization began its flight services in support of missionaries in the Commonwealth of the Bahamas. Over the past fifty years, MFI has increased the scope of missionary services, establishing an aviation niche in serving missionaries primarily in the island nation of Haiti. Most mission aviation organizations today are located and operated solely in foreign countries utilizing single engine aircraft with much smaller capacities and shorter ranges, not typically flying over open oceans. There are very few, such as MFI, who routinely utilizing larger aircraft in their application. Consistently, MFI has delivered tons of cargo and thousands of passengers annually for decades.

In considering MFI’s air transportation services, a theme emerged of providing a lifeline from the United States to Haiti. Clients of MFI offered a consistent picture of professional, dependable, cost-effective aviation services declared as being essential and critical. Those at MFI see themselves as serving heroes, when in practice, they are also heroes.

In examining MFI, what first stands out is their daily use of aircraft to overcome geographic barriers. As an organization, they have an effective fictive kinship to serve a common spiritual purpose. As central as aviation is to MFI, without faith, there would be no flight. It is in their belief in a higher calling that these aviation professionals labor so arduously for a lifetime. As an organization, they are aware of fiscal stewardship in providing their service. They must be competitive with other carriers and distinguish themselves with superior services. There is an underlying notion of providing and caring for missionaries. As a business practice, they follow the biblical principle of not acquiring debt.
Limitations of this Study and Recommendations for Future Research

This was a qualitative study of a single faith-based mission aviation organization. The intent was to document and illustrate the value of aviation in alleviating human suffering and in the advancement of Christian ministry. It is impossible to extrapolate from this study or from the MFI experience the complete value of faith-based mission aviation in the world or of its potential global impact. MFI is a unique organization, flying older, multiengine, higher capacity aircraft from an American base into and out of the third world multiple times each week. This identical solution might not be applicable to other organizations or in other areas of the world due to different geopolitical factors. Haiti is a unique setting which MFI has carefully nurtured and cultivated over the past half century. Most of MFI’s flights are for missionaries originating from North America. The need and utility for a routine use of larger aircraft such as the DC-3 in other settings has not been documented. Faith-based mission aviation is a unique entity, largely beneath the radar and overshadowed by commercial aviation. With resources such as the internet, Facebook and YouTube, this underpublicized aspect of aviation will hopefully be made more visible in the future with greater public awareness and support.

This article is an abridged version of a thesis written in 2013 of the same title and available on line for additional details.

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