

CROSSROADS

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Crossroads is an interdisciplinary, undergraduate research journal published by the Monmouth University Honors Program. The contributors are Senior Honors Thesis students whose work has been chosen by the Honors Council as representing the most original, thoroughly researched, and effectively argued theses in their fields. All contributors are recipients of the Jane Freed Grants-in-Aid-of-Creativity.

The articles in this volume include work in the fields of: English Literature, Mathematics, Music (Industry Concentration), Political Science, and Psychology.

Jennifer Pergola's "The Anomaly of Chaucer's Good Parson in *The Canterbury Tales*," examines the literary, social, political, and religious contexts of Medieval England, as well as the stark contrast of literary form in "The Parson's Tale," in order to demonstrate why the Parson, of all the clerics in Chaucer's work, is the only character not derided for corruption but praised as an ideal model of his role in the church. Stephen Woelfer, in his "Cryptology" article, argues that cryptography and encryption techniques need to advance in sophistication in order to keep pace with the increasing speed of computers capable of breaking codes and compromising the security of electronic data transmission, and he provides an elaborate and sophisticated demonstration of the mathematics behind encryption techniques. In "Deciphering the Sounds of Silence," Adam Basham exposes the music industry, its advertisers and marketers, as guilty of creating "music tribes," streamlining the industry for purposes of profit, but undermining the traditional aesthetic, social, and political diversity that once characterized the role of music in society, and thus, the author's allusion in the title to Simon and Garfunkle's "Sounds of Silence" – "...writing songs that voices never share." Audrey Ambrosino, in her article on "Saddam Hussein's Defiance of the United Nations Security Council," places Saddam's desire to defy the West, and especially the United States, and his underestimation of the seriousness of the UN mandate in the context of a detailed study of his psychology and experiences from youth and how they helped shape his political philosophy and decisions. Finally, in "The Effects of Directed Writing Exercises on Relationship Dissolution Outcomes," Nicole DiBenedetto addresses the thinly researched area of the positive outcomes of

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**THE ANOMALY OF CHAUCER'S GOOD PARSON IN THE
CANTERBURY TALES**

Jennifer Pergola

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work – the Parson. This paper examines how the literary, social, political, and religious issues of Medieval England influenced the creation of Chaucer’s clerical characters and analyzes why certain characters – the Friar, the Pardoner, the Prioress – were always chosen to be the corrupt ones and why the Parson is the only ideal member of his estate. Many of the corrupt characters actually were typical for the period and had been used previously in other works, such as William Langland’s *Piers Plowman*. Furthermore, the portraits of the clergy appear to echo the sentiments of John Wyclif, a religious reformer and Chaucer’s contemporary. The formats of the tales also are examined, in that the corrupt members of the Church recite their tales in poetry while the good Parson gives his meditation in prose. By comparing the two styles, “The Parson’s Tale” is noteworthy in its straightforward delivery and lack of irony, implying that the Parson is the only member of the clergy of whom Chaucer approves. Chaucer’s Parson is alone in his integrity, as his tale’s form and content indicate.

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accordance with Christian virtues, the practice of those who used the system for their own gain had become so pronounced that the literature of the time included satires of such people. One of the most famous of these satires was Geoffrey Chaucer's The Canterbury Tales, written between the 1380's and the 1400's as a commentary on the English estates, among other issues. The prominence of the clergy in everyday life allowed for the presence of a priest, a nun, a friar, a monk, and other members of the first estate among the members of Chaucer's pilgrimage. While the pilgrims in the tales are not representative of all clergy of that era, Chaucer seems to have represented most of his ecclesiastical characters as dishonest. However, he includes one character, the Parson, as the paragon of his station. This selection raises the question of why the Parson should be the ideal clergyman, whereas the other clerics, with the exception of the one-dimensional Second Nun, are portrayed as motivated by self-interest.

In the "General Prologue," the bulk of the pilgrims' portraits are ironic.

Chaucer the Pilgrim, a naïve character, praises both the degenerate and the admirable members of the pilgrimage alike. His praise of the corrupt members is meant by Chaucer the author to underscore those characters' flaws. However, the content is always sincere, in that Chaucer the Pilgrim speaks the truth about all the characters actions. Therefore, despite the approving tone, the reader understands that characters such as the Pardoner, the Friar, the Prioress, and the Canon all have exploited their positions within the Church because Chaucer the Pilgrim reveals their selfish or immoral actions. The same theory applies to the description of the Parson. Since Chaucer the Pilgrim relates how that clergyman lives morally and helps his parishioners, it is understood that Chaucer the author intends for that character to be the lone ideal clergyman in the pilgrimage.

In Chaucer's time, the Church relied upon money more than was proper for its purpose in society. The gradual development of the Church's dependence upon money and connections with the secular world was the main reason why members of the clergy often used their vows to their own

clerics privileges denied the lowly.... [M]ost medieval reformers blamed the corruption on the Church's possessions" (Ames 31). At this point in history, the Church owned much land and was a very wealthy organization. However, the "early Church" had not owned any land, nor had it been given any money (Hussey, Spearing, and Winny 58). The institution at its founding was a socially subversive movement and its initial members were more likely than their medieval counterparts to be motivated by spirituality than greed. Only later did the Church become deeply connected with the secular world, allowing the faults of the latter to become part of the former (DuBoulay 43). Chaucer was one of many who observed that the Church's wealth and power could be a corruptive force, one that made the clergy susceptible to and able to indulge in avarice.

During the time The Canterbury Tales was being written, English religious reformer John Wyclif taught that the corruption of the Church was detrimental to all Christians. Wyclif explained that the spiritual Church and the institutional Church were two different entities at this point in time due to the habits of its members. As William Komowski has written of the time of the Great Schism, "Perhaps, then, for Chaucer, as for Wyclif, the more significant schism was an historical metaphor – a schism between the mission of the original Church and the realities of the fourteenth-century institution, between self-sacrificing spirituality and self-serving materialism, between miracle and fraud" (23). Chaucer, echoing Wyclif in his fictional representations of clergy, realized that ecclesiastics on the whole were no longer serving the people but were frequently affiliated with the Church for their own gain. Such clergymen were able to act this way and remain in power because the Church had been in worldly authority for so long. In fact, there were many instances of nobles becoming bishops and "secular politics" intruding more frequently upon the Church in the late 1300's (Pantin 22, 25). Chaucer was not the first person to question this power, but his review of materialistic clergy is one of the most memorable today.

With this widespread critique of these figures in medieval society, it seems natural that when Chaucer satirizes society in The Canterbury Tales he chose many of his characters to be members of the clergy. Due to the

money, Chaucer simply constructed most of his clerical characters in the same way: appearing to be servants of God and of humanity, but in reality serving their own interests. In fact, many of these characters were already present in medieval literature before Chaucer's tales. William Langland had already included such stereotypical figures as "the hunting monk, the avaricious friar, the thieving miller, the hypocritical pardoner... even, in little, the all-too-human nun" (Donaldson 10). Chaucer could have borrowed from these stereotypes for his own study of human nature, chiefly in the case of the "hypocritical pardoner." He does, though, expand upon these characters and includes many others, such as the good parson. These disparaging views certainly fit with the views of the time, especially when contrasted with the Parson's integrity in the last tale. Chaucer's portraits use the stereotypes and develop them, further setting apart the Parson as Chaucer's choice of the lone good clergyman.

The descriptions of clerical characters in the "General Prologue" are the first indicators of whether the characters are ideal members of the Church. The tales themselves, then, are what definitively confirm Chaucer's motivations for choosing which clergy member best represents his or her role within the Church. The tales also reveal whether the role itself should belong in the Church. Aside from the apparently moral content, the forms of the tales are what prove which clergy member Chaucer the author believes is the ideal and which are exploiting the system. He proceeds by having the corrupt clergy tell fables or stories in poetry while having the Parson give a sermon-like meditation in prose. "The Second Nun's Tale" is in verse, but her character is too underdeveloped to accurately compare her tale to her personality. The earnestness of prose also adds authority to the Parson's views and character, whereas the poetry of the other clergy is frequently meant to entertain the pilgrims and further demonstrate how those characters do not accept their duties seriously. This difference in the pilgrims' presentations affirms the Parson's integrity while reinforcing the corrupt clergy's status as insincere practitioners of their faith.

While Chaucer the author does criticize many of the clergy, he realizes not all clergy take advantage of their positions in society and

demonstrate (Hussey, Spearing, and Winny 62). The Parson is unique in not taking advantage of the opportunities the Church offers for profit, instead sacrificing his own needs for those of his parishioners. The Parson faithfully fulfills his duties of absolving sins, preaching, and administering sacraments, showing that, according to Christian beliefs, his very role is equivalent to Jesus's own mission. Compared with figures such as the Pardoner and the Friar, the Parson is an anomaly when he should be the standard.

Chaucer's Corrupt Clergy: The Interconnections Among History, Character, and Tale

In the "General Prologue" to The Canterbury Tales, Chaucer the Pilgrim introduces each character by station and occupation. The pilgrims comprise a "microcosm of [the] Church," with the inclusion of both religious and sinful members (Ames 72). However, the pilgrims' roles are not necessarily pure in themselves, allowing for the large number of hypocrites present. The act of corrupt clergymen traveling to the shrine of a martyr, then, reflects the hypocrisy of the Church itself (West 179). The Parson is the only one who practices what he preaches, as evidenced in his introduction.

While most of the religious figures in the pilgrimage are corrupt, they are so in varying degrees. Some of the more dishonest members present are the Pardoner, the Friar, the Canon and the Prioress. Chaucer the author may have chosen these positions to represent the corrupt ministry because each one is, in fact, virtually unnecessary in the Church: "These parallel dismissals of ecclesiastics [by the Yeoman, Alisoun, and Harry Bailly]... comically concur with Wyclif's rejection of superfluous clergy and orders, here friars, pardoners, and canons, none of whom have any precedent in Scripture or perform the necessary office of the priest as pastoral minister" (Komowski 18). Friars live in poverty and beg for money; pardoners sell forgiveness; canons can excommunicate and ignore parishioners; and nuns often continue their former courtly lives in the convent. These are mainly institutional roles that matter only to the Church bureaucracy or domestic affairs, such as finding a place for an unmarried daughter. None strictly fulfill the reason for the existence of the Church: to preach the Bible, live a

mission. The main example within The Canterbury Tales is also the primary abuse of the medieval Church – the sale of indulgences. This practice entailed people giving money to the Church’s representatives in the belief that this would limit their time, or that of deceased relatives, in Purgatory. The position of pardoner, a derivative of the order of friars, was created to collect this money (West 181). Christians believed that those who could change bread and wine into Jesus’s Body and Blood (transubstantiation) could also grant these indulgences, allowing the Church to have further control over its secular members (Komowski 10). This practice corrupted not only those giving money but also the ones receiving it. Such a combination of incoming money from the secular sphere with the public’s implicit trust in the religious sphere could allow for such “clergymen” to retain a portion of their collections, frequently with little interference from outside the Church. This creation of a role to encourage the Church’s accumulation of money further shows that ‘Chaucer’s Canterbury Tales are proof that he shared many of Wyclif’s views on the corruption of the Church, the friars and the sale of indulgences” (West 167). Along with selling indulgences, pardoners abused their power in another way. Alfred L. Kellogg and Louis Haselmayer state that pardoners were ordered by the Pope not to preach, although this is exactly what Chaucer’s Pardoner does, and what real-life pardoners probably did to gain more money (Patterson 402). With this list of offenses, Chaucer the author suggests that pardoners could only contribute to the Church’s depravity.

These pardoners of medieval England became one of the worst problems of the Church. A bishop of the time, Henry Despenser, raised money for a “crusade” against the French by using pardoners to sell indulgences (Howard 336). Such acts were indicative of the Church’s downward spiral into greed and corruption. The fact that pardoners and the Church could use spiritual authority to incite war demonstrated that the system was out of control. The pardoners themselves, in their capacity as money collectors, were both instruments and abusers of the structure. Pope Boniface IX in the late 1300’s also indicated how much this order had grown beyond the Church’s intentions when he wrote of the harmful habits of

character has a connection in the “General Prologue” to “Rouncivale” (I.670), which is probably the hospital at “Rouncival” where scholars believe officers kept alms in 1382 (Storm 811-812). This allusion especially implies that he is only a clergyman to make money: “Because alms given to obtain a pardon were intended to ensure that good works would be done by the church in the penitent’s name, the Pardoner’s venality in diverting gifts from that end anticipates his potential diversionary effect on the pilgrimage” (Storm 812). The character, through deception, almost derails the pilgrims from their intended course to Canterbury, echoing the danger his role presents in society. The Pardoner, like his real-life counterparts, can sell indulgences and preach for money as freely as he chooses because the Church allows him and even endorses the former behavior. The Pardoner is corrupt, then, because his very position in the Church and society is corrupt.

Due to these circumstances, the Pardoner within the pilgrimage is more of a criminal than a cleric. He not only cheats people out of their money by preaching against sin, offering false relics, and selling indulgences, but he proudly boasts of what he does to the pilgrims before he attempts to do the same to them. He is not allowed to preach and is supposed to give his money to his bishop; obviously, he ignores both edicts (Cooper 58). Even his pardons from the Pope in Rome are called “hoot” [hot] (I.687), implying they are fraudulent (Cooper 58). The Pardoner’s manipulation of papal absolution is indicative of the extensive corruption of the medieval Church. Regarding pardoners themselves, Chaucer simply repeats the charges previously made against that order.

When the Pardoner is introduced in the “General Prologue,” Chaucer the author immediately presents him as a fake. The Pardoner is contrasted with a parson, in that he makes more money than a priest when he tricks parishioners with false relics, making “the person and the people his apes” (I.706). This practice was actually a common one at the time; some shrines did present fake relics to supplicants, “much to the discredit of the churches that housed them” (Komowski 16). He also sings to receive more money, ironically appearing more religious in doing so. Chaucer makes his Pardoner an unashamed criminal, one who does not care about the people he

influences Howard's view of him as an "Antichrist figure" (489). The character's long hair and high-pitched voice imply that he possesses a feminine personality, leading to the negative connotations scholars have taken from this description. Chaucer may have been questioning the Pardoner's sexuality, which in the Middle Ages would also have been questioning the worth of the Pardoner's character. While the Pardoner is not the Antichrist, his practices are sinful and, as in many medieval works, his exterior reflects his interior quality. By calling his appearance into question, Chaucer also suspects the Pardoner's motives and behavior.

Through his words and actions in his prologue and tale, the Pardoner reveals his many vices. He preaches against swearing more so than other pilgrims, yet he swears himself; his tale is honest and moral, but also a self-conscious "performance" (Ellis 236, 253-254). The performance aspect of his tale is apparent more with "The Pardoner's Tale" than with the other pilgrims because his prologue concerns the form of the tale rather than the content. He explains in his prologue how he frequently uses his tale to trick his listeners into giving him money, which negates the morality of the tale itself. In addition, pilgrims in the later Middle Ages were traveling for forgiveness of sins and to praise God, with pardons given to those going to a cathedral; as Melvin Storm points out, the Pardoner wants to replace Canterbury's relics with his own false ones and almost stops the pilgrimage with the temptation of an easier penance (Storm 810). The Pardoner is, then, a devil-like figure whose role in the Church paradoxically allows him to be no other way.

Further into the prologue of the tale, the Pardoner details how he manipulates his listeners by preaching about the evils of greed before selling his false relics. His open admission of his crimes is unusual; as Lee Patterson argues, the Pardoner may be trying too hard to appear guilty in order to atone for his sins (400). However, there is a general consensus among Chaucer scholars that it is more likely that the Pardoner is not ashamed of his actions and his revelations are only boasts of his abilities as a salesman. Cooper confirms this by mentioning that St. Augustine told preachers to "use a plain style," which the Pardoner does not follow (Cooper 273). His own style is

preacher. As Patterson states, apart from the Church and other sources, Chaucer borrows the confessional format of listing sins and penitential acts from Langland's Piers Plowman, which first appeared in the 1360's (386). A preacher, however, should not boast about his own sins; rather, he should encourage others to lead better lives by his principles and not by references to his own questionable actions. The Pardoner, in the tale-telling competition, ignores this rule in his attempts to make his tale more engaging and profitable. Furthermore, Komowski alludes to the fact that Wyclif would have condemned the Pardoner for selling these "relics" using "the most important of all the pastoral duties and functions, namely preaching" (15). The Pardoner distorts his calling more than he already has by employing the sermon format for devious ends. Cooper even calls his tale a "homily," which is a mixture of a sermon and a tale (264). "The Pardoner's Tale" is a mockery of a real Church service and the character's actions are a stark contrast to a true preacher's duties. While preachers usually do give homilies, the combination of the Pardoner's profit motive and abuse of his estate transform him and his sermon into parodies of their true functions.

Within the tale itself are signs of the Pardoner's exploitation of the spiritual Church he is supposed to serve. His entire tale is hypocritical in his warnings for people to not live like his rioters while he himself lives as they do. In fact, the Pardoner could be representing himself in the three rioters, in that their one attempt to do something beneficial to others – killing Death – is defeated by their own wickedness: "And we wol sleen this false traytour Deeth. / He shal be slayn, he that so manye sleeth" (VI.699-700). Unintentionally or not, the Pardoner is also performing a service to his listeners by warning them about the consequences of gluttony, blasphemy, and other sins. However, much like the effects of his rioters' behavior, any morals presented in "The Pardoner's Tale" are contradicted by the teller's lifestyle.

In concluding his tale, the Pardoner foreshadows the Parson in a rare moment of emotional honesty. The Pardoner admits that a real pardon, which would come from Jesus, is better than his own false pardons. He states, "So graunte yow his [Jesus's] pardoun to receive, / For that is best; I

Pardoner's corruption and demonstrates how such a character can never truly move beyond his own willfully dishonest way of life.

The Disreputable Friar

While not as apparently corrupt as the pardoners, the order of the friars became a notoriously abusive group through the very nature of its means of living. St. Francis founded the order in the 1200's, intending the members to live in poverty like the Apostles; however, a century later they were collectively one of the most criticized branches of the Church (Pantin 3). This radical shift from good intentions to degenerate lifestyles owes almost entirely to the friars' dependence upon begging for money. Friars were expected to travel together, "begging and giving their gains to the poor" (Howard 74). While many friars did so, keeping only enough money for their survival, this system allowed for others to beg for extra money simply for their own benefit. Like the pardoners, the friars' official mission to collect money for the Church and for their own survival allowed for the ease with which some could retain a portion of that money. Since friars ventured outside their friaries to beg and preach, "it seemed to many observers in the fourteenth century... that the world had converted them instead of vice versa" (Ames 42). The nature of the friars' office, along with their constant contact with secular people, allowed many of them to benefit from both the Church and the secular world. As a result, friars on the whole gained a reputation for being greedy (Howard 432). This trait was not lost upon Chaucer, who supposedly had had a bad experience with friars (Hussey, Spearing, and Winny 66). Specifically, there was a report that he had physically attacked one when he was younger (Howard 74). This confrontation could have further contributed to his criticizing the friars as vehemently as his contemporaries did.

Another aspect of the friars that damaged the integrity of the Church further was their act of preaching. They often preached for money, imitating a priest without as much established authority or, apparently, good intentions. Fourteenth-century theologian and preacher Richard FitzRalph argued that friars preached and heard confessions to undermine priests and collect more parishioners and money (Williams 68). Many friars preached sermons and

earn money much in the way that Chaucer's Pardoner does. Friars also were similar to pardoners in that their positions were dependent upon money. The thirteenth-century French theologian William of St. Amour once distinguished "true apostles" from "false" by observing that "true apostles do not go about soliciting temporal goods;" this belief suggests that friars technically should not exist in a true Church (Williams 72). Although they were meant to live in poverty, their reliance upon money placed them in the position of earning profit from alms. The friars' lack of a substantial contribution to the Church, then, is a primary motivation for Chaucer's attack on friars in The Canterbury Tales and for his own representation of his Friar as stereotypically greedy.

Chaucer's Friar undoubtedly equals his reputation as a member of one of the worst orders of the period. Since critics of the Church generally disapproved of friars, Chaucer the author incorporates some of the charges against those clergymen into this character. The Friar of this pilgrimage is guilty of "lechery and avarice, the charges so often brought against [medieval friars]" (Howard 410). Chaucer's Friar is very worldly and appears to live well from whatever money he receives. He is overweight and dressed more like the Pope or a lord than a poor friar, both traits verifying his tendency to retain more of his alms than he should. Chaucer the Pilgrim's observations of the character, such as "Unto his ordre he was a noble post" (I.214) and "This worthy lymytour" (I.269), indicate that the very order of friars and the Church itself is corrupt. If the Friar, with his many faults, is seen as a good example of the friars of the time, then overall the friars are a degenerate order. Chaucer the Pilgrim's "praise" of the Friar early in the "General Prologue" makes him "the epitome of all the mendicant abuses – or, as the style suggests, their virtues" (Cooper 41). Chaucer's Friar, then, fulfills readers' expectations as a member of a corrupt order who could never embody the ideal.

The Friar further reveals his dishonesty when he tells his tale. He tries to continue the rivalry between summoners and friars by making the character punished in his tale a summoner. Although the tale itself is as moral as the Pardoner's, the petty reason for the telling again undermines the

tale reflecting the teller's inadequacy as a clergyman. As with the Pardoner, the Friar's hypocrisy is present in his tale's morality. The plot concerns a sinful summoner who is taken to hell by the devil for all the times he cheated people out of their money. Chaucer the Pilgrim tells of the pilgrimage's Summoner behaving the same way: the statement "Ful prively a fynch eek koude he pulle" indicates the Summoner's ability to trick people, with an indirect reference to his lascivious behavior (I.652).¹ This comment in the "General Prologue" further reveals the similarities between the Friar and the Summoner. The tale is actually a personal attack on the Summoner, undermining any truth to the Friar's warnings. The Friar ironically claims, "[t]hat of a somnour may ne good be sayd" (III.1281), yet most of the criticism of the Church at the time was directed towards friars, rather than summoners. The Friar also claims summoners do not have "jurisdiccioun" over him, which places him on the same level as prostitutes (III.1329-1332). Both friars and prostitutes were known as seducers who begged people for money; in this respect, the only tangible difference between them is their gender. The Summoner from the pilgrimage could be included in this group as well, considering Chaucer the Pilgrim's remark in the "General Prologue" about his abilities. Although the Friar is a hypocrite in indicting the Summoner for the same sins he himself commits, in this instance he neglects to include the Summoner in what would have been a truthful description. Furthermore, the Friar declares that summoners are ashamed of being known by their profession: "He dorste nat, for verray filthe and shame / Seye that he was a sumonour, for the name" (III.1393-1394). In actuality, the Friar is the one who should be ashamed, owing to his order's own poor standing in society. In effect, the Friar accuses the Summoner of actions that he himself, as a friar, would be accused of doing.

In "The Friar's Tale," the summoner is an officer of the clergy who, like the Pardoner, retains some of the money he collects for his superiors for himself. Although he claims to a widow, "I shal no profit han therby but lite;

¹ The explanation of this quote is adapted from Janette Richardson's

describes the Pardoner, but could be applied to the Friar as well. With his well-fed and well-dressed appearance, the Friar does not seem to be one who gives much of his alms to the poor and/or the Church. In addition, like his own summoner, the Friar has even cheated destitute widows (I.253-255). In criticizing the Summoner, the Friar actually demonstrates his own vices.

In effect, "The Friar's Tale" almost becomes another confessional, like "The Pardoner's Tale." This confessional is an unconscious one, however, because the Friar believes he is really disparaging the Summoner. Nevertheless, he indicts himself by his own words, much as the summoner is tricked into being sent to hell in "The Friar's Tale." In regarding the Friar as a representative of the Church at the time, Komowski comments that the tale implies that "[t]he only spiritual power assigned to the Church in the *Friar's Tale* is the ability to damn oneself" (14). Much like the summoner who refuses to repent even after being warned that the widow can make the Devil take him, the Friar does not pay attention to the moral of his own tale. This is emphasized further when the Friar concludes his main story by stating, "And God... save and gyde us, alle and some, / And leve thise somonours goode men bicomel!" (III.1642, 1643-1644). Here, the Friar "prays" for the redemption of summoners when he actually should be praying for the redemption of friars. With the irony of the statement, the Friar inadvertently turns his criticism of summoners into a criticism of himself and his fellow friars, proving his worthlessness as an ecclesiastic.

The Canon: The Results of False Alchemy

In another criticism of medieval clergy, Chaucer includes an apparently secular group that consisted mainly of clergymen: the alchemists. Chaucer embodies these individuals in his Canon, a somewhat minor character who arrives late in the pilgrimage and is described mainly through his Yeoman. A character more ambiguous and, in some ways, even more dishonest than the Friar and the Pardoner, the Canon is a member of group of priests and is introduced towards the end of the work instead of in the "General Prologue." As such, his description is limited to the short time Chaucer the Pilgrim can observe him. His Yeoman, who may not be an entirely reliable source, supplies the remainder of the Canon's portrait and

closely tied to the Canon as a cleric. While the Church did not condone alchemy, the ones to attempt it were mostly clergymen because they were the ones knowledgeable in Latin; “[I]t was a distinctly clerical sin,” as Helen Cooper observes (371). Since clergymen were really the only ones able to practice alchemy, those who did so were abusing their knowledge and position for worldly profit as much as pardoners and friars did. The presence of clerical alchemists also indicates that the Church did not do much to prevent this behavior, adding further to the institution’s scandals. In The Canterbury Tales, Chaucer chooses the shadowy Canon to represent this underworld of clerical magicians.

The problem with alchemy from a Christian point of view was in its goal to change any substance into gold. Not only are the motives behind the attempts to create gold decidedly unspiritual, but many theologians and Chaucerian critics believe that the attempt itself is blasphemous, in that the practitioners desire to emulate God. Joseph Grennen argues that Chaucer sees alchemy as ““at best an amusing mimicry, at worst a profane parody of the Work of Creation and Redemption”” (qtd. in Keiser: 16). In theory, the act of alchemy was, in a sense, the act of creating a new substance from an old, much as God created the world and humanity. Furthermore, Reginald Scot in the 1500’s called all alchemists swindlers, hardly the status of “worker of miracles” that those tricked believed these men to be (Keiser 10). In fact, Cooper argues that the Canon leaves during his Yeoman’s prologue because the pilgrimage is religious, signifying he is the exact opposite (377). She adds that alchemy is “associated with the devil,” making the Canon another of the clergymen who exploits his position in the Church (Cooper 381). Therefore, the practice of alchemy alone is enough to condemn the Canon. The philosophy behind alchemy made those practicing clergymen appear to be “playing God,” which would be committing the deadly sin of pride. The Canon is a dark, devil-like figure, and his abandonment of the religious pilgrimage when his sins are revealed indicates his abandonment of the true Church.

Aside from the blasphemous implications in attempting alchemy, such clergymen were also corrupt because most of them knew that alchemy

Church bureaucracy yet again creating and condoning the existence of con artists.

In “The Canon’s Yeoman’s Tale,” the Yeoman calls alchemy “his [the Canon’s] science” (VIII.721), identifying the Canon with his trade and implying that the Canon lost his good clothes and status because of his work. More irony lies in this description, since the Canon has made himself poor in his attempts to become rich. Chaucer may have had alchemy represent Christianity itself, “the noble faith corrupted by the greed and vanity of its own officialdom” (Howard 493). Chaucer the author has his Canon, along with the Pardoner and the Friar, belong to the members of the clergy who use the knowledge gained from their positions in the Church to destructive ends.

Although most of the Canon’s characteristics are revealed through his Yeoman, the reader can assume that the latter character provides a basically accurate description. Since the Canon tries to stop the Yeoman from revealing their secrets to the pilgrims, the Yeoman is most likely telling the truth. This assumption is enforced when the Canon leaves the pilgrimage during his Yeoman’s disclosure of their activities in alchemy; like the Pardoner insulted by the Host’s comments against his practices, the corrupt Canon cannot hear the truth about himself spoken by another. The Yeoman further reveals a lifestyle that is the antithesis of the true intentions of the Church. He tells the pilgrims how the Canon taught him to rely upon “spirites” of quicksilver and brimstone and “bodies” of gold (sun) and silver (moon), replacing the Christian tenets of faith in the saints and Jesus (VIII.820, 826). He also affirms that the contemporary clergy are powerless in performing miracles (Komowski 18). The appearance of the Canon and his Yeoman make Christianity resemble a pagan religion, with the Canon as a magician/shaman instead of a man of the cloth. This perverted version of Christianity may be Chaucer’s vision of where the Church is heading if its members continue in their greed.

This point is emphasized in the Canon’s very appearance. He is, as mentioned previously, poorly dressed – Chaucer the Pilgrim does not even realize he is a clergyman until he sees a hood attached to the Canon’s cloak (VIII.569-573). The Canon is also described as sweating as profusely as

attending the Canon describe the life of a secular confidence artist more than that of a clergyman.

The Canon and his fellow clergymen are further indicted in “The Canon’s Yeoman’s Tale.” While the Yeoman is the one who actually tells the tale, he admits to participation in his former master’s crimes. The tale is told in two parts, with the first part and some of the prologue being a description of his life with the Canon. While the second part is supposedly not about his Canon (“It was another chanoun, and nat [my lord]” [VIII.1090]), the Yeoman’s description of the Canon’s behavior in the first part appears to fit the character in the tale suitably. In both cases, the canons lie about their alchemical prowess and take money in return for their false services. The tale is an exposé of the Canon’s activities, with another character taking the place of the “real” one. Both canons greatly abuse the power of the Church, and both demonstrate how their role is, at the very least, unnecessary for the needs of the Church’s worshippers.

However, the Yeoman does apologize to absent, honest canons who do not abuse their place in the Church. He injects this acknowledgment into the second part of his tale: “But worshipful chanons religious, / Ne demeth nat that I sclandre youre house, / Although that my tale of a chanoun bee” (VIII.992-994). This also seems to be Chaucer the author’s view in all his criticisms; while he denounces some members of the Church, he mentions that there are many who are honest and who work for the Church’s good instead of their own personal profit. Since Chaucer the Pilgrim speaks the truth in spite of his flattering speech, the Yeoman’s statement about canons and clergy in general also can be accepted as truth. This ideal is challenged, though, when the Yeoman has the priest in his tale believe that the canon is honest because he paid him back on time:

“‘Certes,’ quod he, ‘no thyng anoyeth me
To lene a man a noble, or two, or thre,
Or what thing were in my possessioun,
Whan he so trewe is of condicioun
That in no wise he breke wole his day’”. (VIII.1036-1041)

Once again, both the priest and the canon in this tale appear to have too much

The tale, then, also becomes a criticism of “alchemy” using Church authority, in that the Yeoman believes that none should attempt to perform the pseudo-science at all. He portrays the priest in his tale as being corrupted by his desire to learn alchemy after believing he has seen the canon change charcoal to silver. In paraphrasing Elias Ashmole’s observations on “The Canon’s Yeoman’s Tale,” George Keiser remarks that, as in the priest’s case, “covetousness makes those who are duped by false alchemists rush to such folly” (Keiser 8). The priest is not an innocent victim because his greed is what makes him believe in the alchemy. His statement, “[Y]e vouche-sauf to techen me / This noble craft and this subtilitee, / I wol be youre in al that evere I may,” almost sounds as if he is selling his soul to the Devil for profit (VIII.1246-1248). By the priest’s example, however, the Yeoman proves that the practice of alchemy is a source of ruin rather than fortune. He comments that, by attempting alchemy, “[a] mannes myrthe it wol turne unto grame, / And empten also grete and hevye purses” and claims Plato has said “Ne in no book it [alchemy] write in no manere. / For unto Crist it is so life and deere / That he wol nat that it discovered bee” (VIII.1403-1404, 1466-1468). Chaucer drew this section of the tale from another source and “freely invented most of the dialogue,” accounting for Plato’s anachronistic reference to Christ.² This statement also reveals the Yeoman’s own confused learning of secular and spiritual matters, demonstrating how each realm in medieval society had too many ties with the other. This forbidden aspect of alchemy, coupled with the practitioners’ and victims’ unholy greed, makes the Canon, his Yeoman, and the Yeoman’s characters great abusers of the Church’s power and wealth.

The Prioress: The Interference of Court in Religion

Exceptional by virtue of their gender, nuns in the Middle Ages had their own set of vices. Estates satire from Chaucer’s day often criticizes nuns in the same manner as the genre criticizes women in general, using such terms as “sensual,” “quarrelsome,” and “fond of luxury,” and showing

² Adapted from John Reidy’s notes to The Riverside Chaucer.

women of the second estate and many convents, especially the one at the Prioress's "Stratford atte Bowe," had connections with the nobility (Rothwell 188, 190). In fact, the Remirement convent required their nuns to have several noble ancestors; such practices helped establish "the tradition of translating the role of the courtly heroine into a religious sphere" (Mann 134). In this view, the stereotypical nun is an aristocratic woman who is not so much concerned with religion as with courtly affairs and domestic matters (Hussey, Spearing, and Winny 68). The connection between nobility and religion allows convent life to become an extension of courtly life, as evidenced by Chaucer's Prioress.

This character is a very proper lady who does not appear to be very religious. The "General Prologue" includes her in the pilgrimage, mentions her pets, and describes her forehead as "almost a spanne brood"; however, revealing her forehead, keeping pets, and traveling outside the convent were not permissible for nuns at the time.³ Her implied focus on her personal appearance (table manners, nasal singing, love brooch) all show that she is too worldly to be a nun (Mann 137). She is too much of a courtly lady in her manners and her elaborate and ambiguous "Amor vincit omnia" brooch (she could wear a rosary but not such an elaborate piece of jewelry). Such traits would have the tendency to interfere with convent life (Howard 413). The Prioress's presumed neglect of her religious duties in favor of her courtly manners follows the portrayal of nuns in estates satire, making it nearly impossible for her to have been chosen as an ideal ecclesiastic (Mann 134, 137). In addition, her kindness is only towards animals and apparently excludes people, which is reminiscent of an incident in Chaucer's own life where a prioress came to a house Chaucer sold and took the possessions of the man living there because he did not pay the rent (Howard 46). An event such as this may have prejudiced Chaucer further against nuns, accounting for his inclusion of a worldly one in this work. Stephen Witte contrasts the

³ Geoffrey Chaucer, The Canterbury Tales, ed. Larry D. Benson (Boston: Houghton Mifflin Company, 2000) I.155; quoted from Eileen

and parfit charitee" (I.532) and working "For Cristes sake, for every povre wight" (I.537). In her description alone, the Prioress appears to be a less effective member of the clergy than even the Plowman potentially could be.

When the Prioress gives her tale, her inadequacy for her role is made even clearer. The tale is considered by many scholars to be anti-Semitic in the treatment of Jewish people in the story. Scholars have also viewed such a violent tale told by a seemingly mild woman as exposing the Prioress as a "falsely pious cleric" (Calabrese 72). This is true in light of the content of the tale, which deals with the murder of a young Christian boy by Jews. The Jews are, in turn, executed for their crime. Although the Prioress may believe in her own piety, her tale of murder as punishment for murder expands upon her "pure but perverse feelings" as implied in the "General Prologue" (Calabrese 74). As with the other corrupt clergy, the Prioress's distortion of her calling is accentuated in the story she tells to the pilgrims. Her role as a nun is further demeaned in her honest companion's contrasting lack of depth as a character. Although the Second Nun appears to live in accordance with Church ideals, she is barely acknowledged in the "General Prologue" and only tells a moral tale.

The Prioress's tale of infanticide and religious murder contrasts harshly with the seemingly timid and religious female narrator. Her "innocent" appearance and "childishness" are contradicted in her tale's violence and anti-Semitism (Holloway 204). In addition, her portrait in the "General Prologue" has her crying over wounded animals, yet here she calmly relates the killing of a child and of the Jews who arranged for and knew of his murder: "[he] kitte his throte, and in a pit hym caste.... Therefore with wilde hors he dide hem drawe, / And after that he heng hem by the lawe" (VII.571, 633-634). This again demonstrates the Prioress's hypocrisy, in her belief that extreme vengeance for the murder of a Christian by a Jew is righteous. While the child does not deserve to be murdered, the measures the town's magistrate takes to punish his killers are drastic, considering the "tendre herte[d]" (I.150) Prioress is the narrator.

However, many people believe the Prioress's anti-Semitic reaction is more of an indication of the times and society, rather than an indictment of

center of her tale does rely upon Mary's power to keep the child alive and singing in praise of her: "Wherefore I synge, and synge moot certeyn, / In honour of that blisful Mayden free / Til fro my tonge of taken is the greyn" (VII.663-665). Here, Mary extends the boy's life with a "greyn" and prevails over the presumably male murderer who cut his throat. The boy also had sung earlier "O Alma redemptoris mater" in praise of Mary, which caused the attack upon him and later leads to the discovery of his body (VII.518, 554, 612, 641, 655). The power Mary has over the boy and the events in the tale may indicate the Prioress's own preference of her over male saints.

Although the Prioress most likely means to validate the power of faith, her choice of a tale containing a violent reaction to the Jews is indicative of the Church's and society's attitudes as a whole. In actuality, there were few Jews in England during Chaucer's time, reinforcing the Prioress's distance from the object of her institutionalized bigotry. Any attempts by popes to lessen this hatred enforced by Scripture would have to overcome the widespread and long-lasting attitudes held by most, if not all, of the Christian clergy. Even the good Parson disparages the Jews for their "murder" of Jesus.⁴ His words and her tale, then, show that the medieval Church was anti-Semitic and that such a trait is a product of the Prioress's environment rather than a personal flaw. As Ames states, "the juxtaposition of her pity for the child with her approval of the torture of the Jews is an indictment of her Christianity," implying that the Church's sense of compassion is limited to its own members (199). The fact that her tale is based upon a "legend" and not upon real events confirms that the Prioress is merely following the dogma she has learned from the Church (Calabrese 71). Her anti-Semitism, then, is not as much a condemnation of her character as is her hypocritically violent tale. A nun who tells such a tale should not then "wepe, if that she saugh a mous / Kaught in a trappe, if it were deed or bleede," as the Chaucer the Pilgrims notes in the "General Prologue" (I.144-145). Her selective sensitivity relies on stereotypes of her gender, implying that such shallow women should not be members of the clergy.

⁴ "The Jewes, that they shoulde have, / The Cristen soules, that they shoulde have."

the "General Prologue" is "[a]nother NONNE with hire hadde she, / That was hir chapeleyn" (I.163-164), which reveals nothing about her appearance or personality. She may or may not be a stereotypical nun like the Prioress; the estate to which she belonged before entering the convent could be a factor deciding that. The Second Nun can only be evaluated by her tale, which implies but does not definitively prove that she is an ideal cleric.

Although they are the only female representatives of the clergy, the Prioress and the Second Nun have tales that differ drastically in their implications. "The Prioress's Tale," as stated earlier, is a surprising one for her character to tell, in that this lady of "tendre herte" recounts the religiously motivated murder of a Christian boy and the subsequent massacre of the Jews who knew of the crime. On the other hand, "The Second Nun's Tale" concerns the martyrdom of St. Cecilia, focusing on her words and conversions more than on her actual death. The prologues are similar, in that each contains an invocation to Mary: "O mooder Mayde" (VII.467) and "Thow Mayde and Mooder" (VIII.36) are the terms the women use in calling upon that religious figure. These prayers to the Virgin Mary indicate the women's devotion to chastity, reflected later in the tales by the protagonists (the young boy and St. Cecilia both are chaste). Other than the celebration of virgin martyrs, the two tales are radically different and are indicative of the tellers' lives as nuns in medieval England.

The Second Nun conspicuously omits vengeance from her own tale of Christian martyrs. Her protagonist, St. Cecilia, is murdered for her faith, but she calls for healing instead of punishment for her fellow Romans. Even when she is dying slowly, she spends her time preaching to Christians and asks Pope Urban I to turn her house into a church. She is similar to the Prioress's young boy in that each of their lives is extended in order for them to speak with their neighbors, and neither one mentions the culpability of their killers. The fact that both protagonists are virgin martyrs is also indicative of the nuns' own statuses. Since both women and young men were virtually powerless in medieval English society, much value is placed upon martyrdom and virginity because those traits were the few sources of power available to these people. The Prioress and the Second Nun both telling a

underground sect. However, the uncomplicated faith of Cecilia, who defeats her enemy Almachius with her words and teachings instead of with violence, could exemplify how Chaucer the author believes the Church should operate in the late 1300's.

Like the Parson, the Second Nun is an idealized clerical figure, though she is nowhere nearly as developed a character as he is. However, she sees her tale as a way to instruct others about Christian duty rather than trying to win the tale-telling contest like the other clergy (Ellis 101). The Second Nun recounts a tale of a simpler, more faith-driven Church than the one that exists in her own time. Joseph Grossi argues that the tale could have been demonstrating the ideal attitude of the Church through Cecilia's humility, piety, and moral power over secular authority (299). He also compares the Church of 1300's England to the Roman authorities in "The Second Nun's Tale," suggesting that the Christians in the tale are intended to be models for the pilgrims (Grossi 299-300, 306). Chaucer's translation of the legend of St. Cecilia also could reflect the true purpose of the Church, namely in the "re-birth of her [Cecilia's] husband as a Christian" (Johnson 326). Recounting peaceful conversion is more in line with the Church's mission than the spreading of anti-Semitic propaganda or legends of infanticide as indicators of faith. Like the Parson, the Second Nun demonstrates through her tale how a return to a simpler form of Christianity could heal the Church.

The apparent absence of hypocrisy in the Second Nun is evident in the connection between her prologue and the tale itself. In her tale's prologue, she relates the themes of chastity, martyrdom, and other principles that appear later in the tale itself (Johnson 314). In addition, her mention of St. Ambrose suggests her admiration of saints and explains her use of St. Cecilia as a protagonist (Grossi 306). Saints' lives have been frequently written in verse, making the verse format of "The Second Nun's Tale" more appropriate to her character than the Prioress's violent and anti-Semitic poem. Even the violence of the martyrdoms of St. Cecilia, her husband, and brother-in-law is tempered by those characters' faith and their spiritual victory over the corrupt Almachius; the comment that "[h]ir hous the chirche

should be like. This creed would include self-sacrifice and material simplicity, which the Church of the 1300's seemed to have forgotten in its deep involvement with the secular world of profit.

Although, through her tale, the Second Nun appears to be an ideal member of the clergy, within the pilgrimage she is an underdeveloped character. The omission of a description of her appearance and/or behavior in the "General Prologue" makes it unclear whether she lives the way she preaches. If she obeys the rules of her order, she would be an uninteresting character as opposed to the colorful Prioress. However, she is somewhat of a radical for the time, considering that her representation of Cecilia preaching runs counter to St. Paul's prohibition on women doing so (Holloway 199). In addition, her cloistered life, while appropriate for a medieval female cleric, limits her ability to help her fellow Christians, in contrast to the socially active Parson. The Second Nun's gender in the male-dominated society, Church, pilgrimage, and poem precludes her from equaling the achievements and the recognition of the Parson.

Why the Good Parson Exists in The Canterbury Tales

With models such as these in reality and in others' works, Chaucer has many occasions to criticize all the members of the clergy he includes in The Canterbury Tales. However, there is one clergyman he includes in the pilgrimage who is not corrupt and who lives the way the ideal cleric is meant to conduct himself. This is the Parson, a country priest. Chaucer has him live the way a model priest should – in poverty. His parish is in the country where, unlike the other clergy, he is distanced from much interaction with the secular world of wealth. The Parson also only preaches to the pilgrims; he does not ask for money as the Pardoner does. He offers his secular and clerical audience real solutions to their spiritual problems, rather than entertaining and hypocritical fairy tales. This clergyman out of all the others is the "good" one, probably because the priests' role is the one that embodies Jesus's teachings. Just as Jesus preached and lived a life of self-sacrifice, priests were required only to preach and to take care of their community. Pardoners, friars, worldly canons, and nuns identify themselves too much with money and secular power, however small, for Chaucer to consider them

his apostles twelve / He taughte; but first he folwed himselfe" (I.527-528). This account of the importance of teaching by example establishes the Parson's honesty and the honesty of his tale. He recalls the teachings of Wyclif in his connection between his words and actions, leading to debate about whether Chaucer intends the Parson to be a Wycliffite (Little 240). While Chaucer the author criticizes the Church almost as much as Wyclif does and the Parson promotes many of the values of the latter, the Parson also endorses "auricular confession," which Wyclif and his followers oppose (Little 225-226). "Auricular confession" is telling one's sins to a priest for forgiveness; Wyclif believed the practice "had been corrupted by the improper use of language" (Little 233). With this and other examples, the Parson is not exactly a Wycliffite, then, but several of Wyclif's theories for Church reform are present in "The Parson's Tale."

In fact, "The Parson's Tale" is not a tale at all, or even a sermon; Thomas Bestul recalls that the Parson calls his piece a "meditacioun" (X.55). According to Bestul, a meditation is a late-medieval tradition that usually involves "private communion with his [the speaker's] soul or with the deity and which [are] somewhat free-ranging in form," with the narrator as more of a "detached" presence (600, 601-602). This closely describes "The Parson's Tale," in that the character speaks as an authority on God and presents his beliefs as facts, with his own character appearing neutral. Meditations generally are also meant to be private and read; "The Parson's Tale" is an instance of Chaucer the author knowing that The Canterbury Tales will be read and addressing his audience accordingly. "The Parson's Tale" is different from the other tales in the overall framework, in that this tale "offers a contrast to the copious diversity of the other tales" and its structure is opposed to that of the broad frame story (Bestul 616). The long, involved prose piece on the path to true penitence is almost the complete opposite to the preceding tales in the form and content. Bestul explains Chaucer's prose format in his statement that "the body of medieval theory lying behind meditative literature clarifies Chaucer's poetic procedure in having the Parson reject fiction in favor of devotional prose, conveying with some refinement the value of meditation and its relative place in the scheme of

Canterbury Tales, with lessons for the misguidedly religious and secular pilgrims alike. His lecture to the pilgrims to repent before they reach the afterlife has been interpreted as urging the pilgrims to repent before they reach Canterbury, their physical and spiritual destination at the moment (Ames 102). In preaching to the pilgrims, the Parson assumes the role of the spiritual leader of the pilgrimage as much as he is a spiritual leader in his everyday life. The concordance among his words, beliefs, and actions proves his adherence to the Church's original principles and his place as the pilgrimage's only truly ideal clergyman.

In the "General Prologue," Chaucer the Pilgrim informs the reader of the Parson's goodness. The character is extremely unwilling to excommunicate someone for not paying his or her tithe to him and would rather give whatever money he has, which is an unusual trait in this pilgrimage (I.486-489). Ames comments that "it should be observed... that the good Parson does not avail himself of the system [of excommunication]," indicating priests' power to excommunicate any member who did not pay them (57). The fact that the Parson chooses to forgive more often than not shows that he is not susceptible to the temptation of exercising the power the Church has given him. This is very different behavior from the greedy Friar and Pardoner, who would rather cheat poor people than limit themselves to whatever they can receive from others' generosity. In his tale, the Parson also censures priests who leave their congregations in others' care – presumably so those priests can live in the decidedly secular London – stating that this practice is detrimental to the people's salvation: "Thise been the newe shepherdes that leten hir sheep wityngly go renne to the wolf that is in the breres, or do no fors of hir owene governaunce" (X.721; Cooper 52). He argues that these priests abandon their parishes to serve their own ambitions. Chaucer's priest, on the other hand, acts in accordance with his role, in that he remains with his parish. As Chaucer the Pilgrim observes, the Parson

“sette nat his benefice to hyre
And leet his sheep encombred in the myre
And ran to Londoun unto Seinte Poules...
But dwelte at hoom, and kepte wel his folde,

Parson serves his parishioners and is not motivated by personal greed. He holds a unique place within the pilgrimage merely by performing his duties and taking care of his “flock.” His complete disinterest in money establishes that he represents the original Church, in that he deals with people’s souls rather than their wealth.

This character is a model for all the clergy in the pilgrimage and in society. The Parson is encouraged to speak his views and is given a description in the “General Prologue” that further emphasizes his virtuous lifestyle. He appears to be more of an allegorical figure than the rest of the pilgrims, in that Chaucer depicts his values rather than his individual personality (Cooper 52). Normally in estates satire, priests are not educated; the fact that this one seems to be so further distinguishes this character from his fellow clergy.⁵ He is apart from his fellow clergy because he behaves the way a clergyman should. He is not separate from the pilgrimage, though; instead, he turns the group into his own religious congregation. He serves an important role for the pilgrims, in that his tale, coming last, seems to prepare his companions spiritually for Canterbury (Delasanta 242). He preaches that everyone should repent before Judgment Day, represented here as the shrine at Canterbury (Delasanta 241). Unlike the other poor examples of clergy, the Parson positively enacts his role in society as the pilgrims’ spiritual leader.

The Parson can judge his fellow clerics without being a hypocrite because he lives the way he preaches others should live. One of the more obvious examples is his passivity when the Host curses at him several times; the Parson does not become angry with the Host as the Pardoner does, but asserts himself quietly. The Host earlier accuses the Parson of being a “Lollere” (II.1173), the term applied to those who were associated with Wyclif without necessarily being strict followers of his teachings. This accusation occurs in the epilogue of “The Man of Law’s Tale” and

⁵ Katherine Little, “Chaucer’s Parson and the Specter of Wycliffism,” Studies in the Age of Chaucer 23 (2001): 238-239. As Jill Mann adds, though, these unique qualities also cause the Parson to be too

youre enemys, and preyeth for hem that speke yow harm” (X.521, 526). The Host’s antagonism previously made the Pardoner enraged, but the Parson chooses not to respond in the same way. His actions here make his statements during the tale honest rather than ironic, further setting him apart from the other clergy in the pilgrimage. His emphasis upon the conversion of his listeners rather than personal advancement within the pilgrimage also serves to elevate his character. The Parson’s moral victory over the Host’s conversational aggression places him above the Host; the pilgrims now listen to him instead of their former leader. This event alters the format of the last section of The Canterbury Tales, in that the frame story is no longer an entertaining tale-telling contest. Instead, “The Parson’s Tale” signifies a new direction Chaucer assumes in his work, one that conveys a truly moral lesson. The pilgrims and tales are forgotten as the Parson assumes the position of leader of the pilgrimage and as the ideal cleric in that setting.

In telling his tale, the Parson further demonstrates his integrity. The Parson ironically uses the style of estates satire in order to prove the worth of his role rather than its faults (Cooper 52). In the prologue to his tale, the Parson explains how he values his parishioners over himself, which is contrary to the behavior of priests in estates satire. Satirical writers, including Langland, would include a priest who left his parishioners often to earn profit; this behavior is exactly what the Parson criticizes (Mann 58). The Parson’s behavior, then, is the opposite of that of the stereotypical priest in satires, which is the main indication that his tale does not follow estates satire. His main criticism is of other clergymen who act the same way as those on the pilgrimage who abuse their position for power and money. He especially attacks his fellow priests, whose vices have the most damaging effect in that they also corrupt their own parishioners (Ames 32, 35). His lessons for them are at least as important, if not more so, as those for the secular members of the pilgrimage.

With the emphasis on morals, the Parson and his tale become examples of how the corrupt clergy on the pilgrimage should conduct their lives. The Parson refers to the Bible as much as the other clergy, but his use is more truthful and less self-serving (Cooper 404, 405). His tale also

73). The Parson's symbolic, elevated status within the pilgrimage affirms Chaucer's decision in making this character the one to be respected over all the wayward clergy.

In his prologue, the Parson explains how he will deliver a "myrie tale in prose" (X.46). While the statement appears self-contradictory, the implication is that the content of the tale is much more important than the way the tale is told. This format contradicts those tales told in verse or with exciting plots. He scorns fables, emphasizing that "Paul, that writeth unto Thymothee, / Repreveth hem that weyven soothfastnesse / And tellen fables and swich wrecchednesse" (X.32-34).⁶ The Parson will not tell a fable because such a tale is a lie in St. Paul's view. Bestul states that meditations are "a superior kind of reading," in that the same emotions produced in reading fables (love, fear) can now be used toward religious ends (love of God, fear of God) (615). This exposition on plain prose sets up the Parson's lengthy meditation on the various aspects of penitence and how one can be truly penitent. Although "The Parson's Tale" is, like the other tales, an adaptation from Latin or French sources, Chaucer had already started such a treatise on penitence when he was younger and finished the tale toward the end of his life, accounting for the tale's reflective, instead of comedic, tone (Howard 492, 495, 496). Chaucer also borrows from Edmund Rich's Speculum ecclesiae (on the seven deadly sins), Gower's Speculum meditantus (how penance leads to Christ), and mostly from St. Raymund of Pennaforte's Summa de poenitentia; Chaucer's contributions include his mention of remembering Christ's Passion as integral to bringing about

⁶ Several epistles to Timothy refer to fables, such as "cf. 1 Tim. 1.4 ('Neither give heed to fables and endless genealogies'), 2 Tim. 4.4 ('And they shall turn away their ears from the truth and shall be turned unto fables')." Adapted from Siegfried Wenzel's notes to The Riverside Chaucer.

this tale and teller. This sincerity suggests both Chaucer's and the Parson's intentions that the tale be interpreted as a serious reflection on one's soul, another drastic difference from the previous and generally lighthearted tales. "The Parson's Tale" also contains potential solutions for the corrupt Church of the time, which Chaucer has been satirizing until this point in his work.

The Parson begins his tale with the goal of leading his listeners to Jerusalem/Heaven and Jesus. He states that the only way to "Jerusalem celestial... is cleped Penitence" (X.80-81), setting up his long and involved exploration of penitence. Although meditations were often supposed to be brief, they were also "free-ranging in form", allowing for Chaucer's license to make the tale over 1,000 lines long (Bestul 602, 604). The Parson goes on to emphasize the importance of confession, but claims that such an act means nothing if the person continues to sin. He quotes St. Isidore of Seville as saying, "He is a japere and a gabberre and no verray repentant that eftsoone dooth thing for which hym oghte repente" (X.89). This idea recalls the Pardoner's behavior, in that the character publicly confesses his sins yet continues to act in the same manner. The Pardoner also offers the same insincere spiritual healing to those who buy his pardons. The implicit belief behind that practice is that someone can be pardoned for virtually anything and continue his or her sinful lifestyle as long as he or she gives money to the Church. The Parson, a foil for the Pardoner and the other corrupt clergy, instead tells his listeners that they must work for forgiveness. His guidance towards this goal further establishes his role as the new leader of the pilgrimage.

There are several times when Chaucer has the Parson refer indirectly to other clergy on the pilgrimage. This pattern is most noticeable when the Parson condemns behaviors of which the Pardoner is especially guilty. The

⁷ Thomas H. Bestul, "Chaucer's Parson's Tale and the Late-Medieval Tradition of Religious Meditation," *Speculum* 64.3 (1989): 602, 603, 606-607. The same references to Chaucer's sources are in the explanatory notes adapted from Siegfried Wenzel's notes to *The Riverside Chaucer*. Geoffrey Chaucer. *The Canterbury Tales*, ed. Larry D. Benson

(X.234). Although “The Pardoner’s Tale” is superficially moral and the Pardoner warns others of the dangers of sinning, the words of the Parson imply that the Pardoner will not be saved due to that character’s subsequent attempt to cheat the pilgrims. The Parson also mentions that those who “sweren so horribly by his [Jesus’s] blessed name, that they despise it moore booldely than dide the cursed Jewes or elles the devel, that trembleth whan he heereth his name” (X.599). Despite the anti-Semitic reference, the Parson here criticizes those like the Pardoner who swear maliciously or gratuitously. When the Parson says, “For Cristes sake” (X.591), he really does mean “for the sake of Jesus.” Those in the clergy who blaspheme would be worse than the laity, since the clergy are the ones officially devoted to worshipping God and saving the secular members of the Church. Finally, the Parson builds upon the Pardoner’s theme of Avarice, claiming, “the releevynge of Avarice is misericorde, and pitee largely taken” (X.804). The Pardoner ends his “moral” lesson by simply blaming Avarice for all sins; he never offers a solution for his listeners. On the contrary, the Parson names Pride as “the general roote of alle harmes” (X.388) and offers hope for the pilgrims by honestly explaining how they can save their souls. Unlike the Pardoner’s limiting himself to merely defining sin, the Parson goes on to explain how one can gain salvation.

“The Parson’s Tale” also includes allusions to the Friar’s behavior. The Parson lists as a venial sin if one “amenuse or withdrawe the almesse of the povre” (X.377), which the Friar does when Chaucer the Pilgrim claims the Friar could manipulate an impoverished widow into giving him money. The Parson calls such behavior “spiritueel” homicide, because the act deprives the poor of means to eat and could lead to their death (X.564, 568-569). The Friar is not the only one guilty of this act, since the Pardoner also convinces people who need what little money they do have to pay him. The Parson also names “lov[ing]... God... and lovyng... his neighebor as hymself” (X.515) as the solutions to Envy, but these acts could reform most of the corrupt clergy. If they turn away from their own money-centered lives and conduct themselves as the Parson apparently does, they would no longer drag the Church into disrepute.

thrift are also needed (X.833, 835). These solutions for Gluttony, as with the solutions for Envy, could also be solutions for most of the sins the Parson reviews. Unlike the other corrupt clergy, though, the Parson does not offer simple and easy methods for his listeners to enter Heaven; they all must work for their salvation. He also judges nobles and peasants equally in their abilities to be saved or condemned for their actions, calling sinning nobles “cherles” (peasants) (X.763). The Parson does not discriminate by estate, as many of his fellow ecclesiastics did in reality. At this point in The Canterbury Tales, Chaucer appears to have abandoned estates satire altogether and uses the Parson to judge everyone equally. The Parson assesses everyone according to their actions and not their station, much as Chaucer the author regards the pilgrims and an ideal priest should in reality.

As he nears the end of his meditation, the Parson advocates sincere confession and penance in order for sins to be forgiven. The person asking for forgiveness must be humble and must “be obeisant to receyven the penaunce that hym is enjoyned for his synnes, for certes, Jhesu Crist, for the giltes of o man, was obedient to the death” (X.997). The Parson presents Jesus’s obedience as the model for all Christians, which few of the clergy on the pilgrimage seem to follow. He also details penance as the final stage of confession, which the Pardoner omits from his own sermon; money is all that is needed for him to pardon sins. Instead of a simple absolution through confession to a friar or the purchase of a pardon, the Parson fulfills his duties as a priest by instructing his listeners in true penitence. He concludes with his belief that “This blisful regne may men purchase by poverte espiritueel, and the glorie by lowenesse, the plentee of joye by hunger and thurst, and the reste by travaille, and the lyf by death and mortificacion of synne” (X.1080). This stress on the value of poverty, humility, and self-sacrifice, combined with the Parson’s lifestyle agreeing with his “tale,” are the main characteristics that separate the Parson from the corrupt clergy in the pilgrimage and make him the pilgrims’ spiritual leader. He demonstrates in his tale his awareness that those clerics’ greed and selfishness have betrayed the Church’s ideals and the people they are supposed to be guiding to salvation. This behavior is reinforced by the Church’s reliance upon ritual,

followed the trends in estates satire when he wrote The Canterbury Tales. This especially holds true for the members of the clergy, who, overall, had reputations for greed and worldliness that were not in keeping with the ideals of the Church. The character of the Parson is Chaucer's exception both in the portraits and in the tales' format. He is the one member of the clergy who fulfills the obligations of his role and acts the way John Wyclif and other critics of the medieval Church believed clerics should. The Parson's devotion to his calling makes him stand out among his fellow ecclesiastics and among the tales themselves in his individuality and his integrity.

The very existence of the Parson within the generally irreverent tales shows that he is an exceptional character and one of the few Chaucer the author presents without irony. The simple format of the tale/meditation, written in prose, reinforces this view, especially when contrasted with the preceding tales in the pilgrimage. The one clergyman who lives the way his role dictates he should, the Parson easily assumes the responsibility of spiritual leader of the pilgrimage. In addition, his duties – taking care of his parishioners, preaching, and absolving sins – best reflect what Jesus and his Apostles set out to do during their lifetimes. Selling forgiveness, begging for money, practicing alchemy, and living an aristocratic life do not correspond with the Church's original mission. These practices, which correspond with the invented roles of the Pardoner, the Friar, the Canon, and the Prioress, are what led to the criticisms of the Church in the 1300's and what Chaucer felt should be remedied. As a priest, only the Parson could embody the traits of an ideal clergyman. His is the last of The Canterbury Tales, emphasizing the character's role as the remedy for the Church's corruption.

- Bestul, Thomas H. "Chaucer's Parson's Tale and the Late-Medieval Tradition of Religious Meditation." Speculum 64.3 (Jul. 1989): 600-619. Jstor. Guggenheim Memorial Library, West Long Branch, NJ. 19 April 2004 <<http://www.jstor.org/>>.
- Calabrese, Michael. "Performing the Prioress: 'Conscience' and Responsibility in Studies of Chaucer's Prioress's Tale." Texas Studies in Literature and Language 44.1 (Spring 2002): 66-91. ProQuest. Guggenheim Memorial Library, West Long Branch, NJ. 7 Oct. 2004 <<http://proquest.umi.com>>.
- Chaucer, Geoffrey. The Canterbury Tales. Ed. Larry D. Benson. Boston: Houghton Mifflin Company, 2000.
- Cooper, Helen. Oxford Guides To Chaucer: The Canterbury Tales. Oxford: Oxford University Press, 1989.
- Delasanta, Rodney. "Penance and Poetry in the Canterbury Tales." PMLA 93.2 (Mar. 1978): 240-247. Jstor. Guggenheim Memorial Library, West Long Branch, NJ. 23 Feb. 2004 <<http://www.jstor.org/>>.
- Donaldson, E. Talbot. "Chaucer the Pilgrim." Chaucer Criticism: The Canterbury Tales. Ed. Richard Schoeck & Jerome Taylor. Vol. 1. Notre Dame: University of Notre Dame Press, 1978. 1-13.
- DuBoulay, F.R.H. "The Historical Chaucer." Writers and Their Background: Geoffrey Chaucer. Ed. Derek Brewer. Athens: Ohio University Press, 1975. 33-57.
- Ellis, Roger. Patterns of Religious Narrative in the Canterbury Tales. Totowa: Barnes & Noble Books, 1986.
- Grossi, Joseph L., Jr. "The Unhidden Piety of Chaucer's 'Seint Cecilie.'" The Chaucer Review 36.3 (2002): 298-309. Project Muse. Guggenheim Memorial Library, West Long Branch, NJ. 11 Oct. 2004 <http://muse.jhu.edu/journals/chaucer_review/v036/36.3_grossi.html>.
- Holloway, Julia Bolton. "Convents, Courts and Colleges: The Prioress and the Second Nun." Equally in God's Image: Women in the Middle Ages. Ed. Julia Bolton Holloway, Constance S. Wright, and Joan Bechtold. New York: Peter Lang Publishing, 1990. 198-215.
- Howard, Donald R. Chaucer: His Life, His Works, His World. New York:

West Long Branch, NJ. 7 Oct. 2004. Keiser, George R. "The

Conclusion of the Canon's Yeoman's Tale:

Readings and (Mis) readings." Chaucer Review 35.1 (2000): 1-21.
Project Muse. Guggenheim Memorial Library, West Long Branch,
NJ. 2 March 2004 .

Knapp, Peggy Ann. "The Work of Alchemy." Journal of Medieval and
Early Modern Studies 30.3 (2000): 575-599. Project Muse.
Guggenheim Memorial Library, West Long Branch, NJ. 2 March
2004.

Komowski, William. "Chaucer and Wyclif: God's Miracles Against the
Clergy's Magic." The Chaucer Review 37.1 (2002): 525. Project
Muse. Guggenheim Memorial Library, West Long Branch, NJ. 16
Feb. 2004

Little, Katherine. "Chaucer's Parson and the Specter of Wycliffism."
Studies in the Age of Chaucer: The Yearbook of the New Chaucer
Society 23 (2001): 225-253.

Mann, Jill. Chaucer and Medieval Estates Satire: The Literature of Social
Classes and the General Prologue to the Canterbury Tales.
Cambridge: Cambridge University Press, 1973.

Pantin, W.A. The English Church in the Fourteenth Century. Toronto:
University of Toronto Press, 1980.

Patterson, Lee. Chaucer and the Subject of History. Madison: The
University of Wisconsin Press, 1991.

Rothwell, William. "Stratford Atte Bowe Re-Visited." The Chaucer Review
36.2 (2001): 184-207. Project Muse. Guggenheim Memorial Library,
West Long Branch, NJ. 11 Oct. 2004
<[http://muse.jhu.edu/journals/chaucer_review/v036/
36.2rothwell.html](http://muse.jhu.edu/journals/chaucer_review/v036/36.2rothwell.html)>.

Shepherd, Geoffrey. "Religion and Philosophy in Chaucer." Writers and
their Background: Geoffrey Chaucer. Ed. Derek Brewer. Athens:

<<http://www.jstor.org/>>.

West, Richard. Chaucer 1340-1400: The Life and Times of the First English Poet. New York: Carroll & Graf, Inc., 2000.

Williams, Arnold. "Chaucer and the Friars." Chaucer Criticism: The Canterbury Tales. Ed. Richard Schoeck and Jerome Taylor. Vol. 1. Notre Dame: University of Notre Dame Press, 1978. 63-83.

Witte, Stephen P. "*Muscipula Diaboli* and Chaucer's Portrait of the Prioress." Papers on Language and Literature: A Journal for Scholars and Critics of Language and Literature. 13.3 (Summer 1977): 27-237. Academic Search Premier. EBSCO. Guggenheim Memorial Library, West Long Branch, NJ. 11 Oct. 2004

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Abstract

The intention of this paper is to emphasize the importance of the field of cryptography. The applications of cryptography are vital to today's way of life. It is important to understand that as technology increases, encryption becomes extremely commonplace and integrated in many places from online banking and email privacy to national security. This paper focuses on the popular methods of encryption, and explains how these methods will likely become useless in the future due to technological advances and refined decryption techniques. Finally, because factoring is such a large part of many popular encryption techniques, the mathematics behind factoring techniques will be discussed and analyzed. This will include a mathematical explanation of techniques such as Fermat's method and the Quadratic Sieve. Furthermore, concrete examples of both factoring technique comparisons will be given that display different techniques and the computer time they require. The RSA encryption technique will be discussed as well.

transportation and interaction, cryptology has emerged as an essential field of mathematics. The goal of this paper is to discuss the advances of cryptology and the necessity of the persistent development of encryption to prevent confidential information from falling into the wrong hands. As factoring techniques improve and computers get faster, the security of current encryption algorithms decreases. Eventually, as explained in the following chapters, encryption techniques that are considered completely secure now will be completely useless in years to come. Due to these facts, developments in cryptography are vital to the security of electronic data transportation.

Cryptology is the practice and study of cryptography and cryptanalysis. Cryptography is basically encoding data so that only specific individuals can decode it. Cryptanalysis is the process of decoding encrypted data (Rosen, Elementary 208). People and businesses need to have a sense of security when interacting electronically, whether it is talking on a cell phone or completing a transaction over the Internet. Due to the advances in cryptography, many people believe that using your credit card to purchase something on the Internet is safer than using your credit card in a physical store (RSA 1-7).

the popular public key cryptography RSA (named after its creators: Ronald Rivest, Adi Shamir and Leonard Adleman) algorithm (RSA 1-3). Public key cryptography includes the cryptographic algorithms that have two different keys. Public keys are used for encryption of data that needs to be sent securely, and separate private keys are used for decryption. The receiver of this message would have a public key and a private key. The public key, $(n, e) = (5767, 523)$, is for everyone to know. Even if someone intercepts this data they could know the public key and still not be able to decipher the meaning of the data. The private key, $(n, d) = (5767, 451)$, is something that only the recipient of the message must know. The interesting part is that not even the sender of the message needs to know this key. This leads to the two important characteristics of public key cryptography that make it so applicable. Primarily, the secret key never has to be transmitted from the sender to the receiver. Also, given the public key, anyone can send a secure message to the recipient (RSA 1-3). This has very important practical applications. It allows a person to post his public key, for example, on one's web page or other form of public domain. With this public key, anyone can send a secure message to that person, even in the case that the two parties have never communicated prior to the encrypted message.

When the ciphertext, found in the title, is received, the recipient can then convert the data to the original message by raising each block to the power d , then reducing modulo n . The number that results will be ASCII (American Standard Code for Information Interchange) code that translates to the English alphabet (of course other languages will have numbers assigned to the characters in that language). In the example, the number 5324 found as the first block in the encrypted message is raised to the private code, d , power: $5324^d = 5324^{451}$ and then 5324^{451} is reduced to the least residue modulo n : $5324^{451} \pmod{5767} \equiv 84$, which is the ASCII code for the English alphabet T. The complete ASCII code can be found in the appendix. The results of this decryption process applied to the entire message are shown in Table 1.

3020	72	H
2774	73	I
4869	83	S
2774	73	I
4869	83	S
4445	65	A
4869	83	S
580	69	E
3802	67	C
5119	82	R
580	69	E
5324	84	T
5406	77	M
580	69	E
4869	83	S
4869	83	S
4445	65	A
436	71	G
580	69	E

Table 1: The ciphertext are the strings of letters found in the title. The the ciphertext elements are raised to the power d and reduced to the least residue modulo n . Both d and n make up the private key. The message are the letters that the second column translate to using the ASCII code.

The message, "THIS IS A SECRET MESSAGE" can now be read.

This raises the question, how did the sender of the ciphertext know what numbers would translate to the message they wanted to send without knowing the private key? The answer is that the predetermined public key, in particular $e = 523$, was chosen using modulo arithmetic so that if one raises a number between 0 and $n = 5767$ to the power e , the result will become the

the 84 is raised to the public code e : $84^e = 84^{523}$. This number is then reduced to the least residue modulo n : $84^{523} = 5324 \pmod{5767}$. Now 5324 can safely be sent in the place of T and deciphered by only those who know the private key. The results of this encryption process applied to the entire message are given in Table 2.

Message (M)	ASCII	$(M)^e \pmod{n}$ ciphertext (C)
T	84	5324
H	72	5620
I	73	2774
S	83	4869
I	73	2774
S	83	4869
A	65	4445
S	83	4869
E	69	580
C	67	3802
R	82	5119
E	69	580
T	84	5324
M	77	5406
E	69	580
S	83	4869
S	83	4869
A	65	4445
G	71	436
E	69	580

e and n are the public key. The ciphertext elements can now be sent to the recipient securely.

The resulting ciphertext is then sent securely to the intended recipient of the message. Even if the message is intercepted, the interceptor could not translate the information without the private key. The private key could be obtained, however, if the hacker were able to factor the number n . This is why larger primes, p and q , are chosen for actual applications of RSA cryptography.

This particular example of the RSA system was created as follows: First, two large primes, p and q were chosen where $p = 73$, and $q = 79$. It is important to keep in mind that for the RSA system to truly be effective with today's computers and factoring techniques, the primes must be much larger, typically from fifty to one hundred digits long. For the sake of computational ease the numbers are relatively small in this example. These two primes, p and q , are now multiplied together, the composite product yields: $n = p \times q = 73 \times 79 = 5767$. This large composite number consisting of two primes is very difficult to factor into the original two primes (details on why this is so difficult are given in the next chapter). If the composite number were the product of two primes, each about one hundred decimals long, it would be close to impossible, within a reasonable time frame, given today's computational limitations. This is the underlining idea behind the RSA algorithm. Next, it is necessary to find the number of integers between 0 and n that are relatively prime to n . This number, which may be found using Euler's Phi-function $\mathbf{f}(n)$, is simply $(p-1)(q-1)$, based on the fact that the \mathbf{f} function is multiplicative:

$$\begin{aligned}n = pq \Rightarrow \mathbf{f}(n) &= \mathbf{f}(pq) = \mathbf{f}(p) \mathbf{f}(q) = (p-1)(q-1) \\ \mathbf{f}(n) &= (p-1)(q-1) = 72 \times 78 = 5616\end{aligned}$$

The proof of this implication can be found in the appendix, part I.

The next step in this process is to use $\mathbf{f}(n) = 5616$ to choose d , such that d is relatively prime to the product $(p-1)(q-1) = 5616$. Two integers are relatively prime if they have no common factors except 1 (Weisstein). To find a number that is relatively prime to n we express $n = 5616$ as a product of primes: $5616 = 2^4 \cdot 3^3 \cdot 13$. Notice that, by the

$$\begin{array}{ll}
5616 = 451(12) + 204 & 204 = 5616 + 451(-12) \\
451 = 204(2) + 43 & 43 = 451 + 204(-2) \\
204 = 43(4) + 32 & 32 = 204 + 43(-4) \\
43 = 32(1) + 11 & \Rightarrow 11 = 43 + 32(-1) \\
32 = 11(2) + 10 & 10 = 32 + 11(-2) \\
11 = 10(1) + 1 & 1 = 11 + 10(-1)
\end{array}$$

We now start with the equation $1 = 11 + 10(-1)$ and use substitution in the following manner:

$$\begin{aligned}
1 &= 11 + 10(-1) \\
1 &= 11 + (32 + 11(-2))(-1) \\
1 &= 11(3) + 32(-1) \\
1 &= (43 + 32(-1))(3) + 32(-1) \\
1 &= 43(3) + 32(-4) \\
1 &= 43(3) + (204 + 43(-4))(-4) \\
1 &= 204(-4) + 43(19) \\
1 &= 204(-4) + (451 + 204(-2))(19) \\
1 &= 451(19) + 204(-42) \\
1 &= 451(19) + (5616 + 451(-12))(-42) \\
1 &= 451(523) + 5616(-42)
\end{aligned}$$

The final equation helps us solve the congruence $451e = 1 \pmod{f(n)}$,

the solution to the congruence is $e = 523$. At this point we have identified the public key and the private key:

$$(n, d) = (5767, 451)$$

$$(n, e) = (5767, 523)$$

This information is all that is needed to have secure messages sent to you over a means of data transportation that may not be secure.

For example, one could choose to use these RSA keys to have messages sent securely. To do this, one would keep the private key to themselves and post the public key somewhere, like a webpage, so that anyone can access this information. One would then mention on the page how to use the RSA algorithm for sending messages. This way, anyone can send a secret message. This does introduce another problem, however. Notice that in the example the RSA algorithm took two-digit long ASCII code that represented a single letter, and turned them into a three or four-digit long string of ciphertext. This made our message that was sent almost four times longer than the original message. While this does not sound so very significant, but imagine if the primes were 50 to 100 digits long. Then n would be anywhere from 100 to 200 digits long, and the resulting $f(n)$ would be around that long as well. As a result, the characters in the ciphertext will be between 1 and $f(n)$ decimal places long, making the message much, sometimes unrealistically, longer.

Fortunately, this is a problem with a solution. Many times, in fact, the amount of data that has to be encrypted is very small, such as your pin number during online banking. When it is necessary to send large amounts of data securely it would not be practical to use the RSA method. In these cases, the parties can use the RSA algorithm to send keys to their private key encryption algorithm. Private key encryption has much shorter ciphertext lengths than RSA does (Rosen, Discrete 148).

transposition cipher. A transposition cipher simply replaces a given data value with a random data value within the pool of data values. Without cryptography, deciphering the message within a reasonable time constraint would be impossible. The table that has the original data values and the values they were transposed onto is the key to encrypt and decrypt a message using a transposition cipher. Attempting to decrypt a simple transposition cipher of the 26 English letters, along with the ten numbers and let us say four punctuation marks using the brute force method would take about 2.587×10^{32} years to decipher. Even if only the 26 letters were used it would still take 1.279×10^{11} years to find the plaintext. If you were to use cryptanalysis (letter statistics) this code could be broken in less than a couple hours, by building possible codes based on location and frequency of the letters present verses that of the English language (Dasgupta).

Julius Caesar was among the first to encrypt messages, and he used a version of a transposition cipher called a shift cipher. The Caesar Shift was shifting the messages text three letters to the right giving the pairing shown in Table 3.

Plaintext:	A	B	C	D	E	F	G	H	I	J	K	L	M
Ciphertext:	D	E	F	G	H	I	J	K	L	M	N	O	P

Plaintext:	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Ciphertext:	Q	R	S	T	U	V	W	X	Y	Z	A	B	C

Table 3: *The Caesar Shift by three letters.*

This enabled Caesar to send secure messages that were unreadable to anyone except his army. The ciphertext, if intercepted today would be easily interpreted to the original message based on letter statistics. A message written in the English language that contains 1000 letters would

appear in a sample of English text that contains 1000 letters.

If someone who knew this information and how to apply it intercepted a message encrypted in the Caesar Shift, they could easily translate the data (of course Caesar's messages would have different letter frequencies, but the same concept applies). They could count the number of times all the letters in the message appeared (Savarese). Most likely, the letter that appears the most would be the letter that represents E. The letter that appears the second most would most likely represent T. A letter that is not present or only appears one or two times is probably the letter Z. After assigning a few ciphertext letters to their corresponding plaintext letters, one can recognize that it is a shift of three used in the encryption. They can check this theory by shifting the encrypted message three spaces to the left to see if the new message is logical. Or, of course, if someone had reason to believe that Caesar used a shift, they could just check all 25 possible shifts, and then evaluate the resulting data.

The desire for secure or secret data transformation is the driving force behind the development of effective encryption methods. Leading up to and during the First World War the German Government was transmitting mass amounts of information through radio waves that were easily intercepted. This led to the invention of the Enigma Machine in 1918 by Arthur Scherbius in Berlin (Sale). The Enigma Machine performed a different substitution cipher for every letter that was inputted, through the use of multiple moving rotors that transposed a given input letter then rotated to the next substitution cipher. The enigma utilized 3 rotors and a reflector rotor. The first three substituted the given letter one after another, which led to $26 \times 26 = 676$ different possible substitution ciphers. The reflector rotor then swapped the output letter of the first three rotors and sent it back through the three rotors. This made the enigma machine produce $26 \times 26 \times 26 = 17576$ different possible substitution ciphers (Sale example 1).

The reflector rotor actually made the enigma a weaker encryption machine and this helped the Polish "crack" the machine. The intention of the

the position, then sends it back though the same rotors in the same position.

The following example makes it easy to see that the path taken to get A sent to D is opposite the path D will inevitably be sent to A. Imagine the rotors are in a position such that A gets sent to B, then the reflector rotor swaps B with C, and finally the rotors take C and output D. The final result is that A gets sent to D. Now in the same rotor position, if D is the input, we know the position the rotors are in send D to C. Also, the reflector rotor swaps C and B. Finally, B goes back to A. This makes the enigma simpler because if the interceptors determine that A is sent to D then they know that D is sent to A also.

With the emergence of computers, deciphering techniques have improved and, in turn, encryption has advanced as well. Today's computers could easily scan all 17576 different possible ciphers to check for German words and determine which cipher was used. The most common encryption technique used today is the "RSA" method, discussed in Chapter 1 (RSA 1-3). This is used for a number of reasons, one being that it is a public-key cryptosystem. As opposed to secret-key cryptography (same key used for encryption and decryption), there is a public key used for encryption and there is a private key used for decryption. This feature of public key cryptography is beneficial because anyone can send a secure message to someone if they know their public key, whereas in private key cryptography an initial means of secure communication is needed to share the secret key used for encryption and decryption. If one has a way to communicate securely, there is no need for cryptography. Another reason is that with all known techniques today, factoring a large product of two large primes is extremely difficult (large prime, meaning more than 50 decimal places long), and this is the basis of the RSA encryption algorithm. Factoring is difficult, but not impossible. It requires a lot of mathematical computations, and this is why, with technological advances and the possibility of new techniques for factoring being developed, the RSA algorithm could be "broken." A third reason is that it is relatively easy to develop an encryption using the RSA algorithm, but because it is difficult to factor large composite numbers consisting of two large primes, it is extremely difficult to decipher without

Everyone learns how to factor numbers in Grammar School, so why is it so important in the world of cryptography? If one thinks about how they would go about factoring a number it would be a very simple process. First you would check to see if it is even, if so, factor out a two. Continue this process until the number is odd; by this point you could most likely recognize the number and know one of the factors by pure memory or one of the many “tricks.” For example, if the number ends in a five or a zero, then five is a factor, or if the sum of the digits is a multiple of three, then three is a factor. When all else fails one might use the calculator to see if there are any other primes that divide the factors.

This process always managed to get us through our homework, so factoring appears easy right? Unfortunately this is not the case; factoring is indeed quite computational when applied to the general case where large numbers must be factored. Imagine trying to factor the number 11797. There are several standard tricks that may be employed. It is not an even number so 2 is not a factor. If the sum of the digits is divisible by 3 then the number is as well. In fact, working through the primes one would have no luck until the prime 47 is reached: $11797 \div 47 = 251$. The prime factorization of 11797 is 47×251 . That would not be that bad; it would probably take around ten minutes (excluding any time spent on verifying that 251 is a prime number).

Imagine trying to factor the following number:

$2^{2^{12}} + 1 = 6582018229284824168619876730229402019930943462534319453394436097$.
Where would one start? Working through the list of primes may be futile if the smallest prime factor was very large. It could take an extremely long time to check all of the primes up to this number. Also, if one of the factors were large, we will then need to check all the primes between 1 and the square root of that factor to check if it is prime. This could literally take years. In fact, this number $2^{2^{12}} + 1$ was on the list of the top ten most wanted factorizations in the early 1980s. In 1985, this number was factored using a “super computer” designed specifically for factoring large numbers. The factorization was found in one hour of computer time (Peterson 203). To display the advances that the factoring world has seen, I put this number into

than the “super computer” that originally factored the number really displays the need for advanced encryption techniques.

Naturally, there are more efficient ways to factor large numbers than the elementary methods mentioned before. Many algorithms have been developed for factoring large numbers. The first that will shortly be discussed is Fermat’s factoring method.

Fermat developed this method by representing numbers that were the difference of two squares. He recognized that numbers, n , can be written as:

$$n = x^2 - y^2 = (x + y)(x - y)$$

This produced the first two factors, then the two factors will be factored, or if they are prime they would be done. The algorithm follows in table 5.

Fermat’s factoring method for factoring a number, n .	
Step 1	Let $x = \sqrt{n}$ rounded to the next highest integer (of course if \sqrt{n} is an integer then \sqrt{n} is a factor we are assuming n is not a perfect square).
Step 2	Check all the integers, starting at x , to see if $x^2 - n$ is a perfect square for some $x + i$. This yealds: $(x + i)^2 - n = y^2$.
Step 3	$(x + i)^2 - n = y^2 \Rightarrow n = (x + i)^2 - y^2 = ((x + i) + y)((x + i) - y)$
Step 4	Check to see if $(x + i)^2$ and y^2 are prime or need to be factored further.

Table 5: *The steps involved with Fermat’s factoring method.*

This method works quite well for numbers that have two factors of approximately the same size. It can be very lengthy, however, if the two factors are of differing sizes. The following example will aid in greater understanding of the process, and, also, show that the process works well when the factors are relatively close (Bennett ‘Factoring Methods’).

Example: Factor $n = 445343$.

$$\sqrt{672^2 - 445343} = 79$$

we have: $(x + i) = 672$ and $y = 79$

$$\text{Step 3: } ((x + i) + y)((x + i) - y) = (672 + 79)(672 - 79) = (751)(593) = 445343$$

Step 4: Because 751 and 593 are both prime we have completely factored $445343 = (751)(593)$

Another method of factoring large numbers, known as the quadratic sieve, is better than Fermat's method for a variety of reasons. First it can be used to factor numbers with factors of varying sizes, not just numbers with factors of similar size. Also, it requires fewer steps than similar algorithms. Another advantage is that it uses multiple polynomials, which makes it more likely that it will factor quickly, it demands a shorter sieve interval, and can it be used easily in parallel processing.

One starts the quadratic sieve procedure, like Fermat's, method by choosing values x close to the square root of the number n . Using the formula:

$$x = \left\lfloor \sqrt{n} \right\rfloor + i \text{ for } i = 1, 2, 3, \dots$$

(note: $\left\lfloor \sqrt{n} \right\rfloor$ denotes the floor function or the largest integer \leq to \sqrt{n})

The next step is to find a factor base. The factor base consists of prime numbers in which n is a quadratic residue. In other words:

$$n \equiv x^2 \pmod{p}$$

Then, for every p in the factor base the congruencies,

$$x^2 \equiv n \pmod{p},$$

are to be solved for every p in the factor base. The last step is to apply a sieve to determine the values of $x^2 - n$ that can be factored completely using only primes that belong to the predetermined factor base. By a sieve, I mean simply, eliminating those $x^2 - n$ which cannot be completely factored using only primes in the factor base. Finally, Gaussian elimination is used similarly to the process in Dixon's factorization method to find a product of the $f(r)$ s. This product is a perfect square, y^2 , which gives us the following congruence.

$$x^2 \equiv y^2 \pmod{n} \Rightarrow (x^2 - y^2) | n$$

processing capabilities increases, the security of encryption techniques that rely on the difficulty of factoring large numbers decreases. This is why new techniques are being developed that no longer rely on factoring large numbers, such as elliptic curve encryption discussed in the next chapter.

4.2 Factoring experiments:

After reading so much about how the newer methods of factoring are faster than those previous to them, I became curious just how much faster they are. I decided to factor some numbers using Maple9.5, a mathematics application program. All numbers were factored on the same computer featuring a Pentium IV processor. This computer is a very average computer found in Monmouth University's mathematics learning center. I chose this computer, aside from its convenience, because it is a computer that almost anyone in the US can have access to, including potential hackers. When observing these results it is important to keep in mind the computer I used; any of these numbers could be factored in less than a second using a factoring "super computer", and certainly much less time on a computer designed for parallel processing in the hands of a "hacker."

The three methods programmed into Maple9.5 that I decided to compare were J.M. Pollard's rho method, Lenstra's elliptic curve method, and Morrison-Brillhart algorithm. The default factoring method in Maple9.5 is the Morrison-Brillhart algorithm. This suggests that it is the fastest of the three; the question I have is just how much faster. The following results are quite convincing.

Primes used:

a = 58374155687423

b = 37464560454691

c = 67521547856569

d = 67524547856021

e = 67

f = 456487654215709

g = 456487654215709

h = 789654855215445647

$$2^{143} + 1 = (3)(683)(10425285443)(15500487753323)(6156182033)(2003)(2731)$$

$$2^{144} + 1 = (193)(1153)(22253377)(65537)(278452876033)(38941695937)(6337)$$

$$2^{145} + 1 = (3)(11)(59)(999802854724715300883845411)(3033169)(7553921)$$

$$2^{146} + 1 = (5)(293)(9444732965601851473921)(649301712182209)(9929)$$

$$2^{147} + 1 = (3)^2(43)(26032885845392093851)(4363953127297)(748819)(5419)$$

Composite\method	Pollard's rho	Morrison-Brillhart	Lenstra's Elliptic Curve Method
ab	284	3	13
cd	205	1	11
ef	0	0	0
gh	0	0	0
ij	181	3	10
$2^{140} + 1$	0	0	0
$2^{141} + 1$	2	1	5
$2^{142} + 1$	3	0	1.5
$2^{143} + 1$	6	0.5	2.5
$2^{144} + 1$	0	0	0
$2^{145} + 1$	0	0.5	1
$2^{146} + 1$	2066	15	896
$2^{147} + 1$	11	6	14.5

Table 6: This table displays the amount of time (in seconds) the three different methods used to factor the corresponding composite number. The top row indicates the method used, while the left column indicates the composite number that was factored and the data cells are the time each method required to factor the number.

Another thing that the data implies is that the difference between the times of the different methods appears to increase exponentially. In other words, as the amount of computer time the Morrison-Brillhart algorithm requires to factor a number increases the computer time required for Pollard's rho method increases exponentially. To test this assumption, I found a number, $2^{152} + 1$, that took more than 15 seconds for the Morrison-Brillhart algorithm to factor; it required 25 seconds of computer time. I wanted to make sure that it would take Pollard's rho method more than 137.7 times the time required for the Morrison-Brillhart algorithm, or more than $25 \cdot 137.7 = 3442.5$ seconds. As expected, Pollard's rho method took much longer than 3442.5 seconds; it required an astounding 8191 seconds. This is 327.64 times the 25 seconds that the Morrison-Brillhart algorithm required, and thus I conclude that the relationship is in fact exponential. It is also notable that Lenstra's method required 3077.5 seconds, which is also a large jump compared with the 896 seconds required to factor $2^{146} + 1$.

What does this mean? One thing that the history of mathematics and technology tells us is that improvements in both fields are inevitable. This reinforces the importance in developing encryption techniques. Just a few more improved factoring techniques, which reduce computer time exponentially, can make key sizes unrealistically big, or, if the improvements are great enough, our encryption techniques could become useless.

might eventually take the place of the RSA method as the most popularly used method of cryptography, called “elliptic curve” cryptosystems. There are two types of elliptic curve cryptosystems: analogs to the RSA system and analogs to discrete logarithm based systems. The type of elliptical cryptosystems that are analogs to the RSA method are not of much improvement of the existing RSA method, because the security of the algorithm is still based on the difficulty factoring a composite number that is the product of two large primes. The security of elliptic curve variants of discrete logarithm based systems does not rely on factoring. They rely on solving the equation $Y = kG$ for k , where Y and G are two points on a given elliptical curve. The current methods for computing general elliptic curve discrete logarithms are less efficient than those for factoring (Savas). This fact makes it possible to have smaller key sizes that have the same amount of security than larger keys used in RSA cryptosystems. This is of particular interest because as computers get faster and methods of factoring improve, key sizes are getting larger and larger, and keys in use now will be useless in years to come.

What is interesting about this is, that the current methods for solving elliptical curve equations are less efficient than known factoring methods, but they are there, and they do work. This means that the security of these encryption algorithms are still relative to the speed of a computer’s computations, which means that the implication of these cryptosystems may shorten key sizes for now, but the computers will continue to get faster and faster, and, therefore, the keys will get just as big as they are now. That means that the elliptical curve algorithm is just a short-term solution.

What needs to be discovered is an “unbreakable” code. The question is, “Is such a code possible?” Unfortunately no one knows the answer to that question, but sure enough the world of cryptography will strive for it.

ASCII, American Standard Code for Information Interchange

0	NUL	null	32	Sp	64	@	96	`
1	SOH	start of heading	33	!	65	A	97	a
2	STX	start of text	34	“	66	B	98	b
3	ETX	end of text	35	#	67	C	99	c
4	EOT	end of transmission	36	\$	68	D	100	d
5	ENQ	enquiry	37	%	69	E	101	e
6	ACK	acknowledge	38	&	70	F	102	f
7	BEL	bell	39	‘	71	G	103	g
8	BS	backspace	40	(	72	H	104	h
9	TAB	horizontal tab	41	)	73	I	105	i
10	LF	new line (line feed)	42	*	74	J	106	j
11	VT	vertical tab	43	+	75	K	107	k
12	FF	new page (form feed)	44	,	76	L	108	l
13	CR	carriage return	45	-	77	M	109	m
14	SO	shift out	46	.	78	N	110	n
15	SI	shift in	47	/	79	O	111	o
16	DLE	data link escape	48	0	80	P	112	p
17	DC1	device control 1	49	1	81	Q	113	q
18	DC2	device control 2	50	2	82	R	114	r
19	DC3	device control 3	51	3	83	S	115	s
20	DC4	device control 4	52	4	84	T	116	t
21	NAK	negative acknowledge	53	5	85	U	117	u

25	EM	end medium	57	9	89	Y	121	y
26	SUB	substitute	58	:	90	Z	122	z
27	ESC	escape	59	;	91	[	123	{
28	FS	file separator	60	<	92	\	124	|
29	GS	group separator	61	=	93	]	125	}
30	RS	record separator	62	>	94	^	126	~
31	US	unit separator	63	?	95	_	127	D

(ASCII 1)

$\mathbf{f}(mn) = \mathbf{f}(m)\mathbf{f}(n)$ when m or $n = 1$ because $\mathbf{f}(1) = 1$. So, we will show this is true for $m > 1$, and $n > 1$.

First, we arrange the integers from 1 to mn in m columns and n rows:

1	2	...	r	...	m
$m + 1$	$m + 2$		$m + r$		$2m$
$2m + 1$	$2m + 2$		$2m + r$		$3m$
⋮	⋮		⋮		⋮
⋮	⋮		⋮		⋮
⋮	⋮		⋮		⋮
$nm + 1$	$nm + 2$		$nm + r$		nm

Table: *this table represents the integers from 1 to mn separated into m columns and n rows.*

By definition, $\mathbf{f}(mn)$ is equal to the number of integers from 1 to nm that are relatively prime to nm , and this is the same as the number of integers from 1 to nm that are relatively prime to both n and m (because to be relatively prime to nm that integer must be relatively prime to the factors of nm).

Note: $\gcd(qm + r, m) = \gcd(r, m)$. So, the numbers in the r th column are relatively prime to m if and only if r itself is relatively prime to m . This implies that there are exactly $\mathbf{f}(m)$ columns that contain integers that are relatively prime to m , furthermore, every integer in these columns will be relatively prime to m .

Show: in each one of these $\mathbf{f}(m)$ columns, there is exactly $\mathbf{f}(n)$ integers that are relatively prime to n , this would lead to the desired result, that there are $\mathbf{f}(m)\mathbf{f}(n)$ integers that are relatively prime to both m and n .

The integers in the r th column, where $\gcd(r, m) = 1$, are:

$$r, m + r, 2m + r, \dots, (n - 1)m + r$$

By looking at the above table you can see that there are n integers in these columns, and all are unique (mod n), because if $km + r \equiv jm + r \pmod{n}$, then $k = j$:

$$km + r \equiv jm + r \pmod{n} \Rightarrow km \equiv jm \pmod{n} \quad (\text{subtract } r)$$

This implies that the integers in the r th column are congruent to the in the set $\{0,1,\dots,n\}$. By definition of \mathbf{f} , there are $\mathbf{f}(n)$ integers in the set $\{0,1,\dots,n\}$ that are relatively prime to n , so there is also $\mathbf{f}(n)$ integers in the r th column that are relatively prime to n .

Therefore, there are $\mathbf{f}(m)\mathbf{f}(n)$ numbers found within the integers from 1 to nm that are relatively prime to both n and m . QED (burton 131)

- ASCII Table and Description. <<http://www.lookuptables.com>>
- Bennett, Andrew. "Factoring Methods," "The Quadratic Sieve." Kansas State University Department of Mathematics. 1998. Kansas State University. 18 March 2004 <<http://www.math.ksu.edu>>
- Burton, David. Elementary Number Theory Fifth Edition 2002. Boston Massachusetts: McGraw Hill, 19.
- Dasgupta, Partha. "Making and Breaking Codes." Partha Dasgupta. Arizona State University. 26 Feb. 2004 Metz, Cade. "Quantum Cryptography." PC Magazine. July 2003: 108-110. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 3 March 2004
- Moskowitz, Robert G. "Public Key Without the Middleman." Network Computing. 24 July 2003: 22. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 3 April 2004
- Peterson, Ivars. "Major-League Sieving for Faster Factoring." Science News Vol. 146. 30 July 1994: 71. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 7 March 2004
- Peterson, Ivars. "Uncommon Factoring." Science News Vol. 127. 30 March 1985: 202-203. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 13 March 2004
- Rosen, Kenneth. Discrete Mathematics and Its Applications Fourth Edition. Boston Massachusetts: WCB/McGraw-Hill, 1999. 124, 146-148.
- Rosen, Kenneth. Elementary Number Theory and its Applications. Reading Massachusetts: Addison-Wesley Publishing Co., 1988. 208-248.
- RSA Laboratories. "RSA Laboratories' Frequently Asked Questions About Today's Cryptography," Version 4.1. RSA Security. 2000. Security Inc. 8 April 2004
- Sale, Tony. The Enigma Cipher Machine. 4 September 2003.

- Savas, E., A. F. Tenca, M. E. Ciftcibasi, C. K. Koc. "Multiplier architectures for $GF(p)$ and $GF(2^n)$." IEEE Proceedings – Computers & Digital Techniques Vol. 151 Sept. 2003: 147-160. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 15 April 2004
- Sharpe, Loma. "Unmasking Security." IEEE Review Vol. 49 Issue 3 March 2003: 46-48. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 15 April 2004
- Sturdevant, Cameron. "RSA splits keys to lock up data." eWEEKLABS Vol. 20, Issue 17. 28 April 2003: 61. Academic Search Premier. Ebsco Host. Monmouth University Libraries, West Long Branch, NJ. 8 April 2004
- Waters, John K. "RSA's 'Nightingale' software sings security song." ADTmag. 29 April 2003. Application Development Trends 8 April 2004. <<http://www.adtmag.com>>
- Weisstein, Eric. Math World. 18 March 2004. Wolfram Research. 18 March 2004. <<http://mathworld.wolfram.com>>
- Weisstein, Eric. "RSA – 576 Factored" Math World. 5 December 2003. Wolfram Research. 21 April 2004. <<http://mathworld.wolfram.com>>

DECIPHERING SOUNDS OF SILENCE

Adam Basham

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no mistake that Greek thinkers like Pythagoras and Plato saw great importance in the power of music. Pythagoras' ideas in the "Doctrine of Ethos" clearly suggest that music has the power to move us. Plato too recognized this in his Republic, and while his suggested censorship would have greatly limited the scope of socially acceptable music, the implicit message is that music influences society.

But as important as music is to us, our access to that very music is in jeopardy today, as that very music is no longer in the hands of artists. Instead, it is in the hands of advertisers, marketers, and others primarily motivated by profit. Indeed, art has turned into business and we as listeners have become unsuspecting consumers. Consequently, while we choose our musical icons, while we latch onto their ideologies, and while we allow them to shape our very culture, what we are really doing is succumbing to the marketing strategies of the corporate powers that be. Indeed, personality has been reduced to prescribed persona that is sold to us in the guise of authentic self-expression. An awareness is needed fast.

me that music is inconsequential; that is, it simply does not matter. After all, its sole purpose is entertainment. Well, for just as long, I have been determined to prove them wrong. That said, it is no wonder that this essay has been writing itself in my head now for quite some time, a proclamation that, indeed, music *is* important; and in the present age, such a declaration has never been more accurate.

I now dedicate this essay to those who have encouraged me over the years to embrace and to pursue music; to my grade school music teachers Mr. Conlain and Mr. Van Buren; and to my family, most specifically, to my father, who has filled my world with music since the moment I entered into it. I dedicate it to Monmouth University Professors Ron Frangipane and Joseph Patten, who worked with me during the writing process and served me as mentors, and to Dr. Azcuy in the Honors department, who oversaw the entire process. Finally, I dedicate it to the musicians and songwriters. May they one day find true freedom of expression. This thesis was submitted on April 10, 2005.

Hello darkness, my old friend,
I've come to talk with you again,
Because a vision softly creeping,
Left its seeds while I was sleeping,
And the vision that was planted in my brain
Still remains
Within the sound of silence.
In restless dreams I walked alone
Narrow streets of cobblestone,
'Neath the halo of a street lamp,
I turned my collar to the cold and damp
When my eyes were stabbed by the flash of a neon light
That split the night
And touched the sound of silence.
And in the naked light I saw
Ten thousand people, maybe more.
People talking without speaking,
People hearing without listening,
People writing songs that voices never share
And no one dare
Disturb the sound of silence.
"Fools" said I, "You do not know
Silence like a cancer grows.
Hear my words that I might teach you,
Take my arms that I might reach you."
But my words like silent raindrops fell,
And echoed
In the wells of silence.
And the people bowed and prayed
To the neon god they made.
And the sign flashed out its warning,
In the words that it was forming.
And the sign said, "The words of the prophets

the artists that create it, and into our own minds as listeners and interpreters. In addition, it is innate to human understanding, a learning catalyst that helps us as both listeners and creators to become creative problem solvers, mathematical thinkers, and recognizers of patterns. If that is not enough, music also affects mood. It is no mistake that Greek thinkers like Pythagoras and Plato saw great importance in the power of music. Pythagoras' ideas in the "Doctrine of Ethos" clearly suggest that music has the power to move us. Plato too recognized this in his Republic (99-103), and while his suggested censorship would have greatly limited the scope of socially acceptable music, the implicit message is that music influences society. Indeed, we march into war to the sound of drums. We pray to the sound of hymns. We get married to the sound of a march. Each and every one of us has a soundtrack to our lives.

Yet, as important as music is to us, our access to that very music is in jeopardy today, as that very music is no longer in the hands of artists and storytellers. Instead, it is in the hands of advertisers, marketers, and others primarily motivated by profit. Indeed, art has turned into business, and we as listeners have become unsuspecting consumers. Consequently, while we choose our musical icons, while we shape our lifestyles in their images, while we latch onto their ideologies and rebellions, and while we allow them to shape our very culture, what we are really doing is succumbing to the marketing strategies of the corporate powers that be. Indeed, personality has been reduced to prescribed persona that is sold to us in the guise of authentic self-expression.

How does this work? Well, the recording industry relies on radio and television to promote and to provide access to its acts. Yet, radio is not a pay per service operation. Instead, it receives the funding it needs to operate from outside advertisers, advertisers who have increasingly targeted smaller and more specific entities since the 1970's. Whereas advertisers once targeted the general American public, they now target particular lifestyles, or what Joseph Turow calls "image tribes," based on a number of specific demographics. What's more, the radio and recording industries are becoming increasingly concentrated with only a few major corporations owning a vast

Of course, marketing control is not political in nature. Instead, it is social control. In forming groups based on lifestyle, marketers are able to create an “outcast” mentality that leads to group majorities suppressing the dissention of minorities through social coercion. In exerting their control based on majority power, these marketers have created what Alexis de Tocqueville called a tyranny of the majority. This tyranny prevents minority members from expressing themselves freely, and it forces artists in the music world today to choose between conforming to the social norms of constructed society or expressing themselves freely and risking missed success. Ironically, marketers are often able to pitch the majority as a non-conforming minority; hence, we often believe that we are latching on to “counter-culture” and “self”-expressing when we are really just reinforcing the stereotypes of various “tribes.”

Unfortunately, this has a stifling effect on human development. According to John Stuart Mill, free-expression is essential for proper human development, because it is through self-expression and free thought that we are able to both come to truth and form ethical and aesthetic value judgments that account for who we are as individuals and as a society. In other words, as long as our culture is being dictated to us, so are our ideals. Self-actualization is left un-fulfilled because our values are not discovered naturally through self-reflection; rather, they are projected onto us by market elites. Yet, money will continue to be made. Is this sufficient justification?

Above all else, this phenomenon fosters mass-manipulation. Musicians that speak their minds on political or ethical issues provide our culture with potential social options. At the same time, artists who create “outside the box” provide us with potential artistic and intellectual options. The ability to make choices comes from having choices, and democracy relies on decision making. If musicians are silenced based on business decisions, the options they provide us with for moral and aesthetic value judgments disappear. The lack of dissention makes mind control at the hands of advertisers much easier because it limits our ability to choose lifestyles that are not so effortlessly and conveniently sold to. As long as only certain kinds of music are permitted to become successful, “image tribes” will

of self-expression, and the promotion of false personas, leaves us lacking in self-fulfillment, because we never come to realize who we actually are as individuals. Essentially, the very concept of identity is being tampered with. Simultaneously, we are limited in our ability to communicate our emotions, desires, and convictions. If we can not vent our frustrations freely through normal social means, we are more inclined to do so through violence; even though clearly, violent thoughts displayed in song are much safer than the same thoughts expressed through action. In this sense, freedom of expression serves as a societal safety valve.

All in all, this is a very relevant problem, and one that is not often expressed. Clearly, the media and marketers do not want us to discover this, and very few musicians speak out against it because they too need to make a living. A general public awareness needs to happen, and it needs to happen soon if we want to turn the tides on this tyranny of the majority that is plaguing the nation's culture like a creeping disease. In the words of Paul Simon, people are "talking without speaking," "hearing without listening," and "writing songs that voices never share" because "no one dare disturb the sound of silence." This sound is the sound of a dangerous tyranny of the majority that is suppressing our very cultural identity.

In this essay, I will illustrate how this tyranny of the majority has become a sort of new machine, supervised by marketers, but fueled and run by oblivious consumers who end up becoming parts of the machine itself. What this means for the music industry is, simply put, the perpetuation of the aforementioned sound of silence, a reflection of an ignorant and manipulated culture, devoid of authentic identity. The current state of the music media is a hindrance to human development, and the evidence lies in the music itself.

II. REFLECTIONS

Simply put, art mirrors society. After all, artists live in society; they are influenced by it, and in turn, their art influences it. As Professor Ron Frangipane puts it, it is a "chicken and egg" phenomenon, wherein it can never be known where exactly the cycle begins. This is because the cycle is continuous, with each part constantly impacting and reinforcing the other (Frangipane).

to the new toils that a hypothetical freedom introduced (Frangipane).

Next, look at the sophisticated music of Mozart, and compare it to “the clothing of the time, the powdered wigs of the time, the elegance of Vienna” (Frangipane). Certainly, if it is possible to name a style or genre of music, it is equally possible to illustrate this very cycle of inspiration.

The phenomenon also occurs in a slightly different way; namely, as a cycle of culture and counter-culture, wherein counter-culture is born in order to offset or to balance the popular culture of the time, which then becomes influenced by and adopts aspects of that very counter-culture (Frangipane). The Beatles brought rock and roll back to the United States in the mid-sixties, which offset the Tin Pan Alley scene of the time. Of course, this led almost immediately to Beatlemania, to the British Invasion, and to a new pop-culture. In turn, the hippy movement of the late sixties formed to balance the pop scene with ideas of peace and free love; and before long, society was overtaken by flower power as it entered into the psychedelic Summer of Love.

Of course, the cycle did not start in the sixties, nor did it end there. It is a natural flow, a perpetual reaffirmation of our cultural identity, and another example of how music and society continue to shape one another.

Perhaps one of the best examples of the “chicken and egg” cycle is the social change that was achieved by music during the Vietnam War era in response to the manner in which that era had motivated the music. Here, traditional folk music, rock and roll, and a newer variation of the two in the folk-rock of Bob Dylan and Simon and Garfunkel all existed simultaneously. Of course, folk has always been somewhat political in nature, and as its influence began to spread, the rock music of the time began to take on the same sort of activist personality. This was the music of the hippies (Frangipane).

Meanwhile there was a war going on that much of the nation disagreed with, clearly a prime target for activist expression, and “all of a sudden the music starts to take the lead as a rallying point for the hippies and the pacifists of that time” (Frangipane). Clearly, this was nothing more than a natural progression of circumstances during which the culture and its music

the Fish's "I-Feel-Like-I'm-Fixing-to-Die-Rag," artists' anti-war sentiment was both blatant and successful, with many of the most controversial songs making their way onto the charts (Nel 1-3).

Though the culture was not dominated by a pacifist attitude, the point is, it was allowed for and represented by pop-culture through the music and the media. In other words, though assent was commonplace, so was dissent, and the latter was reflected fairly and completely in the cultural mirror.

Just take a look at the number of songs representing the opinions of the dissenters. In 1962, Peter, Paul, and Mary released "Where Have All the Flowers Gone?." In 1963, Bob Dylan released "Masters of War" and "Talkin' John Birch Paranoid Blues," while Pete Seeger released "Waist Deep in the Big Muddy." Dylan became active again in 1964 with the release of "The Times They Are Changing," and in 1965, Phil Ochs released "Draft Dodger Rag" and "I Ain't Marching Anymore," while Country Joe and the Fish released the aforementioned "I-Feel-Like-I'm-Fixing-to-Die-Rag" (Nel 1).

In the second half of the sixties, and even into the seventies, protest songs became even more abundant. Some include Credence Clearwater Revival's "Run Through the Jungle" and "Fortunate Son," the Doors' "The Unknown Soldier," Buffalo Springfield's "For What it's Worth," and John Lennon's "Give Peace a Chance," though this is only a small representation of a much larger body of music (Nel 1).

What's more, the artists of the time were quite outspoken in their lyrics. Notice the sarcastic, blatant tone of the following:

...Yeah, come on all of you, big strong men,
Uncle Sam needs your help again.
He's got himself in a terrible jam
Way down yonder in Vietnam.
So put down your books and pick up a gun:
We're gonna have a whole lot of fun.
And it's one, two, three,
What are we fighting for?
Don't ask me, I don't give a damn,

You're big chance has come at last.
Gotta go out and get those reds-
The only good commie is the one who's dead
And you know that peace can only be won
When we've blown 'em all to all kingdom come...
(Country Joe and the Fish)

As offensive as this might sound, it was a hit at the time, which only suggests that society had an open mind toward the art that was presented to it. It only makes sense, since that art was a reflection of the culture itself. Clearly, the Vietnam era provides a healthy example of music and culture influencing and enforcing one another, but as will be shown in this essay, this is not always the case.

III. THE NEW MACHINE

It is important to understand that, while music is a mirror to culture, it is through the media that music is experienced by the society at large. In fact, in the words of Joseph Turow, "The media, in short, are the quintessential vehicles for portraying the life of society *to* society" (8). By the media, he refers to television, radio, magazines, internet, movies, sound recordings, and newspapers, to name the most relevant of examples. From this point on, I will use the term to refer only to the music media, or the parts of the media that directly affect the music world.

Clearly, music is an art. Yet, today it is more; namely, it is a commodity, a product in the hands of major corporations, from record labels to publishing companies, from radio stations to retail stores. Ultimately, music has become a business; in fact, it has been a business for some time now. So, why does this suddenly matter more than ever? There are two reasons.

First, the media has become too concentrated for its own good. The sixties saw an environment where music was cherished for its creativity and for its message. During that time, there were a substantial number of record labels and even more locally run radio stations. This diversity in the media allowed for an artist to freely speak his mind.

Today, however, there are only a handful of major record labels, which

and listeners (Future of Music Coalition 1-3).

Clear Channel is clearly the most severe case, having grown from owning just forty stations in 1996 to over 1,200 stations today. However, it is the shared control by a handful of companies that causes problems. Almost every market in the U.S. is dominated by around four firms, which, together, control over seventy percent of the market share. In fact, in some smaller markets, that number is increased to ninety percent (Future of Music Coalition 2-3). The worst part is these companies are not locally run; instead, they are national or regional corporations, meaning local interests are often trumped by regional corporate policy. When four major firms in a market deal with only five major recording labels, smaller artists have no voice in that market, period (2-3).

Why the sudden consolidation? Perhaps it is because “the natural tendency of media organizations is to combine and to reduce competition, a trend accelerating since the mid-1980’s” (Teeter and Loving 894). The process was greatly helped along by the “Telecommunications Act of 1996,” which eradicated the limit to the number of radio stations a single owner can control nationwide, and although there are still limits to the number of stations a single owner can control in a single market, those limits have been greatly reduced (Teeter and Loving 899-900).

According to a study done by the Future of Music Coalition, this has led to “less competition, fewer viewpoints, and less diversity in programming” (2-3). It further states, “Deregulation has damaged radio as a public resource” (2-3).

Yet, media concentration is only half of the equation, and the other half has had an even more profound effect on the music world. What’s more, it is harder to spot, due to its deceptive nature. In fact, it is not primarily in the hands of the music media at all; instead, it begins at the hands of outside marketers such as Pepsi or McDonalds, or any other company that uses the media to advertise a product.

In his book, Breaking Up America, Joseph Turow explains how these marketers have shifted their techniques since the 1970’s. Where they once used mass marketing to send a message to society as a whole, they are now

gathering information on individuals' race, ethnicity, income, generation, activity patterns, marital status, location, and gender. After it is collected, all of this information is put together to create "geographical and psychological profiles they call 'lifestyles'" (3). By working with the media to turn these lifestyles into "*primary media communities*", advertisers are able to garner greater consumer loyalty; and furthermore, they are able to target these communities with specific ad messages that somehow associate a product with their particular needs(4).

This creates "a fractured population of self-indulgent, frenetic, and suspicious individuals who increasingly reach out only to people like themselves" (3), a perfect scenario for advertisers who want to reach specific groups of people who are like-minded with similar interests. Even more, with media outlets now the equivalent of gated communities, advertisers know just where to place an ad to reach a certain lifestyle (3-9).

Furthermore, the media signals to specific types of people that they should join a particular community because they belong there; even worse, it signals to others that they ought to keep away because they do *not* belong (91). Because of this, consumers are compelled to choose which community they belong to most; division is emphasized more than overlap, so very few people will belong to more than one group (92). This is dangerous, considering these lifestyles transfer into social clusters in the real world, and not just in the media; thus, social diversity is hindered while discussion and debate disappear and prejudice is strengthened (92-93). People segment into what Turow calls "image tribes," groups of people that have the exact same interests (184-200).

Signaling mostly occurs via the creation of formats, which are defined by the type of personality that a media community takes on. For instance, a radio station's format is defined by its song playlists, its on-air personalities, the type of sound bytes it plays, and even the type of commercials it airs (9). In addition, the same lifestyle that listens to a particular station might tend to read a certain kind of magazine and watch a certain kind of television station or movie. The more advertisers study that lifestyle, the more they will know how and where to reach it with particular products that seem relevant! Thus,

operation. It relies on ad dollars for funding, so in order to draw advertisers, stations are forced to format their stations to appeal to the “image tribes” that marketers are trying to reach (Frangipane).

As more and more local stations are being bought out by national conglomerates, station executives are becoming less and less interested in local interest and quality programming. Instead, they are relying on corporate strategy, which usually involves specializing on particular formats, often across the board (Future of Music Coalition 1-3). For instance, Radio One is a national corporation that specializes in urban formatting. Recently, the company dropped its alternative station, Y100.3 (WPLY), in the Philadelphia market in order to give one of the markets existing hip hop stations, 103.9 the Beat, the stronger 100.3 signal. The company also now owns the adult R&B station, 107.9; the vacated 103.9 frequency has been filled by a new gospel station, Praise. Ultimately, the format change has created a situation in which Radio One owns a station catering to every African-American demographic in the city; thus, they can “cluster market” their urban package to advertisers (DeLuca 2).

When I asked former Y100 programming director, Jim McGuinn, what the reason for the format switch was, his response was as follows:

ROne has a corporate agenda – they call themselves the Urban Radio Specialists. We didn’t fit that mold, and even though we outrated 103.9 by a bit and out-revenued them by millions per year, they made the flip. (McGuinn 1)

In order to reach a more specific target, a parent company was willing to replace a station that reached more people overall. Target marketing was clearly chosen over mass marketing, and overall company profit was clearly chosen over local interest, especially since the decision left the nation’s sixth largest market without a single alternative station (DeLuca 1-2, Werde 11).

Regrettably, this sort of approach has become a normal occurrence. One method used by parent companies to measure station profitability is called “power ratio” (Barnhart 1-2). Moreover, it measures how profitable a station is in terms of converting listeners to advertising dollars; which means

stations draw in older audiences, while marketers tend to target the younger age demographics. As a result, KXTR was moved from FM to AM (Barnhart 1-2).

Another problem presented by this new machine is that, in attempts to more precisely sell formats, stations are shortening the spans of their playlists (Future of Radio Coalition 2-3). Top 40 radio itself is becoming segmented to the point where there are now top 40 charts within different formats. In the early days of radio, an audience would hear a wide variety of music whenever they tuned in. For instance, during the 1960's top forty might have included a folk song followed by a Motown tune followed by a big smash rock and roll hit. Since each represented the best of their respective genre, radio was generally filled with high quality content. Now, however, there might be a top 40 modern rock station *and* a top 40 hip hop station; thus, filler material is needed for each genre so that the representative stations have enough songs to fill their playlists (Frangipane). Because of this, talented artists that do not fit in to any format will remain unheard while imitation bands with little original content will be heard in abundance.

Of course, the recording industry must react to radio formatting. If radio formats target specific "image tribes," then the major labels are forced to sign artists that would appeal to those same "tribes," and in many cases, they are compelled not to sign artists that would not. Ultimately, this creates a situation where artists must choose to either "sell out" their unique visions or settle for gaining exposure only through small, independent labels via local gigs and college airplay. Finally, while major labels have deals with major distributors, which place product in large retail stores such as Wal-Mart and Best Buy, independents often do not. Smaller labels are forced to rely on small local shops, which are slowly dying out to those very retail chains. Consequently, not only do many original artists not get heard on the air; they also do not get sold in stores (Frangipane). This not only affects the artists, it also affects the listeners who will never have exposure to them.

Indeed, the new machine is dangerous and accurate. It is a device designed for attaining and maintaining control, and it has been plugged into to society undetected. Unfortunately, the system is so complete that we, the

The new machine is not political in nature. It is a social machine that functions on social control. There is no military to back it up and no threat of violence but there is the threat of isolation, of becoming an outcast. In Democracy in America, Alexis de Tocqueville warned of a threat much greater than that of political tyranny. His was a tyranny of the majority, in which the people oppress themselves. “The authority of a king,” he believed, “is purely physical, and it controls the actions of the subject without subduing his private will” (304). On the other hand, he believed that “the majority possesses a power which is physical and moral at the same time,” and which “acts upon the will as well as upon the actions of men” (304). In other words, the majority suppresses the minority through social coercion.

John Stuart Mill also warned of this threat. He believed that even self-government is not government of each man by himself; rather, it is government of each man by each other man. In essence, the will of the people is really the will of the majority over the will of the minority. Because of this, if the majority wishes to oppress the minority, the minority will be oppressed (Lee 1-2). Mill further states:

Society can and does execute its own mandates;
and if it issues wrong mandates instead of right,
or any mandates at all in things with which it
ought not to meddle, it practices a social
tyranny more formidable than many kinds of
political oppression, since, though not usually
upheld by such extreme penalties, it leaves fewer
means of escape, penetrating much more deeply
into the details of life, and enslaving the soul
itself. Protection, therefore, against the
tyranny of the magistrate is not enough; there
needs protection also against the prevailing
opinion and feeling, against the tendency of
society to impose, by other means than civil
penalties, its own ideas and practices as rules
of conduct on those who dissent from them...

social repercussion (304-310). Nobody wants to end up a social outcast for not following the dictates of the majority opinion.

Yet, were an individual to deny belonging to any “image tribe,” or should an individual decide that he belongs to several lifestyle communities at once, wouldn’t that individual be considered an outcast by society? Now we begin to see the ultimate danger of the new machine. Though marketers do not exert power themselves, they manipulate us into exerting power over each other. They create a tyranny of the majority, not maintained by them, but sustained by us *for* them. If a skateboard punk listens to Celine Dion, he will be ridiculed by his peers, and yet he will not be accepted by the hip hop community. If a country music fan speaks out against the president, she will be persecuted by her cohorts, yet she will not be welcome among the death metal crowd. So what options do we have? Conform or become outcasts? Most choose the first.

The sad thing is that these “image tribes” are not natural communities. Instead, we live in our gated enclaves only because we have been conditioned to do so. As Turow states, “If you are told over and over again that different kinds of people are not part of your world, you will be less and less likely to want to deal with those people” (7). Along the same lines, if one is told over and over again that different kinds of interests are not part of one’s world, one will be less and less likely to want to adopt those interests, especially if one’s peers will shun the action. Since one will not be mingling with people outside of one’s own “tribe,” one is not likely to be exposed to other interests anyway.

The authors of the machine “look for splits in the social fabric and then reinforce and extend the splits for their own ends” (7). In other words, it is a tyranny of the majority machine, and *we* continue to fuel it by accepting the personas we are assigned.

More than anything else, a tyranny of the majority is a form of persecution exerted over an individual based on his opinions; it is an external social constraint on the individual’s freedom of expression, a freedom that John Stuart Mill believed is essential to the comprehension of truth and to the development of human values (Mill 19-63). This is because free expression

deeper understanding of truth. When an individual's opinions become contested, those individuals must actually fully grasp the meanings of those opinions in order to defend them; thus, comprehension deepens (Mill 39-45).

Furthermore, if an idea proves true time and again, even at the face of the strongest adversity, it is less likely that that opinion is actually false. In continuously allowing his beliefs to be tested, the individual becomes more certain of the fact that he has actually come to realize what is indeed true. Likewise, if an idea is successfully refuted, then he becomes all the smarter for it, since he has learned the error of his ways (Mill 39-45). Clearly, there is great value in the kind of diversity that the new machine tries to quash by keeping unlike individuals apart, so that their ideas are never able to converge. Yet, marketers know that the more accepting we become of the views we are used to, and the more suspicious we become of the opinions of others, the more susceptible we will be to manipulation.

Still, there is more. What happens to ideas that seem to have no place among *any* of the "image tribes"? Usually they are censored or ignored, or worse, never expressed due to fear of social persecution. Liberty of expression is a necessary condition for human development because it is needed in order for individuals to determine the values that constitute the higher qualitative pleasures of human experience.

When our ethical and aesthetic ideals are dictated to us as individuals and as a society, we lose control of our own characters and of our own culture. Our beliefs no longer belong to us, and we become like cogs in the machine. When one considers this along with the exploitation of personality, a.k.a. lifestyle, one begins to wonder if there is any authentic identity left at all. We are not self-actualized; instead, we are conceived of by the machine as parts of the machine itself.

We are cogs, and so we do as cogs do. We fulfill our roles, never stepping out of bounds, because in doing so we provoke retribution from our peers who are also cogs, and whose roles, as cogs, are to persecute those who move out of place. The system has been designed to repair the *damaged* parts of the machine on its own.

Mill insisted:

Musicians provide us with potential value judgments and truths through their art. They attempt to stimulate us aesthetically through their musical creativity, and they attempt to persuade us ethically, politically, and socially through lyrics and symbolism. When confronted with a musical “marketplace of ideas,” individuals and a culture have the opportunity to sift through a number of value options and to choose for themselves the ones that fit them both individually and collectively to become self-actualized. What a shame it is that such a “marketplace of ideas” would be hindered in the name of corporate profitability.

V. MIRROR, MIRROR

Indeed, art mirrors society and society mirrors art; but, what happens when the natural chicken and egg cycles are controlled? When marketers influence music, they can manipulate popular culture; likewise, when advertisers dictate popular culture, they can maneuver the music industry pretty much at will. Frighteningly, the more power they garner on one side, the more leverage they attain on the other.

“The Merchants of Cool,” on PBS Home Video, explores this new cycle in greater detail. It examines the research techniques implemented by the nation’s five largest media companies, Viacom, News Corp., Disney, Universal, and AOL Time Warner, specifically on the youth demographics. Together, these companies own much of the film studios, television networks, cable channels, sports teams, video stores, internet service providers, and music companies that sell to the country’s pre-teen, teen, and young adult populations; and, they know how to appeal to their tastes (FRONTLINE).

This is mostly thanks to focus groups and other studies run by these companies and hired consulting firms, people who specialize in learning about the consumer habits of kids. For instance, Viacom’s MTV cable network runs ongoing studies, during which, it sends researchers on visits to the homes of typical fans. During these visits, the teens are asked a variety of questions regarding fashion, music, movies, food, television, dating, stress, buying habits, and other issues pertaining to them. In other words, they are interviewed about their lifestyles. Meanwhile, consultants act as “culture

that very population to provide it with cultural icons that are specifically designed to appeal to it. It is able to create lifestyles for teens that they feel the need to subscribe to in order to fit in.

Two such lifestyles are the “mook” and the “midriff.” The “mook” is the name given to the Howard Stern type of persona, that of Blink 182, spring break frat boys, and the pranksters of “Jackass.” Because teenage boys are presented with an onslaught of “mook” icons, they feel the need to take on the persona themselves; that is, they remain in a perpetual state of obnoxious immaturity. On the other hand, teenage girls aspire to play the part of the “midriff,” a persona typified by the likes of Brittany Spears and Christina Aguilera. Contrarily, they are encouraged by the media, and expected by their peers, to grow up too fast and to become sexual beings before they even understand their own sexuality (FRONTLINE). Neither lifestyle represents the real interests of those that portray them; instead, they are merely parts played by actors, evidence of the new machine at work.

These are just two examples of how corporations are able to sell kids personas. A cycle is formed in which MTV or some other media outlet does research into trends, sells those trends back to the very people that it studied, observes the reaction, and starts all over again. In this way, companies are able to anticipate what will be profitable, because they are caught up in a sort of “feedback loop,” which they secretly control.

The same companies are also able to quash counter-culture by catching onto it before it takes off naturally, and by selling it as a part of a controlled form of popular culture; thus, no real revolution ever takes place. Even rebellion is sold for profit by those that are supposedly being rebelled against. In this way, the rage rock scene, featuring groups such as Insane Clown Posse and Limp Bizkit, has been easily tamed and used for major profit. This control and repackaging of the counter-culture becomes a severe roadblock to the natural culture/counter-culture cycle. What is more, we will never know if the artists involved would have prospered on their own, or if the scene would have come to fruition, had the corporate powers that be not gotten involved, since everything that we hear is “pre-ordained” (FRONTLINE).

During the Vietnam War era, the musical “marketplace of ideas” was

shallow, and exclusionary. Even more, we have become lazy, letting the media dictate who we are and what we should believe. We are segmented, so there is always a fear of offending someone unlike ourselves, and the media knows this. Everything must be politically correct one hundred percent of the time; conflict and originality are frowned upon. Conformity has become the name of the game.

After September 11th, Clear Channel has done everything in its power to avoid being politically incorrect, from temporarily banning 158 potentially offensive songs such as “Walk Like an Egyptian” and “Bridge Over Troubled Water” to boycotting the Dixie Chicks after a remark made by group member Natalie Maines (Barrett 1-4). In addition, members of Britain’s BBC network and Ted Turner have been horribly dismayed at the fact that Clear Channel has used its airwaves in a biased manner to organize pro-war rallies (Marr 1-3, Barrett 1-4, Martell 1-2). The company’s stations have sponsored over thirteen of these events known as “Rally for America,” and one in Atlanta drew a crowd of 25,000 people (Barrett 2). Circumstances such as these indicate that today’s “marketplace of ideas” is severely limited to one perspective.

Compare the list of successful songs by dissenters during the Vietnam era with the climate during the previous Iraq war, where anti-war songs were not played on the air at all besides a single hit by the Beastie Boys entitled “In a World Gone Mad” (Frazier 1-2). Of course, even that song was not played by many stations, and those that did play it were geared toward a more liberal target. Overall, the best way to access the song was by downloading it from their website, www.beastieboys.com (1-2).

In fact, many dissenting artists chose the internet as the sole source of distribution for their controversial songs during the war for fears of industry and public repercussion, such as the radio and sales boycotts suffered by the Dixie Chicks. Even Madonna, who is particularly notorious for creating controversy, has steered clear of speaking out in the wake of the madness. The singer/songwriter decided against releasing the original version of the video for “American Life,” since she feared that its violent anti-war themes would offend too many people (Moody 1-2). On a VH1 special, Madonna

So, how does the Dixie Chicks story illustrate the extent of the new machine's tyranny? Well, first take a look back at the lyrics to "I-Feel-Like-I'm-Fixing-to-Die-Rag," and then compare them to the much milder Dixie Chicks rhetoric. For starters, the discord was not even based on lyrics. Instead, the entire dispute began when Maines stated that she felt "ashamed that the president of the United States is from Texas" (qtd. in Willman 23). One sentence, based solely on opinion, and stated during a passionate moment on stage, led to internet advertisements deeming the group "Saddam's Angels" (qtd. in Willman). Countless radio stations boycotted their music causing record sales to plummet, radio stations and music stores sponsored merchandise burnings, and the group even received death threats (Willman 24-25). Some decades earlier, it had been acceptable to denounce the government in a published, radio-friendly anthem; today, it is not even acceptable to mention an opinion during a show.

VI. THE SOUND OF SILENCE

Yes, we are all a part of this new machine, and the silence that surrounds us today is a result; it grows like a cancer as the new machine becomes stronger with each generation. I only hope that my words do not fall like silent raindrops. They must be heard so that awareness can be achieved.

Together, we will teach the nation about the "people talking without speaking." These are the artists that are forced to sell out in order to make a buck. They are the "mooks" and "midriffs," the "image tribes" that subscribe to lifestyles that may or may not actually suit them, yet they defend them as their own. They are the counter-cultures that never quite make it as counter-cultures, the Insane Clown Poses that get signed to major label record deals and appear on professional wrestling shows, while leading fans on rebellions that lead to profit for those they rebel against. They are Brittany Spears, the pop-punkers, and the rage rockers that pretend to have, or even believe to have, a meaning; the mimickers of others in their respective "tribes." There are so many plastic, illegitimate, insincere messages being communicated, and they are greeted openly, as they are safe and conventional, each one being cleverly packaged and marketed to a specific segment of the new

into their ears, having never been exposed to a diverse “marketplace of ideas,” which could, at any given moment, reveal to them the true nature of their own likes and dislikes. They are the social puppets, never self-fulfilled, the “image tribe” members that neither discuss nor debate; thus, they never find truth beyond that which is spelled out for them by their closest of peers and by the media machine itself. They are the naïve, the manipulated, and the deceived, the targets of the machine.

Finally, we will teach the nation about the “people writing songs that voices never share.” These are the Dixie Chicks, boycotted for daring to speak their minds, and the artists who are forced to resort to internet distribution of controversial material. They are the groups that dare to be different and are, thus, sentenced to small careers on independent labels with no major distribution and no airplay. They are the unsung heroes, the non-conformists who are penalized by remaining silent in the ears of the conforming masses. For these, and for ourselves; indeed, for society at large, let us, together, dare to disturb the sound of silence. Let us threaten the new machine by exposing it for what it is. Until people are aware, until they are willing to stop fueling the system, there will remain little hope. Change must begin with knowledge. Once that knowledge is obtained, actions can be taken to dismantle the new machine. After all, it is a machine that relies on ignorance.

Barrett, Wayne. "Bush's Voice of America". Yahoo News. 1 Apr. 2003.

Village Voice. 27 Apr. 2003.
<http://story.news.yahoo.com/news?tmpl?=-story&u=/vv/20030401/lo_vv/43031>.

Cross, Ian. "Is Music the Most Important Thing We Ever Did? Music, Development and Evolution". 1999. University of Cambridge. 12 Dec. 2004.

DeLuca, Dan. "In the Mix/Alas, Alt-Rock is Off the Air". Philly.Com 4 Mar. 2004. The Philadelphia Inquirer. 7 Mar. 2005.

Frangipane, Ron. Personal Interview. 2004.

Frazier, David. "Beasties Question U.S., Chinese Regimes". Yahoo News. 24 Apr. 2003. Reuters. 27 Apr. 2003.

FRONTLINE. "The Merchants of Cool". PBS Home Video. 2003.

Lee, Eugene. "John Stuart Mill's 'On Liberty'". The Victorian Web. 6 Nov. 2000. National University of Singapore. 29 Apr. 2003.

Marr, Merissa. "BBC Chief Attacks U.S. Media War Coverage". Yahoo News. 25 Apr. 2003. Reuters Industry. 27 Apr. 2003.

Martell, Duncan. "Turner Calls Rival Media Mogul Murdoch 'Warmonger'". Yahoo News. 25 Apr. 2003. Reuters Industry. 25 Apr. 2003.

McDonald, Joe. "I-Feel-Like-I'm-Fixing-to-Die-Rag". 1965.

McGuinn, Jim. "Re: NEED YOUR HELP." Email to Adam Basham. 22 Mar. 2005.

Mill, John Stuart. On Liberty and Utilitarianism. New York: Bantam Books,

Nel, Phil. "What's Going On? An Incomplete List of Songs About Vietnam".
The Vietnam War: 25 Years After. 1 Jul. 2000. College of Charleston.
27 Apr. 2003. Nelson, Brian R. Western Political Thought From
Socrates to the Age of
Ideology. Englewood Cliffs: Prentice Hall, 1996.

Plato. The Republic. London: Penguin Books, 1987.

"Radio Deregulation: Has It Served Citizens and Musicians?". Future of
Music Coalition. 2004. Future of Music Coalition. 25 Sep. 2004.
<<http://www.futureofmusic.com/research/radiostudyexecsum.cfm>>.

Simon, Paul. "The Sound of Silence". 1965.

Teeter, Jr., Dwight L., and Bill Loving. Law of Mass Communications,
Freedom and Control of Print and Broadcast Media. New York:
Foundation Press, 2001.

Tocqueville, Alexis de. Democracy in America. New York: Bantam Books,
2000.

Turow, Joseph. Breaking Up America, Advertisers and the New Media
World. Chicago: University of Chicago Press, 1997.

Werde, Bill. "Rock Radio No Longer Rolling". Rolling Stone. 24 Mar. 2005:
11-12.

Willman, Chris. "Stars and Strife". Entertainment Weekly. 2 May. 2003: 22-
29.

SADDAM HUSSEIN'S DEFIANCE OF THE UNITED NATIONS SECURITY COUNCIL

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Security Council deadline prior to the Gulf War of 1990-1991. It examines Saddam's political psychology and personality and the role they played when he dismissed the Security Council deadline. It discusses the various events that have impacted his leadership and the crucial decisions behind them. I have found that Saddam chose to ignore the UN Security Council deadline for two reasons: he wanted to defy the West, especially the United States; and he did not perceive the UN deadline and the international coalition to be as serious as they were.

of 1990-1991. More specifically, my research focuses on the various circumstances and factors that led up to the Gulf War of 1990-1991, and will prove exactly why he chose to ignore the deadline. This research has allowed me to provide a thorough analysis of his psychological motives and rationale behind his blatant disregard of the UN deadline.

Saddam Hussein intentionally ignored the deadline for two reasons: he wanted to defy the West, especially the United States; and he did not perceive the UN deadline and the international coalition to be as serious as they were.

On April 7, 2005 Iraq's new President, Kurdish leader Jalal Talabani, was sworn into the office. Also sworn in along with Jalal Talabani were two new Vice Presidents – Adel Abdul-Mahdi, a Shiite, and Ghazi al-Yawer, a Sunni Arab. These three leaders represent all sects of the population in Iraq – a stark contradiction to the way former Iraqi leader Saddam Hussein dictated the country. They plan to bring stability to the transitional country and promised to create a democracy (Dulami et al, 2005: 1).

Although the political and cultural future of Iraq is somewhat unclear, it is still transitioning, growing, and developing. The removal of Saddam Hussein from power has resulted in a complete “one-eighty” for the political direction of the nation. Ironically enough, the power and authority that Saddam had ceaselessly tried so desperately to hold on to is now in the hands of men with progressive ideas for a democracy. But the swearing in of the new Iraqi President is the culmination of years of totalitarian rule and bad decisions on the part of Saddam Hussein.

The drastic political decisions of Saddam Hussein are products of many aspects of his personality and political ideology. These components are critical to the understanding of why Saddam Hussein ignored the UN Security Council deadline given to him. It is Saddam's leadership style, personality, and political ideology that play the quintessential role in his ignorance of the deadline.

Dr. Jerrold M. Post has conducted the most scholarly research in this area.. The various events that led up to Saddam's decision to invade and annex Kuwait, and also the impact of the reaction of the international community and the UN Security Council are important as well. Additionally,

Jerold M. Post. Post's psychological assessment in *The Psychological Assessment of Political Leaders* is the most extensive and thorough in its analysis. The book contains information written by Post on Saddam Hussein's political psychology, as well as an analysis of speeches and general personality traits. This is the only political psychology of Saddam Hussein, and it has been presented to the United States Central Intelligence Agency on two occasions.

Saddam Hussein is a nationalist who used any means to advance the Ba'ath Party, and undoubtedly used force to achieve revolutionary needs. From an early age, Saddam had envisioned Iraq as part of his destiny, and envisioned himself as part of Iraq's destiny. As a boy he was showered with tales of heroic political leaders that fought long and hard to achieve power and to maintain it. With early aspirations of one day becoming the supreme Arab Nationalist leader, he quickly began to channel all of his energies and efforts to achieving this goal (Post, 2003: 337-338). Throughout Saddam's road to leadership and dictatorship, he did not let anything stand in his way of success. He was known to repeatedly turn on allies and break commitments, usually enforcing his authority and power with measures of ruthless aggression and violence. Without a doubt, as if it were second nature, Saddam expelled loyal followers and colleagues, without hesitation or depicting any sign of conscience or regret. He lived his life based on the assumption that enemies and people conspiring against him to bring him down and defeat him were constantly surrounding him.

Saddam was inherently paranoid and defensive in nature, and therefore he had loyalty for only himself, with the Arab Nationalist movement and the Ba'ath Party ranking second as his priorities. As a result, Saddam ruled Iraq with fear. Fear silenced his colleagues and political advisors from dissenting or challenging any of Saddam's decisions. Fear silenced the Iraqi people from speaking to their friends and family about politics. To Saddam and to the Ba'ath Party, fear was an instrument of power, a mechanism of maintaining total authority (Makiya, 1998: 275-276). In addition to being very nationalistic, Saddam had an immense distrust of others in general. Consequently, threats to Iraq were perceived as personal threats to Saddam

thoroughly discussed in order to place the events throughout Saddam's career into context.

Saddam Hussein was born on April 28, 1937 in the village Al-Awja, near Tikrit, Iraq, just north of Baghdad (Post, 2003: 336). Many traumatizing experiences as both a child and an unborn child have factored in on Saddam's personality. While his mother was still pregnant with him, both his father and twelve-year-old brother had died of cancer. Following the deaths of her husband and child, Saddam's mother, Sabha, slumped into a deep depression and attempted suicide. After her suicide attempt, a Jewish family had taken Sabha in, and shortly after that she attempted to abort herself of the unborn Saddam, but was stopped by the Jewish family (Post, 2003: 336). Following his birth, Saddam was placed in the care of his maternal uncle, Khayrallah Talfah Msallat, who continued to raise Saddam through the infant and toddler years. When he was three years old, Saddam was placed back in the care of his mother and her new husband, Hajj Ibrahim Hasan, who reportedly abused Saddam throughout his childhood, both physically and emotionally.

The lack of time with his mother and the abuse Saddam had sustained by his stepfather had produced a "wounded self" image for the young Saddam. This has detrimental effects on the self-esteem of a child, and has negative effects on a child's ability to maintain relationships with others as well (Post, 2003: 336). Clearly as Saddam's behavior suggests throughout his life, he psychologically began to overcompensate and set high, difficult goals of grandness and power – i.e., supreme Arab Nationalist leader. These traumatic events as a young child have had a tremendous impact on both Saddam's self-esteem and his relentless quest for power and authority. His later ambitions of political leadership suggest that he was compensating for early childhood feelings of lack of power and authority (Post, 2003: 336-337).

At the age of ten Saddam returned to his uncle, Khayrallah, in Tikrit to receive an education. Khayrallah was Saddam's role model, father figure, mentor, and parental figure. His values, ideas, and political views were unquestionably etched in Saddam's mind, and later became the values, ideas, and political views of Saddam as well. Khayrallah was an Arab Nationalist

have superior authority and power over Western states. It was at this young and impressionable age that Saddam began to idolize Michel Aflaq, the founder of the Ba'ath Party. Saddam then received his secondary education at an Arab Nationalist school in Baghdad (Post, 2003: 337-338). Thus, at an early age Saddam was engulfed with a narrow-minded political ideology that sought the exclusion of all non-Arabs.

Political Career

By the time Saddam was twenty years old he had joined the Arab Ba'ath Socialist Party in Iraq, and only two short years later Saddam was chosen to lead a five-man team to assassinate Abd Karim Qassem. Saddam had worked very hard for two years and had exemplified devotion and loyalty to the party, and so he was chosen. This was a pivotal moment in Saddam's life – the assassination was unsuccessful because of a faulty judgment on Saddam's part. With the shame of his critical mistake, during his exile he began to study law in Egypt. He became active in the Egyptian Ba'ath Party, where his nationalism and determination brought him leadership status (Post, 2003: 338). Finally, in 1963, when he returned to Iraq, the Ba'ath Party elected him to the position of National Command. By the age of twenty-six Saddam had progressed rather rapidly toward his ultimate pursuit of power, authority, and worldwide recognition. This success brought him even more ambition and a stronger sense of nationalism.

Throughout Saddam's path to leadership he had eliminated opponents; anyone that he had perceived as a threat in the slightest sense. His attitude was one that reflected his paranoia and distrust of people in general – he was known to turn on allies, assassinate loyal colleagues beneath him, and create enemies out of friends, all at the whim of his fear of conspiracy. By the time Saddam was officially inaugurated into leadership of Iraq in 1979, his success had brought him to a new height of paranoia and distrust. Parallel to the infamous advice of Niccolo Machiavelli in *The Prince*, Saddam took care of business in “one clean swoop.”

One of his first actions taken as the official dictator of Iraq was to hold an immediate meeting with about two hundred of his senior officials. Saddam had imminent doubts concerning the loyalty and trust of various

senior officials who Saddam had seen were “loyal” were then ordered to direct the executions of the twenty-one untrustworthy “traitors.” This action in itself represents the extreme levels of paranoia and the disconnection with reality of Saddam’s mind.

Saddam’s political ideology thought it “just” to assassinate twenty-one people because of his suspicions that they were “disloyal.” In Saddam’s mind, he could not fathom the idea of someone or something threatening him or questioning him. Therefore, merely on his suspicions, he believed that the alleged disloyalty of these men merited execution. This behavior also represents a tendency toward violent physical aggression as an instrument of power (Post, 2003: 342-343). Saddam’s paranoid nature and lack of a conscience are extremely relevant in his leadership prior to the Gulf War.

It is this behavior in itself that has often worked to Saddam’s disadvantage as leader. Critical decisions are often made wrong, and miscalculations have caused Saddam additional time and energy in military conflicts. The large contribution of his miscalculations and misjudgments can be attributed to the fact that Saddam received limited advice and opinions from his cabinet and political advisors. Saddam’s unconstrained tendency to employ rather extreme measures of punishment to perceived “traitors,” and also to dissenting views from his own political advisors, has had a silencing effect on the people who were supposed to be acting as Saddam’s chief council. They were afraid to be truthful with Saddam. In all essence, Saddam became a totalitarian dictator, and was able to initiate anything he wanted – his advisors feared him and therefore there was no system of “checks and balances” to hold him accountable (Makiya, 1998: 271). This fact is relevant in both pre-and post-Gulf War Iraq. This was especially applicable when Saddam chose to ignore the UN Security Council deadline given to him prior to the Gulf War. Had Saddam not been so extreme in his political ideology and paranoid tendencies, perhaps he would have rationally chosen not to ignore the deadline.

Invasion of Kuwait

Beginning in 1976, Saddam had been relocating the Kurdish population in Iraq (Aburish, 2000: 121). He had aggressively gone to war

made by Saddam. The Iran-Iraq War was the result of two Middle Eastern leaders, desperately holding onto ideals that were no longer relevant in the 20th century – Iran was promoting religion as a supreme force, and Iraq was promoting state supremacy with total and complete authority (Aburish, 2000: 191). Perhaps the overly drawn out, aimless and unnecessary war with Iran can reveal the true personality characteristics of Saddam. The war with Iran forced Saddam to make political decisions outside of the borders of Iraq, and revealed his leadership style to the entire international community.

There was an estimated one million deaths resulting from the Iran-Iraq War during a course of six years (Makiya, 1998: 259). The war with Iran lasted for many brutal years, and afterwards Iraq found its economy in poor condition and burdened by over \$75 billion in debt. Saddam had borrowed an incredible amount of money from the surrounding Arab states and the US to pay for the war with Iran. Now Iraq was faced with the tedious task of reconstruction following a brutal and bloody war. In addition to Iraq's international debt, it was estimated that the cost to reconstruct the country would be approximately \$230 billion (Karsh & Rautsi, 1991: 201). Saddam then began to pressure Kuwait into forgiving its share of Iraq's war debt. Saddam argued that the long and costly war with Iran had been fought for the benefit of all Gulf Arab states, and therefore Kuwait should forgive Iraq's debt (Karsh & Rautsi, 1991: 204).

Attempting to raise money from oil revenues, Saddam had pressured oil-exporting states to raise oil prices and to cut back on production. He had argued that Iraq would not be in such a financial bind if its Arab neighbors could have helped during the Iran-Iraq War, which he argued was for the benefit of all Arab states (Karsh & Rautsi, 1991: 205). In a desperate last effort to avoid war, Saddam sent his advisor, Dr. Sa'adoun Hamadi, to many of the oil-producing countries in the Middle East, urging them to curtail the production of oil immediately (Aburish, 2000: 279). Kuwait refused to do so, and additionally, they supported OPEC's opposition to the oil production cuts. Kuwait was pumping large amounts of oil for export and keeping prices low, which infuriated Saddam (Karsh & Rautsi, 1991: 205). Not only did this increasingly humiliate Saddam's authority, but also to Saddam this was

off Iraq from the sea, but it provided Kuwait with an equal amount of oil that Iraq had, although Kuwait's population was a fraction of Iraq's. Saddam mainstreamed the belief amongst Iraqi citizens that Kuwait essentially was thriving on Iraq's costly war with Iran, yet reaping the benefits of selling oil (Karsh & Rautsi, 1991: 213). To Saddam, Kuwait had a precious commodity – oil reserves – that it was providing to the West at low prices and in large quantities.

Additionally, at a time when Iraq was aggressively pressuring all of the Middle Eastern states to raise the prices of oil per barrel, Kuwait and the United Arab Emirates chose not to do so and also began to exceed the amount of oil exported as set forth by OPEC's figures. The West was the primary purchaser of oil, and to Saddam, the low prices and high quantity of oil being exported by Kuwait was merely helping the West to succeed in its political agendas. With Iraq's outrageous debt from the war with Iran, Saddam had no means to either reconstruct the devastated country, or to bring to the people of Iraq the promised "fruits of victory (Karsh & Rautsi, 1991: 204)."

Saddam began to fear that the Iraqi people would lead an uprising against him because he could not deliver on what was necessary for Iraq's stability and reconstruction (Karsh & Rautsi, 1991: 204). With various assassination attempts against him, Saddam slumped into a paranoid obsession with his personal and political survival (Karsh & Rautsi, 1991: 207). At this point, there were two malicious enemies in Saddam's mind – the West and Kuwait. To Saddam, Kuwait's increase in oil exports to Western states was the reason why Iraq found itself in such a vulnerable and shaky financial and political situation. Because Saddam saw himself as completely intertwined with Iraq, because Iraq was shaky financially and politically, in Saddam's mind he was then also shaky politically and his existence was threatened (Hermann, 2003: 337).

Furthermore, Saddam interpreted Kuwait's refusal to raise oil prices and drastically cut down on oil exports as a blatant and straightforward attack on Iraq. Saddam then grew more and more aggressive in his attempts to pressure Kuwait, and after the final negotiation session, Saddam sent his

Saddam wanted to invade Kuwait, Iraq's strategic and financial needs would be satisfied by Kuwait's abundant oil reserves and its convenient access to the sea. Saddam would also appear to the people of Iraq as a heroic dictator and proactive supreme Arab Nationalist leader (Karsh & Rautsi, 1991: 213).

On August 2, 1990, Saddam invaded and annexed Kuwait, creating an international crisis in the Middle East (Karsh & Rautsi, 1991: 217). The entire globe was now focused on this conflict between Iraq and Kuwait, which had taken a drastic turn in escalation. Saddam felt more powerful than he ever had – he had control of an oil rich country, and was on the center stage in the international community. He was now globally recognized and saw himself as a major international player. His life-long aspirations of becoming a supreme Arab Nationalist leader were now unfolding before the world to see. However, this attention was negative, and Saddam was shocked with the amount of scorn and condemnation that the international community expressed toward Iraq's decision to invade and annex Kuwait.

This was made evident in the subsequent passage of resolutions in the UN Security Council providing Iraq with a deadline to leave Kuwait, and also approving the use of force if Saddam did not comply with the resolutions mandates. Nonetheless, Saddam Hussein chose to blatantly ignore the UN Security Council Deadline given to him. Saddam ignored the deadline for two reasons: he did not understand the severity or seriousness that was attached to the deadline; and he wanted to defy the West, specifically the United States.

1. Saddam ignored the UN deadline because he did not understand the severity or seriousness that was attached to the deadline.

Saddam did not thoroughly understand the severity or seriousness that was attached to the UN deadline because he had a narrow-minded political ideology, and little experience with governments and cultures outside of the Arab world. In Saddam's mind, the invasion and annexation of Kuwait was "just" due punishment to what he believed was a nation conspiring against him and the good of Iraq. Because Saddam had little to no experience with other cultures and political ideologies, merely disposing of them as irrelevant,

bad economic situation after the war with Iran, and Kuwait should forgive its war debt. If Saddam wanted to survive politically, he had to reconstruct Iraq – immediately. He could not afford to be paying back war debt if he wanted to keep his political prowess (Karsh & Rautsi, 1991: 202). Additionally, Saddam had a preconceived notion that the US would remain neutral through the invasion of Kuwait, and would subsequently influence other Western states to do the same (Karsh & Rautsi, 1991: 215-216). When Saddam decided to invade Kuwait, he overestimated his position and power, and did not consider the consequences of his actions (Aburish, 2000: 284). He failed to recognize the possibility of the UN reacting to the invasion, and was even shocked by the UN Security Council Resolution 660, which condemned the Iraqi invasion of Kuwait and demanded that Iraq withdraw from Kuwait (Aburish, pp.284-285).

Saddam was raised by his uncle – an Arab Nationalist that adamantly opposed all Western ideas, values, political beliefs, the Zionist movement, and all other cultures outside of the Arab world for that matter. From an early age Saddam was indoctrinated with a very limited view on politics and culture. He became a member of the Ba’ath Party as a very young man and had little exchange with other political parties or political ideologies. Politically speaking, Saddam has led a relatively isolated life, created a narrow-minded view of politics and the world. For the rest of his life, Saddam would see the world through a lens that would view the West as the inherent enemy of the Arab nations, and would promote force and aggression as primary tactics of political action. Because Saddam so closely identified himself with the Arab Nationalist movement, and saw himself as the supreme Arab leader, he had expected much of the global community, specifically the Arab nations, to support his annexation of Kuwait and oppose the United States-led international coalition against him (Post, 2003: 345). But Saddam’s decision to invade and annex Kuwait was based on shortsightedness and paranoia, and to his surprise, much of the global community was condemning his decisions as dictator of Iraq.

To further intensify Saddam’s disregard for the seriousness of the UN Security Council deadline, Saddam had a preconceived notion that, if Iraq

Additionally, after a brief meeting with the US Ambassador to Baghdad, April Glaspie, on July 25, 1990, Saddam read into her words as he wished. At the meeting Saddam accused Kuwait as waging an economic war against Iraq (by not increasing the price of oil per barrel) and ultimately depriving the children of Iraq from food and shelter. He then proceeded to blame the United States of supporting Kuwait's alleged economic war on Iraq. Ambassador Glaspie then assured Saddam that the United States did not have evil intentions towards Iraq, only good will (Karsh & Rautsi, pp.215-216). This was all Saddam needed in his mind to ensure himself that the United States would remain neutral should he invade Kuwait, and the United States' neutrality would then be more than enough justification.

It is also imperative to thoroughly understand the political ideology that was fueling all of Saddam's decisions, especially when he rationally and blatantly chose to ignore the UN Security Council deadline. The Ba'ath Party in Iraq had complete and total authority over politics, law, and the military. The Ba'ath Party used secrecy and military police activities as its main means of enforcement (Makiya, 1998: 33). Party membership soon became synonymous with any state job, political or clerical. The party was quickly a social organization as well as an authoritative body (Makiya, 1998: 39-44). Ba'athist ideology stood for everything that was pan-Arabic, and everything that was anti-West. It was bloated with confidence and used its high self-esteem as a means of holding on to the masses' loyalty (Makiya, 1998: 270). Being the most prominent and definitive Ba'athist figure, Saddam Hussein was too "confident" to believe that the UN deadline was any real threat to his power, nor was it legitimate in its assertion that he was wrong in invading Kuwait.

It was Saddam's political ideology that blinded him to the seriousness of the UN Security Council deadline. He was unable to perceive the UN's sanctions as credible and legit, and therefore disregarded them as unimportant and fueled by Western thought. Should Saddam have had a more open-minded view on political theory, perhaps he would not have chosen so adamantly and confidently to ignore the UN deadline presented to him.

must understand his political nature and political motives. Saddam was a nationalist who would resort to any means possible to advance the Ba'ath Party and undoubtedly use force to achieve his needs (Post, 2003: 343). He was known to repeatedly turn on allies and break commitments, usually enforcing his authority with measures of ruthless aggression and violence. He lived his life and leadership based on the assumption that enemies and conspirators were surrounding him. As leader of Iraq he was inherently paranoid and defensive in nature, with tendencies toward aggressive behavior. Saddam had always envisioned Iraq as part of his destiny and himself as part of Iraq's destiny. Saddam's goals as leader of the Iraqi Ba'ath Party were to see the creation of an independent, unified Arab nation that would have superior authority and power over Western states (Post, 2003: 337). To Saddam, the UN deadline was a product of Western political ideology that was greatly influenced by the United States. In Saddam's mind, to submit to the deadline would be to submit to the "infidel" West (Karsh & Rautsi, 1991: 221). More importantly, he felt that if he defied the West and the United States he would gain greater support in the Arab community (Karsh & Rautsi, 1991: 241).

Saddam recognized the United Nations as a product of Western ideals and values, and therefore did not see the UN Security Council Resolution as relevant. To him, the UN encompassed all of the Western political ideals that starkly contradicted those of the Arab Nationalist movement. In fact, the Arab Nationalist movement was a reaction of "evil" Western political ideals, with the primary mission of the movement being to overcome Western states with superior authority. Saddam then began to visualize the crisis as Iraq vs. the United States, which made him eager to defy the deadline (Post, 2003: 346). Hence, Saddam was unable to recognize the legitimacy of the UN as a means of enforcing international law and conduct. He did not view the UN deadline as credible or even serious because he could not mentally envision the UN with any substantial political power.

As dictator of Iraq, Saddam enjoyed absolute power and total authority. Because he ruled the nation with fear and placed the Ba'ath Party with the primary responsibility of policing Iraq of "traitors," Saddam very

his political power. Saddam's over exaggerated responses to people that would dissent from his own opinion was nothing less than execution. Hence, Saddam's judgment was never questioned.

To his dismay, when the UN Security Council Resolution was passed, Saddam was shocked to see that the international community was so against his decision to invade Kuwait. In fact, to Saddam, the UN deadline represented a threat and blatant attack on his political prowess. He saw the UN as "questioning" his authority and his ability to make rational political decisions. He took it completely personal and was unable to fathom an entity challenging his decision. In Saddam's mind there was nothing left to do but to dismiss the deadline an irrelevant product of American pressure from which he would not fail to conquer (Karsh & Rautsi, 1991: 221). Additionally, after the UN Security Council Resolution 678 was passed, authorizing the use of all necessary means against Iraq if Iraq did not withdraw from Kuwait by January 15, Saddam offered to meet with President Bush to discuss the issues between the United States and Iraq. President Bush declined, and to Saddam, this was a large blow to his ego (Aburish, 2000: 299). To Saddam, the UN and the West were threatening his power and he felt the need to reassert himself and not be seen as weak. He felt compelled to gain even more power, and to withdraw from Kuwait and accept the UN deadline would be to trade in his power (Hermann, 2003: 381).

In addition to his personal need to defy the West, Saddam felt compelled to be seen in the eyes of the Middle East as the courageous Arab leader that would stand up to the United States' agenda (Karsh & Rautsi, 1991: 241). Segments of the region's population in Algeria, Egypt, Jordan, Morocco, the Sudan, Tunisia, and Yemen began to openly protest against the international coalition's planned military ramifications for Iraq. These people believed that the West was following a double standard, in reference to the Israeli-Palestinian conflict (Aburish, 2000: 291). These protests against the United States only propelled Saddam further into wanting to defy the West. He wanted to be seen as the "hero" that would accuse the United States of having double standards, and not back down. At this point, Saddam

Another factor in Saddam's drastic political decision was Iraq's struggling economy and debt that needed to be alleviated. Economics were initially what prompted Saddam to invade Kuwait, and economic need would not be forgotten. These dimensions all resulted in Saddam ignoring the final UN Security Council resolution mandating him to withdraw from Kuwait. Finally, on January 12, the United States Congress authorized President Bush to use military force to eliminate Kuwait of the Iraqis (Karsh & Rautsi, 1991: 243).

Iraq Today

Today Iraq is a country high on our world wide political radar. Iraq is facing perhaps the most challenging and pivotal era in its history – the disintegration of an old totalitarian regime and the integration of a new unknown way of life. The entire globe is now focused on how Iraq will adapt to the transition of power and the way in which it will assimilate into an entirely different political ideology. No doubt this will be a slow and tedious process, with many bumps along the way. The political future of Iraq will determine not only the United States' future international policies towards other totalitarian regimes, but the validity of liberating oppressed people and introducing democracy to a new generation. But the phenomenal removal of Saddam Hussein as dictator of Iraq was not an event that happened in seclusion over night. It was the outcome of many international disputes that were acted out on the world stage, involving many intense moments. The political uncertainty and the occupation of Iraq by a U.S. led coalition is the culmination of decades defined by the aggression and political ideology of a narrow-minded Saddam Hussein.

The importance of understanding why Saddam Hussein ignored the United Nations Security Council deadline given to him prior to the Gulf War of 1990-1991 is invaluable. Perhaps it can serve as a mile stone in the history of Iraq and as the “beginning of the end” of Saddam Hussein's political existence. Clearly Saddam had such an adamant political agenda, fueled by aggression and a defiant personality, that led him to ignore deadlines given to him not only once in 1990, but a second time in 2003 prior to the United States led “Operation Iraqi Freedom.” However, in 2003 the circumstances

total power and prestige, and to defy the West by ignoring UN sanctions, was now hiding from what he knew would come. Like Saddam's blatant ignorance of the UN Security Council deadline of 1990, Saddam stubbornly ignored the United States' deadline to evacuate prior to the 2003 invasion and occupation. However, Saddam rationally and consciously knew that if he would ignore the deadline in 2003 that the United States *would* invade. It was his personality and relentless need to defy the deadline yet again that led to his refusal to evacuate in 2003. For Saddam Hussein, failure to learn the lesson once was not enough – he learned the lesson a second time and the last time with his removal from power in 2003.

Following the removal of power of Saddam Hussein, Iraq's future looks shaky but bright. With the swearing in of a new Iraqi President, Jalal Talabani, the road to democracy and a new political ideology is slowly being forged. Ironically, the new Iraqi leader is a Kurd, and the two Vice Presidents are Shiite and Sunni (Dulami et al, 2005: 1). Perhaps the inclusion of ethnic representatives from the entire population of Iraq will act as symbolism for the democratic and inclusive government to come. Although the exact political ideology of Iraq is still in formation, it is a relief to the world, especially the Middle East, that the aggressive dictatorship of Saddam Hussein has come to an end. Perhaps if Saddam Hussein did not blatantly ignore the United Nations Security Council deadline prior to the Gulf War of 1990-1991, he would not have traveled down the political road that led to his loss of power. Perhaps if he had had the foresight to acknowledge the UN's credibility and legitimacy, and was not so driven by his relentless need to defy the West, he would be the one forging a bright new future for Iraq today. The act of behaving in the international community and adhering to international sanctions can best be attributed as wise, tactical, and rational for a political leader. This is most personified through Saddam's reluctance to behave accordingly and adhere to international law and sanctions. For him, it meant the end of his political career, and perhaps his life.

NY: Bloomsbury.

Butt, Gerald. 2001. Saddam Hussein Profile. Accessed online at BBC News: http://news.bbc.co.uk/1/hi/world/middle_east/1100529.stm

Central Intelligence Agency. 2004. "World Factbook: Iraq." United States Central Intelligence Agency. Accessed online at <http://www.cia.gov/cia/publications/factbook/print/iz.html>.

Dulami, Enes; Flower, Kevin; Raman, Aneesh; Robertson, Nic. 2005. "Kurdish Leader sworn in as Iraqi President." Accessed online

Herman, Margaret G. 2003. "Saddam Hussein's Leadership Style." Pp. 375-386 in Post, Jerrold M. 2003. The Psychological Assessment of Political Leaders. Ann Arbor: University of Michigan Press.

Karsh, Efraim; Rautsi, Inari. 1991. Saddam Hussein: A Political Biography. London: Futura Publications.

Long, Jerry M. 2004. Saddam's War of Words. Austin, TX: University of Texas Press.

Makiya, Kanan. 1998. Republic of Fear: The Politics of Modern Iraq. Berkeley, CA: University of California Press.

Post, Jerrold M. 2003. The Psychological Assessment of Political Leaders. Ann Arbor: University of Michigan Press.

Rather, Dan. 2003. Portrait of Saddam Hussein. Accessed online at CBS Broadcasting.

Schafer, Mark; Walker, Stephen G.; Young, Michael. 2003. "Saddam Hussein: Beliefs and Integrative Complexity," pp. 387-396 in Post, Jerrold M. 2003. The Psychological Assessment of Political Leaders. Ann Arbor: University of Michigan Press.

Wikipedia.org. 2004. "Saddam Hussein." Accessed online at http://en.wikipedia.org/wiki/Saddam_Hussein.

WorldHistory.com. 2004. "Saddam Hussein." Accessed online at <http://www.worldhistory.com/hussein.htm>

THE EFFECTS OF DIRECTED WRITING EXERCISES ON RELATIONSHIP DISSOLUTION OUTCOMES

Nicole M. DiBenedetto

Abstract

The purpose of the present study is to determine if writing interventions commonly used in the context of trauma (e.g. Pennebaker, 1997) can be applied to the experience of relationship dissolution. The present study investigates the effects of three types of directed writing exercises on relationship dissolution outcomes. On the first day of the experiment, a pretest questionnaire packet was administered to assess levels of positive emotions, growth, happiness, life satisfaction, and negative emotions. Participants were then randomly assigned to a writing condition and were instructed to write for 20 minutes a day for the next three days. At the conclusion of the three day period, a posttest questionnaire that measured the same variables as the pretest questionnaire was administered. One condition asked participants to write about the positive aspects of their dissolution, the second condition asked participants to write about the negative aspects of their dissolution, and the third condition was a control group that asked participants to write about an unrelated series of topics. It was hypothesized that participants in the experimental conditions would report fewer negative emotions and more positive emotions, growth, happiness, and life satisfaction than the control group at the third day posttest. Additionally, it was hypothesized that participants in the positive condition would report greater increases in growth, happiness, and life satisfaction, as well as greater decreases in negative emotions, than both the negative and control conditions.

Vanni, 1998). However, recent research suggests that people may also experience positive outcomes, such as personal growth, as a result of relationship dissolution (e.g. Tashiro & Frazier, 2003). These contradictory findings result in an important, as yet, unanswered question: What factors may help promote positive outcomes such as growth following relationship dissolution?

Only one major study has focused solely on positive outcomes of relationship dissolution (Tashiro & Frazier, 2003). However, no study to date has investigated potential coping strategies that may promote positive outcomes. One previous study has looked at using focused writing tasks to help cope with relationship dissolution (Lepore & Greenberg, 2002). However, that study focused on writing's ability to diminish negative feelings. Thus, it would seem beneficial to examine the potential for a focused writing task to promote positive outcomes. The present study is the first to investigate the effect of directed writing exercises on the promotion of positive outcomes (personal growth and positive feelings) following relationship dissolution.

Negative Outcomes

Relationship dissolution has generally been thought of as distressing, often traumatic experience. A significant amount of empirical research supports this idea and has examined predictors of this experience (e.g. Frazier & Cook, 1993; Simpson, 1987; Sprecher et al., 1998). The majority of dissolution research has focused on negative outcomes, specifically on distress. One study, comprised of 234 college students, found that the more committed and invested a person is in the relationship, the more distress they were likely to experience post-dissolution (Simpson, 1987). This study looked at distress as the extent to which participants had difficulty with adjusting emotionally to the breakup, the extent to which participants' routines and everyday functioning were disrupted as a result of the breakup, and the extent to which participants felt "upset" about the breakup (Simpson, 1987). Findings from this study indicate that individuals do experience distress following dissolution.

A study conducted by Frazier and Cook (1993) defined distress a bit

under the general distress umbrella. While distress was defined differently than in the Simpson (1987) study, the findings and their implications are similar.

Another study measured distress by assessing the extent to which participants experienced an array of negative emotions (Sprecher et al., 1998). Negative emotions featured in this study included: depression, guilt, anger, hate, frustration, and hurt. Participants were also asked to indicate the extent to which they experienced the following positive emotions: contentment, love, happiness, satisfaction, and relief. An Overall Distress Index was obtained by calculating the difference between the mean negative emotions score and the mean positive emotions score. The results of this study indicate that participants were more likely to experience distressing negative emotions (as opposed to positive emotions) shortly following the dissolution.

All of the aforementioned studies, as well as the majority of the dissolution literature, has focused on the negative distress outcomes of dissolution. However, little research has focused on positive outcomes of dissolution. The lack of research on this subject is surprising given the overwhelming empirical evidence that exists in favor of the prevalence of personal growth after other traumatic experiences.

Positive Emotions

While most of the research has focused on post-dissolution negative emotions, some has looked at positive emotions. One study that examined post-dissolution emotions also looked at the possibility that break-ups can result in positive emotions. A study of 257 college students who had experienced a break-up within the past year found that participants reported having experienced both negative and positive emotions post-dissolution (Sprecher et al., 1998). While the results of this study indicate that participants experienced more negative emotions following dissolution, they also reported experiencing some positive emotions. However, because positive emotions were not central to the study, they were not explored further in the paper. This may be in part because the mean for negative emotions was higher than that of positive emotions. However, one's

raises an interesting question: Could a break-up contain some positive elements in addition to the negative ones and, if so, what may promote such experiences?

Personal Growth Following Traumatic Events

The possibility that relationship dissolution may result in some positive outcomes is suggested by findings from the post-traumatic growth literature. Studies from this area suggest that traumatic events can yield benefits for those who experience them (Tedeschi, Park, & Calhoun 1998). Growth in this context can be defined as adding to one's functioning, qualities, awareness, or experiences (Tedeschi, et al., 1998). Some commonly reported examples of post-traumatic growth include enhanced social resources (Schafer & Moos, 1992), enhanced personal resources (Schafer & Moos, 1992), shift in priorities (Tashiro & Frazier, 2003), new relationship knowledge (Tashiro & Frazier, 2003), and improved coping skills (Schafer & Moos, 1992).

The notion that negative events can potentially yield positive outcomes is not a new one. Crisis theory has long postulated that a negative experience contains the potential for personal growth (Caplan, 1964). This seemingly counterintuitive theory is supported by a vast amount of empirical evidence. A plethora of traumatic events have been found to correlate with growth outcomes, including bereavement (e.g. Park & Cohen, 1993), heart attack (e.g. Affleck, Tennen, Croog, & Levine, 1987), and house fires (e.g. Thompson, 1985). Some studies did not specify a traumatic event but asked participants to think of a recent traumatic event they had experienced (e.g. Calhoun, Cann, Tedeschi, & McMillan, 2000; McMillan & Fisher, 1998). Such studies thus evaluated a variety of events that fall within the traumatic category.

A recent study that assessed a wide variety of traumatic events as they related to growth was conducted by Calhoun et al. (2000). This study consisted of 54 undergraduate college students. Participants were selected based on a pre-screening process in which prospective participants were asked to indicate if they had experienced a traumatic event within the past three years. The traumatic events represented in their sample included car

Another study that assessed an array of traumatic events as they relate to growth was conducted using 389 adult spectators of a Catholic children's baseball game (McMillen & Fisher, 1998). A list of eighteen traumatic event categories was provided, as well as an "other" option. Participants were also asked to describe the traumatic event in an open-ended format. A majority (81.7%) of the participants selected one of the listed events (McMillen & Fisher, 1998). The most frequently occurring choices included death of a loved one, illness of loved ones, job stress, divorce, child rearing problems, and relationship difficulties. Findings from this study indicate that growth after a negative experience is characterized by changes in priorities, increases in emotional strength, spiritual gains, and greater interpersonal closeness. It is important to note that two of the most frequently reported growth producing traumatic events were divorce and relationship problems. This suggests that negative relationship-related events can produce positive outcomes, specifically growth.

Personal Growth Following Relationship Dissolution

Similarly, a related set of studies that found evidence of post-traumatic growth reported that relationship dissolution was the most common traumatic event cited by the sample (Park, Cohen, & Murch, 1996). Three consecutive studies were conducted to test the reliability of the Stress-Related Growth Scale in the context of stressful life events (SRGS; Park et. al, 1996). Participants were asked to describe the most stressful event they had encountered within the past year before completing the SRGS. In all three studies, romantic relationship problems such as dissolution were cited as the most stressful event by a majority of the participants. Findings from all three studies indicate that growth does occur following negative events, and that growth tends to manifest itself in the form of life lessons learned from the negative experience (Park et. al, 1996). Additionally, findings indicate that growth may be predicted by positive affect and a satisfactory level of social support.

Recent research has furthered the notion that relationship dissolution is a traumatic event that can produce positive outcomes. One study focused specifically on positive outcomes of relationship dissolution (Tashiro and

a common occurrence (Tashiro & Frazier, 2003). For example, in response to the open ended growth item, participants reported an average of five positive changes that had occurred post-dissolution (Tashiro & Frazier, 2003).

Responses to this item were placed into categories of person (referring to the participant, or self), other, relational, and environmental positives. Positive changes that fell under the person (self) category were reported most frequently. The types of positive changes listed imply that growth after break-up involves individuals improving upon their own characteristics, traits, and beliefs (Tashiro & Frazier, 2003). These findings may serve as an indication of how the self can be regained or enhanced post-dissolution. For example, improving or adding traits to the self is a means of enhancing or bettering the self (e.g. "I am more self-confident"). An example of re-acquainting with the self is seen in the following response: "I rely on my friends more. I forgot how important friends are when I was with him" (Tashiro & Frazier, 2003). Such a statement implies that the participant has regained a belief that they held prior to the relationship that was lost or suppressed while in the relationship. These findings, which are similar to the findings of Park et al. (1996), provide support for the idea that relationship dissolution can yield positive outcomes such as growth and suggest potential correlates of the experience. The combined findings of the Park et al. (1996) and Tashiro and Frazier (2003) studies are critically important to the current study, which also seeks to investigate the factors related to positive outcomes of relationship dissolution (including growth).

Other Positive Outcomes Following Relationship Dissolution

While a vast amount of research has focused on negative outcomes of relationship dissolution such as distress, the Tashiro and Frazier study (2003) is the only study to date that has intentionally focused specifically on positive outcomes such as growth after relationship dissolution. A recent study conducted by DiBenedetto (2004) sought to build upon previous research (e.g. Park et al., 1996; Sprecher et al., 1998); Tashiro & Frazier, 2003) by investigating positive outcomes of relationship dissolution as they relate to the self. A study of 155 participants examined the relationship between

becoming more confident, learning better communication skills). Re-acquainting with the self refers to regaining aspects of the self that may have been lost while in the relationship. Self-improvement coping strategies include any positive coping actions that serve to better the self in some way, such as going to the gym.

Additionally, the relationship between positive dissolution outcomes and loss of self and utilizing denial coping strategies was investigated. Loss of self refers to feeling as though parts of the self have disappeared as a result of losing the relationship with the former partner. This notion stems from the self-expansion model which postulates that those in romantic relationships incorporate aspects of their partners into their sense of selves (Aron & Aron, 1996). If aspects of the self are included as part of the relationship, they could be lost if the relationship ends. Denial coping strategies are negative coping actions in which the person refuses to accept or acknowledge that the negative event has happened (Carver, Scheier, & Weintraub, 1989).

Findings from this study indicate that an enhanced sense of self, re-acquaintance with the self, and utilizing self-improvement coping strategies are significant predictors of positive emotions and growth. Loss of self was negatively correlated with both positive emotions and growth, and denial coping strategies were negatively correlated with positive emotions. Taken together, these findings provide further support for the notion that relationship dissolution can result in positive outcomes, specifically positive emotions and personal growth. Additionally, 31% of the participants reported anecdotally that they found that participating in the study made them feel better about the dissolution of their relationships (DiBenedetto, 2004). This suggests that processes following dissolution (such as answering questions about it) may facilitate positive outcomes such as positive emotions. Thus, it would be useful to devise a strategy specifically aimed at facilitating positive outcomes.

Writing About Traumatic Events

There is a large body of literature on the benefits of directed writing exercises following trauma (for a recent review see Pennebaker, 1997). The general format of traumatic writing studies involves having the experimental

traumatic writing studies have been conducted utilizing these two very similar paradigms. Such research has focused on a wide variety of topics, including graduate entrance exams (e.g. Lepore, 1997), transition to college (e.g. Pennebaker, Colder, & Sharp, 1990), and relationship dissolution (e.g. Lepore & Greenberg, 2002). Some studies did not specify a traumatic event, instead asking participants to write about what they perceived to be their most recent traumatic experience (e.g. Park & Blumberg, 2002).

All of these studies found that the traumatic writing group benefited in some significant way when compared to a control group who wrote about a superficial (non-traumatic) topic, especially in the area of health benefits. Additionally, writing about trauma has been found to alleviate intrusive thoughts (e.g. Lepore, 1997; Lepore & Greenberg, 2002), alleviate a variety of health symptoms (e.g. Pennebaker, 1997), and alleviate distress via finding meaning in the event (Park & Blumberg, 2002). Thus the trauma writing literature provides empirical support for the idea that writing about a traumatic event can yield a vast array of benefits. This demonstrates that writing about a traumatic event can have positive consequences, regardless of the nature of the event.

A recent pair of studies that demonstrate the positive effects of writing about trauma were conducted by Park and Blumberg (2002). Participants were asked to write about the most traumatic event they had experienced in their lives. On the first day of the experiment, prior to the writing manipulation, participants completed questionnaires assessing health, global meaning, and coping strategies. The questionnaires were again administered at the conclusion of the three day writing task. Questionnaires were also administered four months later to participants via mail (Park & Blumberg, 2002). In a second study, 44 participants were asked to identify the most traumatic event they had experienced, but were not asked to write about it. They then completed the same questionnaires used in the first study. The combined results of these two studies indicate that writing about a traumatic event may help participants find meaning in the event, and that writing helps alleviate stress and negative health outcomes, more so than simply identifying a traumatic event (Park & Blumberg, 2002).

assessed via a questionnaire administered at the conclusion of the experiment, again at the end of the semester, and again four months later. The positive emotions questionnaire assessed the extent to which the experiment had affected their mood. Results from this study indicate that the experimental participants required fewer physician visits than did those in the control group. Findings for grade point average and positive moods were mixed, with some experimental participants superior and others similar to the participants in the control group. Still, the results of this study provide more evidence of the positive health effects of writing about a traumatic experience (Pennebaker et al., 1990).

While both the Park and Blumberg (2002) and the Pennebaker et al. (1990) studies provide support for the benefits of writing about a traumatic experience, neither study looked specifically at the effects of writing about relationship dissolution. A study conducted by Lepore and Greenberg (2002) is the only study to date that has focused on this issue. The study consisted of 145 undergraduate college students who had experienced the break-up of a close relationship within the past year. Participants were mailed materials that instructed them to either write about their break-up 20 minutes a day for three consecutive days or to write about a superficial topic for the same period of time. Interviews were conducted over the telephone prior to the participants completing the writing task and again at the end of the three-day writing period. During the telephone interview, upper-respiratory health symptoms, mood, cognitive processing, and attitudes about the ex-partner were assessed using previously established measures of said variables (Lepore & Greenberg, 2002).

Findings from this study indicate that those in the experimental condition experienced less upper-respiratory health symptoms, tension, and fatigue than did the control group. Additionally, it was found that those in the experimental condition were more likely to reunite with their former partners. These findings suggest that writing about a break-up can yield both physical and social benefits (Lepore & Greenberg, 2002). While this study did not investigate positive emotions or personal growth, it did demonstrate a link between writing about dissolution and beneficial outcomes in the form of

emotions and personal growth in recently broken-up individuals? Despite the vast amount of literature on the topic of writing about trauma, no studies have investigated the possibility of a relationship between writing about trauma (in this case relationship dissolution) and positive outcomes such as positive emotions and personal growth.

The present experiment was developed based upon the aforementioned findings in the dissolution, post-traumatic growth, and traumatic writing literatures. Unfortunately, only one major study has focused solely on positive outcomes of relationship dissolution (Tashiro & Frazier, 2003). No study to date has investigated the possibility that writing about the break-up may impact emotional and personal outcomes. Only one major writing study has looked at relationship dissolution (Lepore & Greenberg, 2002). However, that study focused on the effects of writing about break-up on upper respiratory infections (Lepore & Greenberg, 2002). Additionally, no study to date has investigated the effects of writing on promoting positive outcomes following any traumatic event. Instead, previous work has focused on diminishing negative feelings.

Due to these shortcomings, the present study seeks to investigate whether writing about a break-up can facilitate positive emotions, personal growth, happiness, and life-satisfaction in a post-dissolution sample, while minimizing negative emotions. Thus the present experiment is the first to investigate both therapeutic writing and the promotion of positive outcomes following relationship dissolution.

Based upon the findings in other traumatic writing experiments (e.g. Park & Blumberg, 2002), the present study will test the following hypotheses:

- 1) Participants in both the negative and positive conditions will report less negative emotions and more positive emotions, growth, happiness, and life satisfaction than the control group at the third day posttest.
- 2) Participants in the positive condition will report more positive emotions, growth, happiness, and life satisfaction than the negative condition and will report greater increases in these same variables than the negative condition.

The negative condition hypotheses seem likely considering previous

Participants

The study contained 43 participants (10 males, 33 females) from a private university in the Northeast. The sample ranged in age from 18 to 40, with a mean age of 20.5. Of the 43 participants, 86% identified themselves as Caucasian, 4.7% identified themselves as African American, 2.3% identified themselves as Hispanic or Latino, 2.3% identified themselves as Eastern or Asian and 4.7% identified as "Other.". The majority (62%) of the participants were freshmen, 9.3% were sophomores, 20.9% were juniors, and 7% were seniors. On average, participants had experienced the break-up within the past 16.6 weeks. The average relationship length prior to dissolution was approximately 93.4 weeks. The participants were obtained through the participant pool and received class credit for their participation.

Materials

Positive Emotions Scale. A 20 item positive emotions scale, developed from the five item scale used by Sprecher et al. (1998), was used to measure the extent to which participants had experienced positive emotions after the dissolution. The fifteen added emotions were calm, comforted, competent, confident, empowered, energized, free, fulfilled, hopeful, optimistic, pleased, relaxed, strong, thankful, thrilled, and wise. Love, an item used in the original scale, was omitted from this version. Each item was measured on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely). Emotions such as content, free, fulfilled, relaxed, strong, and wise were listed. Alpha in the pretest = .94. Alpha in the posttest = .97.

Growth Scale. Post-dissolution growth was measured using a 15 item scale (adapted from Tashiro & Frazier, 2003). Commonly occurring responses to the open-ended growth item in the Tashiro and Frazier (2003) were modified slightly to fit into a Likert scale format. Participants were asked to indicate the extent to which they had experienced each instance of growth on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely). Example items include "I have grown as a person," and "I am more goal oriented." Alpha in the pretest = .88. Alpha in the posttest = .94.

Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). This is a previously established, four item scale that measures happiness. Each item

in the posttest = .90.

Satisfaction With Life Scale (Diener, Emmons, & Larsen, 1985). This is a previously established scale that measures life satisfaction. Participants were asked to indicate the extent to which they agree or disagree with each of five statements. Sample items include “In most ways, my life is close to my ideal” and “I am satisfied with my life.” Each item is measured on a seven point Likert scale ranging from 1 (not at all) to 7 (extremely). Alpha in the pretest = .85. Alpha in the posttest = .89.

Negative Emotion Scale. An 18 item scale, developed from the nine item scale used by Sprecher et al. (1998), was used to measure the extent to which participants have experienced negative emotions post-dissolution. The ten items added to the original scale are: exhausted, traumatized, empty, anxious, confused, rejected, betrayed, bored, indifferent, and dissatisfied. For the purposes of this study, “guilt,” an item used in the original scale, was omitted. Participants are asked to indicate the extent to which they have experienced each emotion since the break-up of their relationship. Each item is measured on a 7-point Likert scale ranging from 1 (not at all) to 7 (extremely). Alpha in the pretest = .94. Alpha in the posttest = .96.

Design

Participants were randomly assigned to a condition based on a code circled on the last page of the day one pretest packet. There were three levels of the independent variable in this experiment. One condition was asked to write about the positive aspects of their break-up, the second was asked to write about the negative aspects of their break-up, and the third was a control group asked to write about an unrelated topic. One experimental condition asked participants to write about their negative thoughts and feelings related to the break-up; the other asked participants to write about their positive thoughts and feelings related to the break-up. The control group was instructed to write about a superficial non-traumatic topic (e.g. cohabitation in the dorms). There were four dependent variables in this experiment: growth, positive emotions, life satisfaction, happiness, and negative emotions. Changes in these variables were measured by administering a questionnaire on the first day of the experiment and again on the third day of

1998), negative emotions scale (Sprecher et al., 1998), growth scale (Tashiro and Frazier, 2003), subjective happiness scale (Lyubomirsky & Lepper, 1999), and a life-satisfaction scale (Diener et al., 1985). After completing the initial questionnaire, participants were randomly assigned to one of the three conditions based on a code circled on the last page of the pre-test questionnaire packet. Participants were then given instructions and writing materials that instructed them to write (on their randomly assigned topic) for 20 minutes a day in a place of their choosing for three consecutive days, beginning with the day of the initial appointment.

Positive Condition Writing Manipulation. Participants randomly assigned to the positive condition were instructed at the beginning of each writing task as follows: “We want you to let go and write about your deepest thoughts and positive feelings about the relationship that ended. The important thing is that you dig down into your deepest positive emotions and explore them in your writing. Do not worry about grammar and spelling.” The day one writing task asked participants to, “Write down the events and factors that you think led up to your breakup and about the actual breakup.” The day two writing task asked participants to, “Write about the aftermath of the breakup a few days after it happened.” The day three writing task asked participants to, “Write about the aftermath of the breakup a few weeks after it happened.”

Negative Condition Writing Manipulation. Participants randomly assigned to the negative condition were instructed at the beginning of each writing task as follows: “We want you to let go and write about your deepest thoughts and negative feelings about the relationship that ended. The important thing is that you dig down into your deepest negative emotions and explore them in your writing. Do not worry about grammar and spelling.” The day one writing task asked participants to, “Write down the events and factors that you think led up to your breakup and about the actual breakup.” The day two writing task asked participants to, “Write about the aftermath of the breakup a few days after it happened.” The day three writing task asked participants to, “Write about the aftermath of the breakup a few weeks after it happened.”

materials, even though this may offend some students' religious views?" The day two writing task asked participants to write about the following topic: "Should men and women be allowed to cohabit in the same dormitory or dormitory room?" The day three writing task asked participants to write about the following topic: "Should college students and professors be allowed to date?"

At the end of the three-day period, participants returned to the lab to complete the second part of the study. When they returned, participants deposited their writing materials in a box, and completed the same questionnaire packet administered on day one. Both parts of the study were always administered within the same week so that participants with Monday start dates returned their materials and completed the questionnaire during specified time periods on Thursdays. Participants with Tuesday start dates returned their materials and completed the questionnaire during specified time periods on Fridays. This experimental method is consistent with the writing paradigm suggested by Pennebaker (1997) and utilized by a variety of writing studies (e.g. Lepore, 1997; Lepore & Greenberg, 2002; Park & Blumberg, 2002; Pennebaker et al., 1990).

Results

Means and standard deviations for all key variables by condition are shown in Table 1.

Differences in Growth. A one-way analysis of variance comparing the influence of writing task condition (positive, negative, control) on growth was conducted. The results of this analysis were not significant, $F(2,40) .56$, $p = .57$. To determine if differences exist between sets of conditions several contrasts were conducted. The first contrast compared the positive writing condition to the negative writing condition on growth. The results of this analysis were not significant ($p = .80$). The second contrast compared the negative writing condition to the neutral writing condition on growth. The results of this analysis were not significant ($p = .33$). The third contrast compared the positive writing condition to the neutral writing condition on growth. The results of this analysis were not significant ($p = .42$). Taken together, these findings indicate that the writing conditions did not result in

contrast compared the positive writing condition to the negative writing condition on positive emotions. The results of this analysis were not significant ($p = .50$). The second contrast compared the negative writing condition to the neutral writing condition on positive emotions. The results of this analysis were significant ($p = .004$), indicating that participants in the negative condition reported a greater increase in positive emotions from pretest to posttest than those in the control condition. The third contrast compared the positive writing condition to the neutral writing condition on positive emotions. The results of this analysis were significant ($p = .000$), indicating that participants in the positive condition reported greater increases in positive emotions from pretest to posttest than those in the control condition. Taken together, these findings indicate that the experimental writing conditions resulted in greater increases in positive emotions scores from the pretest to posttest than did the control condition.

Differences in Life Satisfaction. A one-way analysis of variance comparing the influence of writing task condition (positive, negative, control) on life satisfaction was conducted. The results of this analysis were not significant, $F(2,40) .24, p = .79$. To determine if differences exist between sets of conditions several contrasts were conducted. The first contrast compared the positive writing condition to the negative writing condition on life satisfaction. The results of this analysis were not significant ($p = .51$). The second contrast compared the negative writing condition to the neutral writing condition on life satisfaction. The results of this analysis were not significant ($p = .82$). The third contrast compared the positive writing condition to the neutral writing condition on life satisfaction. The results of this analysis were not significant ($p = .66$). Taken together, these findings indicate that the writing conditions did not result in any changes in life satisfaction scores from the pretest to posttest.

Differences in Happiness. A one-way analysis of variance comparing the influence of writing task condition (positive, negative, control) on happiness was conducted. The results of this analysis were not significant, $F(2,40) .24, p = .79$. To determine if differences exist between sets of conditions several contrasts were conducted. The first contrast compared the

.84). Taken together, these findings indicate that the writing conditions did not result in any changes in happiness scores from the pretest to posttest.

Differences in Negative Emotions. A one-way analysis of variance comparing the influence of writing task condition (positive, negative, control) on negative emotions was conducted. The results of this analysis were not significant, $F(2,40) .27, p = .08$. To determine if differences exist between sets of conditions several contrasts were conducted. The first contrast compared the positive writing condition to the negative writing condition on negative emotions. The results of this analysis were significant ($p = .03$), indicating that participants in the positive condition experienced a greater decrease in negative emotions from pretest to posttest than those in the negative condition. The second contrast compared the negative writing condition to the neutral writing condition on negative emotions. The results of this analysis were not significant ($p = .14$). The third contrast compared the positive writing condition to the neutral writing condition on negative emotions. The results of this analysis were not significant ($p = .43$). Taken together, these findings indicate that the positive writing condition was correlated with a decrease in negative emotions when compared to the negative condition. However, this trend was not significant when compared to the control group. Additionally, there were no significant differences on third day negative emotions scores between the negative and control conditions

Discussion

The hypotheses related to positive emotions were partially supported, specifically in the context of participant's emotional experience. Both the positive and negative writing conditions reported greater increases than the control condition in positive emotions from pretest to posttest. This finding is not surprising, given the vast amount of literature supporting the benefits of writing about stressful experiences (e.g. Park & Blumberg, 2002; Pennebaker et al., 1990). This is the first study to date to obtain such results by utilizing a positive writing condition.

There was not a significant difference between the positive and negative conditions in positive emotions at third day posttest. This finding

not all, of these hypotheses were supported. Participants in the positive writing condition reported a greater decrease in negative emotions from pretest to posttest than the negative writing condition. This finding is not surprising in light of previous research that has highlighted the beneficial effects of writing about relationship dissolution (e.g. Lepore & Greenberg, 2002). However, these findings expand and build upon previous research significantly in that this is the first study that has investigated the effects of a positive writing condition.

Additionally, there was no significant difference between either the positive or negative and control conditions in negative emotions. However, there was a trend that indicated that only the negative condition experienced an increase (though not a significant increase) in negative emotions at the third day posttest. This finding is perplexing, given the vast amount of evidence in the writing literature for the benefits of writing about a stressful event (e.g. Pennebaker, 1997). This finding may indicate that positive writing may lead to greater benefits than the traditional negative writing paradigm. These findings indicate that writing about the positive aspects of the dissolution experience will result in a greater decrease in negative emotions (as well as a greater increase in positive emotions) than writing about the negative aspects of the dissolution experience.

The remaining findings indicate that the hypotheses related to growth, happiness, and life satisfaction were not supported. This could be attributed to a variety of causes. In the case of life satisfaction, the small sample size and resulting lack of statistical power may have resulted in an inability to detect a difference between conditions. Therefore future research should be conducted investigating the potential effects of writing interventions on life satisfaction and should utilize a larger sample.

Alternatively, it is possible that growth and happiness may not be influenced by directed writing exercises. Increases in growth, for instance, may require a stronger, more action-oriented intervention than a three-day writing exercise can provide. Since research has shown that growth can occur post-dissolution (e.g. Tashiro & Frazier, 2003), future research should investigate what kinds of interventions can facilitate this reaction. An

presents a possible avenue for future research.

The greatest limitation of this study was its small, mostly homogenous sample. The small sample size ($N=43$) limited the statistical power of the analyses. Therefore, while some trends could be detected, there was not enough power to determine the significance of the relationship. Additionally, the sample was disproportionately female (76.7%), which could have skewed the results. Additionally, the sample was disproportionately Caucasian, resulting in a lack of ethnic diversity in the sample and affecting the study's ability to generalize beyond the white female college student population. Future research should be conducted with a more diverse sample so findings could have implications beyond the white, female population.

The present study also had some significant strengths. Most notably, the present study was the first to investigate the potential benefits of a positive writing condition. Additionally, this study was the first to focus on positive and negative emotion variables. The present study was also only the second study to date to investigate the effects of directed writing exercises on relationship dissolution outcomes. The three-day design of the study adhered to the preciously established traumatic writing paradigm (Pennebaker et al., 1997) and is thus comparable to other research done in this area.

A significant amount of future research should focus on the effects of positive directed writing exercises. As this study was the first to investigate the effects of a positive writing manipulation, more research is needed to determine the usefulness of such an intervention. Future research should focus on the potential effects of positive writing conditions on variables previously investigated in relation to the traditional negative writing conditions. For example, the effects positive writing exercises may have on health and physician visits should be investigated. Additionally, the effects on factors such as mood and stress should also be considered. Because this particular type of directed writing exercise has not been researched previously, opportunities for future research abound.

The present study sought to build upon previous dissolution and writing research by implementing directed writing exercises in a population that had recently experienced dissolution. The findings indicate that directed

one other study has investigated the effects of directed writing exercises on dissolution outcomes (Lepore & Greenberg, 2002), significantly more research should be conducted in this area.

- Aron, A. & Aron, E.N. (1996). Self and self-expansion in relationships. In G.J.O. Fletcher & J. Fitness (Eds.), *Knowledge structures in close relationships: A social psychological perspective* (pp. 325-244). Mahwah, NJ: Erlbaum.
- Caplan, G. (1964). *Principles of preventative psychiatry*. New York: Basic Books.
- Calhoun, L. G., Cann, A., Tedeschi, R. G., & McMillan, J. (2000). A correlational test of the relationship between post-traumatic growth, religion, and cognitive processing. *Journal of Traumatic Stress, 13*, 521-527.
- Carver, C., Scheier, M., & Weintraub, J. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267-283.
- DiBenedetto, N. M. (2004). Break-ups can be good for you; Positive emotions and growth following relationship dissolution. Unpublished senior thesis, Monmouth University, West Long Branch, New Jersey.
- Diener, E., Emmons, R., & Larsen, J. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71-75.
- Frazier, P. A., & Cook, S. W. (1993). Correlates of distress following heterosexual relationship dissolution. *Journal of Social and Personal Relationships, 10*, 55-67.
- Lepore, S. J., & Greenberg, M. A. (2002). Mending broken hearts: Effects of expressive writing on mood, cognitive processing, social adjustment, and health following a relationship break-up. *Psychology and Health, 17*, 546-560.
- Lepore, S. J. (1997). Expressive writing moderates the relation between intrusive thoughts and depressive symptoms. *Journal of Personality and Social Psychology, 73*, 1030-1037.
- Lyubomirsky, S. & Lepper, H. (1999). A measure of subjective happiness: Preliminary reliability and construct validity. *Journal of Personality and Social Psychology, 46*, 137-155.
- McMillen, J. C., & Fisher, R. H. (1998). The perceived benefit scales:

- of stress-related growth. *Journal of Personality*, 64, 71-105.
- Park, C. L., & Cohen, L. H. (1993). Religious and nonreligious coping with the death of a friend. *Cognitive Therapy and Research*, 17, 561-577.
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8, 162-166.
- Pennebaker, J. W. (1990). Accelerating the Coping Process. *Journal of Personality and Social Psychology*, 58, 528-537.
- Schafer, J., & Moos, R. (1992). Life crises and personal growth. In B. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 149-170). Westport, CT: Praeger.
- Simpson, J. A. (1987). The dissolution of romantic relationships: Factors involved in relationship stability and emotional distress. *Journal of Personality and Social Psychology*, 53, 683-692.
- Sprecher, S., Felmlee, D., Metts, S., Fehr, B., & Vanni, D. (1998). Factors associated with distress following the break-up of a close relationship. *Journal of Social and Personal Relationships*, 15, 791-809.
- Tashiro, T., & Frazier, P. (2003). "I'll never be in a relationship like that again": Personal growth following romantic relationship break-ups. *Personal Relationships*, 10, 113-128.
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.) (1998). *Post-traumatic growth: Positive changes in the aftermath of crisis*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The post-traumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455-472.
- Thompson, S. C. (1985). Finding positive meaning in a stressful event and coping. *Basic and Applied Social Psychology*, 6, 279-296.

	Positive Writing Condition	Negative Writing Condition	Control Writing Condition	<i>N</i>
Positive emotions	.44 ^A (.61)	.30 ^B (.56)	-.40 ^{AB} (.56)	43
Growth	.16 ^A (.61)	.22 ^B (.62)	.00 ^C (.38)	43
Happiness	.07 ^A (.50)	.21 ^B (.64)	.11 ^C (.53)	43
Life satisfaction	.26 ^A (.72)	.10 ^B (.65)	.16 ^C (.48)	43
Negative emotions	-.37 ^A (.92)	.27 ^A (.56)	-.16 ^B (.62)	43

Note: Means with superscripts in common are significantly different.