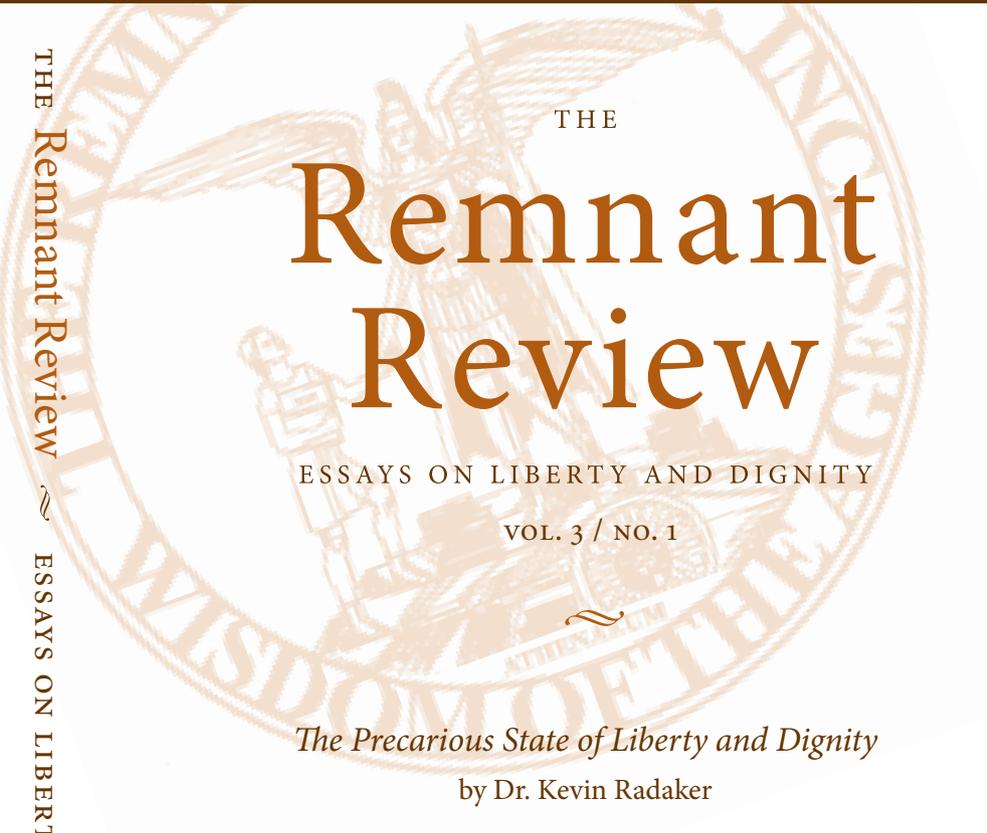


THE Remnant Review



ESSAYS ON LIBERTY AND DIGNITY

VOL. 3/NO. 1



THE  
Remnant  
Review

ESSAYS ON LIBERTY AND DIGNITY

VOL. 3 / NO. 1



*The Precarious State of Liberty and Dignity*

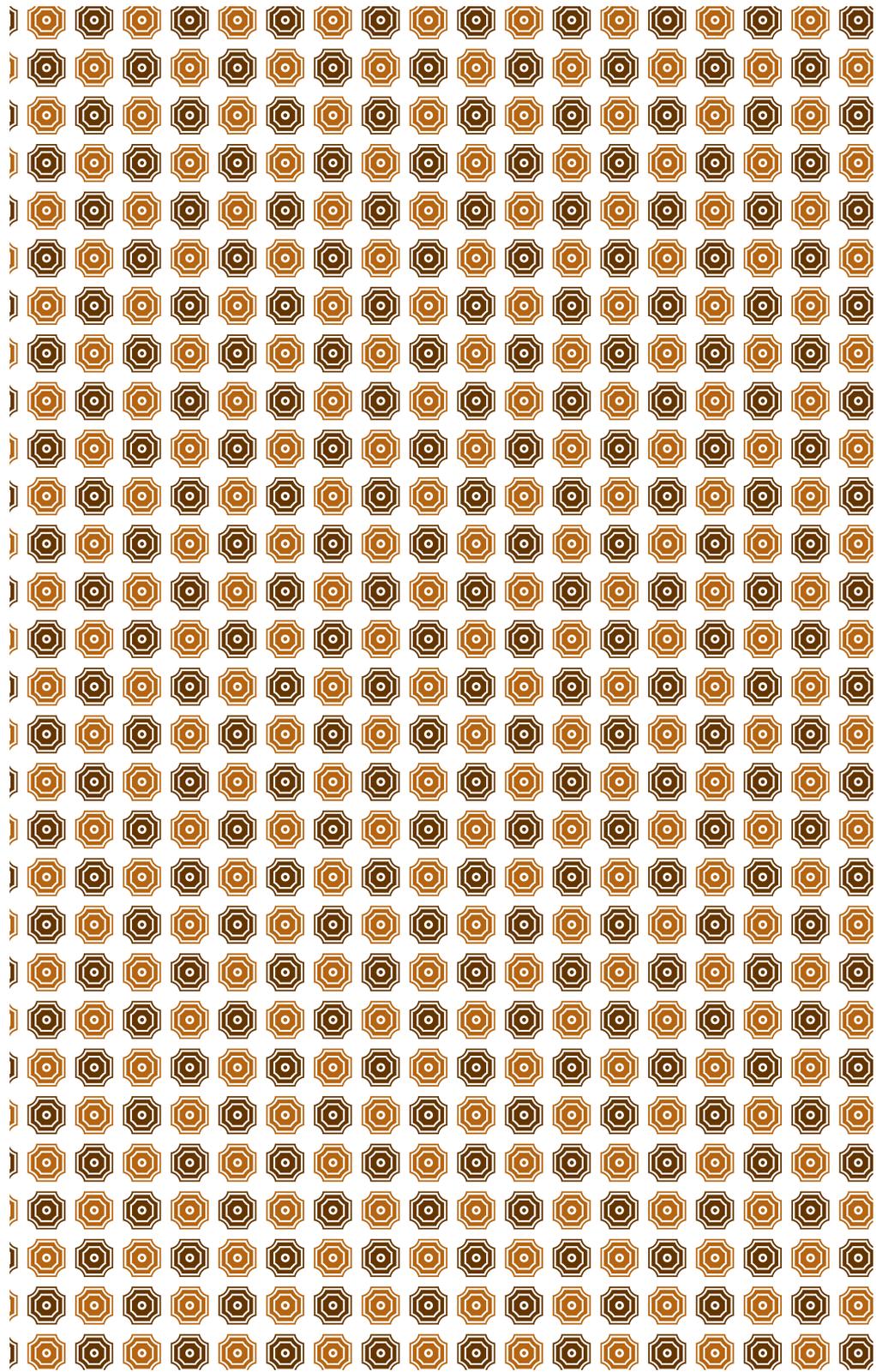
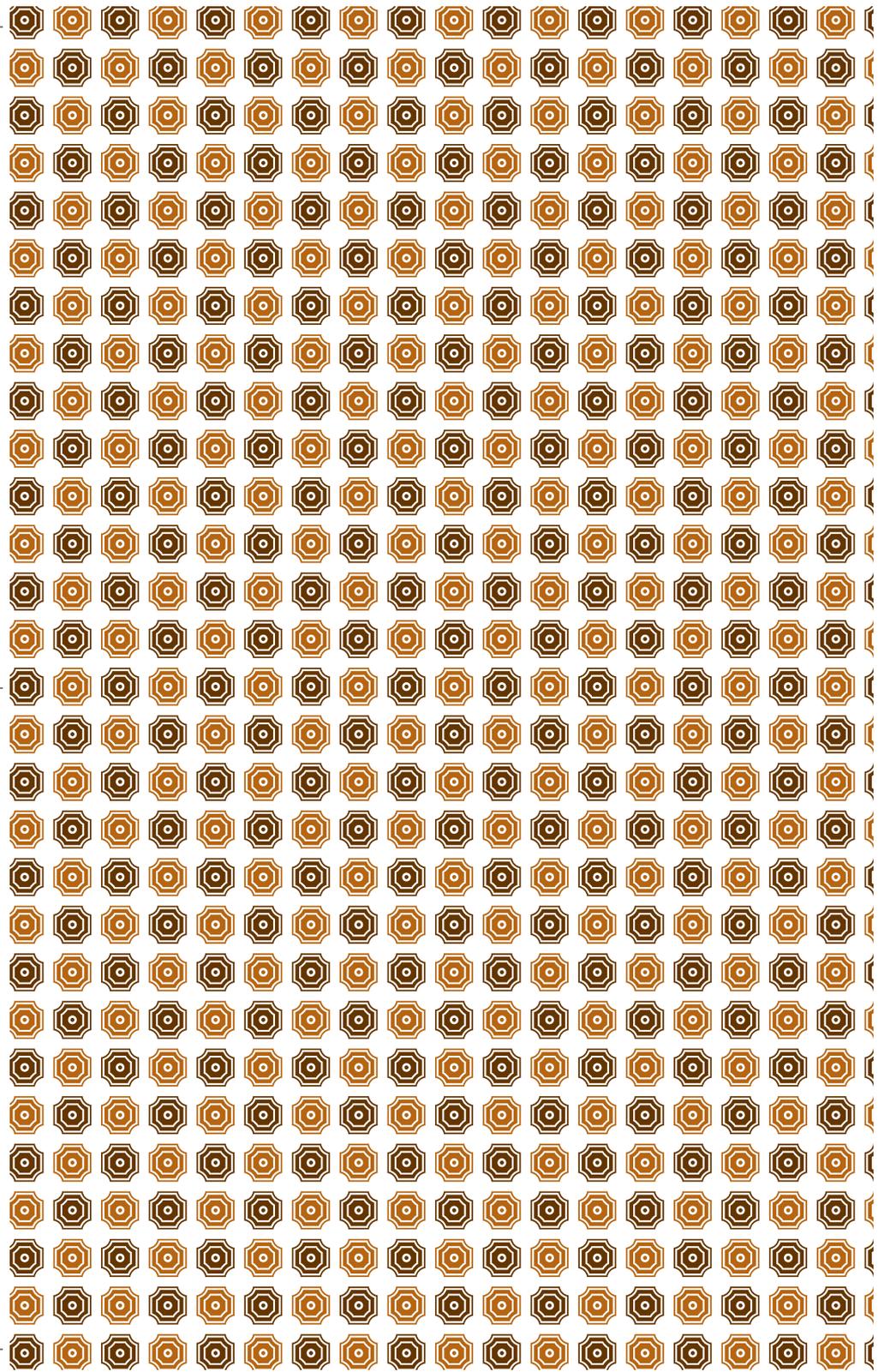
by Dr. Kevin Radaker

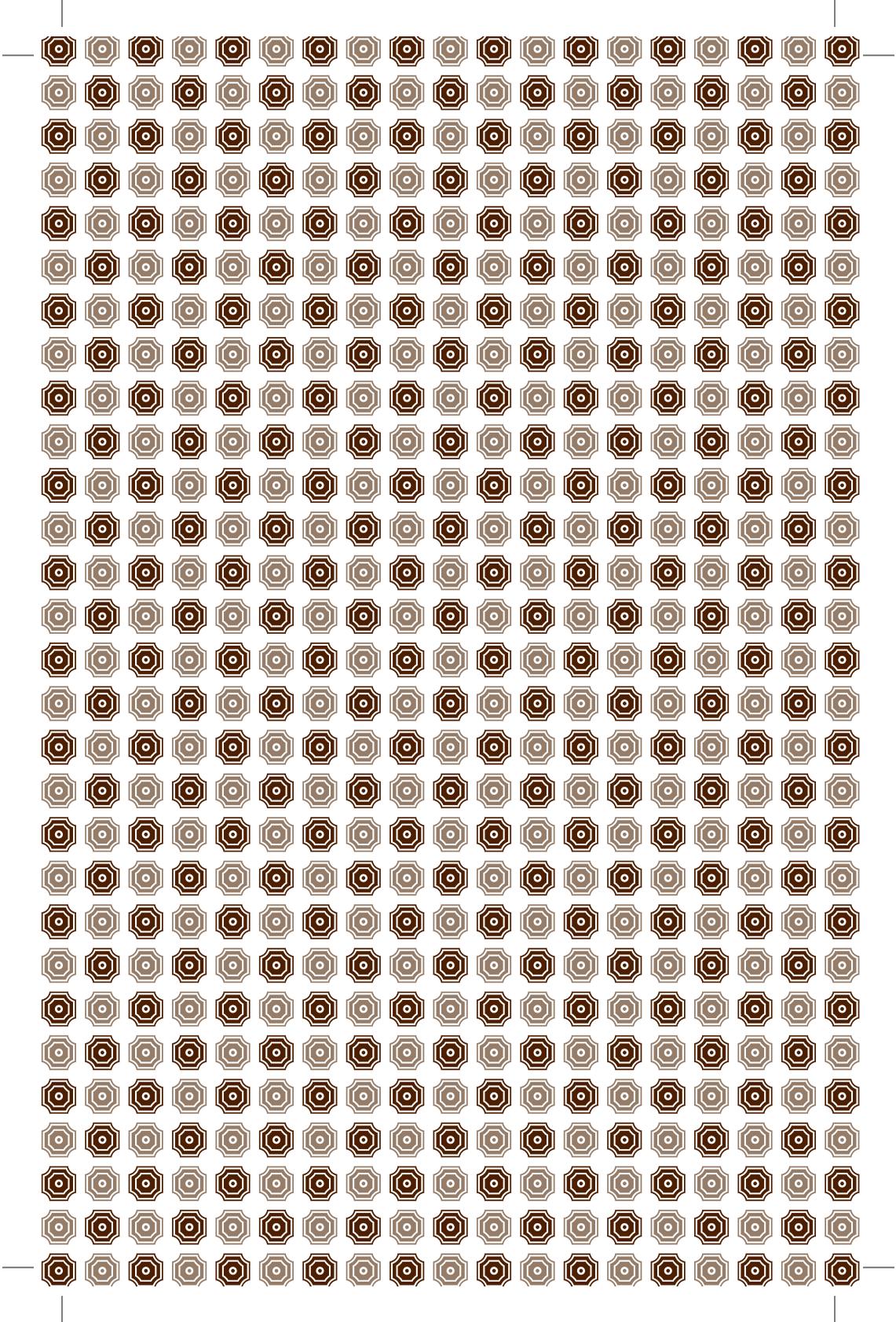
*Newton's Reach*

by Timothy Ferris

*The Right to Ignore the State*

by Herbert Spencer







Inquiries should be directed to:      Editor, The Remnant Review  
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Submissions are accepted at the above address, but are preferred in digital format. Articles can range from 10 to 25 double spaced pages, including end notes. End notes and underlining are preferred. Please email submissions to [info@theremnanttrust.com](mailto:info@theremnanttrust.com) Manuscripts are not returned unless envelope and postage are provided for same.

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Disclaimer:

The articles in The Remnant Review do not represent any consensus of beliefs. We do not expect that readers will sympathize with all the sentiments they find here, for some of our writers will flatly disagree with others; but we hold that The Remnant Review can do more to inform public opinion by a broad hospitality to divergent ideas than it can by identifying itself with one school. We do not accept responsibility for the views expressed in any article, signed or unsigned, that appears in these pages. What we do accept is the responsibility for giving them a chance to appear.

The Editors



## EDITORS NOTE ISSUE 3

Welcome back. I think we have made many strides since our first issue. We have tried to take much criticism to heart. I feel there are still more things to improve but many less than in the previous issue.

This issue covers many fields of inquiry. The Boccaccio piece we feel is interesting as we (The Trust) have chosen Athena / Minerva as the main symbol for our seal. The Emerson piece, many in The Trust think of as our founding document. Please note that we make every effort to not change articles from the form which we receive. Emphasis, bold or otherwise, is that of the authors.

KB March 2007

This issue of The Remnant Review, like the inaugural issue contains articles addressing the subjects of “liberty” and “dignity”, but I would like to address the reader’s attention to the Reese article, “The Rare Book Market Today.” The Remnant Trust is a very active player in the rare book market and this article discusses a topic not regularly addressed. The acquisitions of rare books is central to the activities of the Remnant Trust and the Reese article illuminates some of the practical issues involved in the creation of the Trust collection. While it may not be purely academic we feel it will be interesting to our readership.

The purpose of the articles presented here is to provoke thought and discussion amongst our readership. We, the editors, would encourage anyone reading this issue to provide feedback. We also welcome submissions from the readership. Students, both graduate and undergraduate, are especially encouraged to submit articles that concern the topics of “liberty” and “dignity.”

RH April 2006



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## **The Remnant Trust, Inc.**

### **Mission Statement**

The mission of The Remnant Trust is to elevate educational standards & the public's understanding of individual liberty & human dignity through the precedent setting, hands on availability of the world's great ideas in original form...To raise consciousness of the most significant documents that have shaped America: The Great Experiment...to raise the spirits of each generation to think the grandest thoughts & be guided by the most profound idealism, implementing Emerson's thesis on Man Thinking...to provide, through sharing, those works moving Goethe's vision into reality: to think is easy, to act is hard, but the hardest thing in the world is to act in accordance with one's thinking...to be the world's finest repository of the great ideas that have propelled Man through the centuries from the earth to the stars...to be free, to think, speak & act in keeping with the greatest of enduring assets: Reason, with justice for all...Great ideas belong to everyone.





## ARTICLES



Temporal Chauvinism: Radical Interpretations of  
Contemporary Society

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by

Donald S. Prudlo  
Assistant Professor of History  
Jacksonville State University

Several years ago the good people at Philips/Magnavox employed the lyrical talents of the late John Lennon to broadcast the message “It’s getting better all the time” into our living rooms. Such content was surely meant to convey the ever-increasing range of features and value found in their electronic products. That Lennon’s estate did not feel compromised by such a commercial application of his lyrics is comforting to say the least. But the former Beatle was surely not thinking of pushing video players when he penned these words. Indeed the original song was a paean to the freeing power of love and it had an ironic ending. However ends and purposes have never been forefront in the minds of marketeers. Instead I wish to point out that the advertising campaign gives voice to one side of a pervasive trend in society, one that I call temporal chauvinism.

By this term I wish to indicate a position that advocates either of two extremes. On one hand those may be called

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*Donald S. Prudlo*

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temporal chauvinists who constantly advocate the perpetual improvement of society. This position is characterized by an evolutionary view of the human condition whereby the race is continually becoming better. Such a view is relatively new and largely a product of the Enlightenment. The second set of presuppositions to which temporal chauvinism may be applied are those who see humanity rushing down a steep slope to its own destruction. Those who hold a form of this belief find themselves at odds with society, sometimes withdrawing from it completely. To them humanity is a depraved mass which grows worse with each passing year. Though this form of temporal chauvinism has a much longer genealogy than the positive type, the purpose of this article is to show that both streams are really inimical to the heart of Western Civilization, and they both try to lead it in directions away from its true center.

### **-The Optimists-**

Most in evidence in contemporary society are the “besters.” In many different walks of life there are those who believe in the continual improvement of humanity. The opening example lays bare one of the main communities who hold to perpetual progress: the technologists. For these people technology will be the panacea for the amelioration of society’s ills. With the advent of faster computers, better lasers, and cheaper manufacturing methods there will come the virtual elimination of suffering and poverty. Such is their implied belief. While I too am confident in the ability of science and technology to overcome difficult obstacles set in our way by nature and design, many let this confidence slip over into that

irreducible factor of existence, humanity itself. This is where technologism slips into science fiction. The ideal world of those clever and witty people who inhabit the message boards of open-source communities is displayed in all its splendor in the Star Trek universe: no money, universal peace (to the enlightened insiders), and the continual effort to eliminate sources of suffering and discord.

Such a worldview encompasses the central tenets of the evolutionary thesis. Through a process of adaptation and natural selection, humans too are evolving, some say. Many who today espouse ideals of technology and evolutionism forget the very real activities of “Social Darwinism” throughout the history of the twentieth century. Since today’s society exhibits at least the patina of concern and compassion for the downtrodden, many are quick to forget that the nightmares of Nazism and Communism were all experiments in societal control over the weak and presumed valueless members of society. Indeed there are many areas of American history which do not reflect favorably on the humane treatment of the marginalized.

The generation which grew up in the prosperous eighties and even more prosperous nineties is, as a group, optimistic. I will not say mindless optimists as they have a strong streak of realism and intolerance of hypocrisy. However they have been affected by the endless technical improvements in their lives and the robustness of an ever expanding economy (enough to produce optimism in any generation). The events of September 11 have dimmed this somewhat, as analogous disasters in the past have tempered the optimism of preceding generations.

The historical and philosophical roots of this “half-full and getting fuller” view of the human condition predate evolutionary thought. Most concretely they can be traced to Rousseau’s idyllic vision of man in his primitive state, and especially to the vulgarization of his views spread during the French Revolution. The French thinker’s “Noble Savage” has been an image indelibly printed on the consciousness of the west and endlessly cited by defenders of indigenous and primitive ways of life. If we would but strip away the accretions of civilization and the hampering effects of society we would find man in a non-religious Eden. Such musings served to inspire the chief thinkers of the Enlightenment in their ascription of regenerative powers to reason. They contributed in no small way to a philosophy of autonomy, such as in Jefferson’s “illimitable freedom of the human mind.” For the Enlightenment reason was the “technology” of the day. Cleansed and purified from rituals and monkish shackles, it would return humanity to its noble estate, raising it from the mire of superstition and enthroning it in “Pure Reason.”

Such thinking, the possession of the elite in the eighteenth century, had a trickle down effect into the nineteenth. It embedded itself in the whiggish histories of the time. These read as if all the world was waiting for the advent of nineteenth-century Europe, and they saw a pattern that inevitably led to making everyone in the image and likeness of 1850 London or Berlin. The dominance of Anglo-Saxon Protestantism was seen as the crowning achievement of civilization, and it was the “White Man’s Burden” to bring its insights to the benighted peoples of the world. The whiggish historians proceeded from the quite plausible (to them) premise that the course of human history proceeded in a direct line, reaching its pin-

nacle in themselves. That is certainly optimistic history.

Optimistic ideas again filtered down and reached these shores in the full bloom of the Gilded Age. America, always late to embrace European fashions, latched onto that particular form of religious optimism known as Post-Millennialism. In this scheme Christ would not come in glory until we had established His prosperous millennial kingdom right here on earth and by our own efforts. The United States had come through a religiously tense and uncertain time of millennial expectation during the 1830's and 1840's. The sense of impending doom was palpable, and the national conflagration of the Civil War brought many of these spiritual issues to a head. In the later atmosphere of progress, detachment from southern values, and economic prosperity that followed the war in the north, most prominent evangelicals latched onto the notion of Post-Millennialism. America was God's chosen land, they preached. This was manifested by the great prosperity of its people and its victory over slavery. Self-satisfaction was the Christian order of the day and in no small way did it contribute to the prevailing notion of America as God's elect people. Here was a novel thing: Christian religious optimism. Notions like sin and suffering became marginalized. God's kingdom was coming on earth, in America. It was our manifest destiny.

Whatever remnants of Enlightenment optimism which Nietzsche didn't excise with his pen, the killing fields of Flanders finished off. The gilded age's onrushing cult of progress charged directly into the machine guns of Ypres, and collective optimism found its grave. The twenties and thirties were periods of wandering and aimlessness in religion, philosophy, and in society-at-large. Optimism faded from the radar.

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While Reinhold Niebhur was slaying the last remaining dragons of religious optimism, communism and the Holocaust stood as titanic challenges to the Enlightenment ideal of the supremacy of reason.

Today optimism lives again, but it is a facile character compared to the overarching schemes of old. Today it is an optimism which seeks to alleviate conflict by removing meaning, and in so doing to create an “ideal society.” Why do I take so much time in detailing a malady which few if any conservatives ever experience? First I do it to show the transience of such idealistic optimism in the past. More so though, I present it as a foil to the next intellectual illness which plagues conservatives of many stripes: the pervasive attitude of pessimism which afflicts those who today see the grave wounds inflicted on western society.

#### **-The Pessimists-**

Sentiments that the world is going to the dogs have a much more respectable historical pedigree than excessive optimism. This alone should demonstrate that it is far more natural to have feelings of pessimism about the conditions of human society. A quick reading of the book of Ecclesiastes should be enough to cure the most convinced “bester” and demonstrate the historical longevity of the opposite attitude. The feelings of each generation that views with a jaundiced eye the development of its own youth is again testimony to the enduring belief in cultural digression. All young people, be they Egyptian, Roman, medieval, or Gen X, seem always to be viewed by their parents and grandparents as treading the path to ruin.

As a unified system of beliefs, systematic pessimism has been complemented by all the manifestations of dualist thought throughout history. When one radically separates the sensible world from the spiritual, and invests the former as the absolute expression of evil, pessimism about society, family, and the world itself are inevitable. I contend that every system that seeks to determine that society, or the progress of history, is indubitably getting worse all the time, is infected with latent dualism.

Such attitudes as dualism encourage the flight from society. Culture and one's fellow men, for a dualist, represent only obstacles. Whether one is fleeing from sin, incarnated evil, or the general baseness of everyday life, one can find refuge in the intellectually easy belief of dualism. "I must remove myself from these sinners" becomes both a mantra and an asylum for those who will not take the time to heal themselves or who manifest a cowardly reluctance to improve society. I do not speak of those individuals who left humanity for the sake of humanity, such as those who fled to the sanctuary of the monastery or who heroically gave their life on the battlefield. Instead these individuals represent what is best in human nature and exhibit a profound hope in the possibilities and ends of human existence. It must be remembered that many times the monastic population has been the conservator of tradition and culture and not their enemies. Even apart from the "creeping dualism" of the "worsters" one can clearly discern times where it has appeared hopeless and lost, and we can reflect on the actions of those who lived at the time as a mirror for the present.

Even the casual student of history cannot fail to take note of the moments in the past which have appeared as the low-

est points of western civilization. How could the Greek city-states possibly withstand the Persian colossus from the east? How could the world recover from the fall of Roman order? How could the west stand against a raging Muslim host, streaming across the Mediterranean, taking Spain, sacking Rome? When Europe sought to tear itself apart religiously or intellectually (or merely by the current experiment of collective amnesia), while these were indeed events of shattering importance and moment, nevertheless we have survived them. Men who lived at these times must have also thought the end was near.

Through the Medieval period the Christian Church, together with the state, fought against dualism and, in so doing, reaffirmed the goodness of such things as human society, marriage, and the fruits of the earth. Protestantism, in attempting to react correctly against an unfortunate imbalance in late Medieval theology, unwittingly reopened the door for radical dualism. The coming of the forensic imputation theory of justification laid primary emphasis on the sovereignty and prerogatives of God. It had the unfortunate effect of removing from the human actor much moral culpability and emphasis on virtue which had been the cornerstone of western ethical thought. For Protestant thinkers humans had become utterly depraved. Medievals had called on their contemporaries to rectify and correct the pervasive sinfulness in society. For the Protestant divines, however, sin and the human condition became something to despair about and, in doing so, to receive external justification. In some cases this led to the denigration of natural goods themselves, which one can see in the puritan attitudes toward sexuality, French Jansenist positions on sacramental participation, and the endless nineteenth cen-

tury temperance campaigns against “demon rum.”

It was attitudes such as these that led to the formation of groups dedicated to fleeing from society which was so rapidly headed towards ruin. Such was the desire of the Mayflower passengers, who sought to flee a Europe about to tear itself to pieces in religious conflict. Similar groups with far different ideas formed the many “perfectionist” communities in the American North before the Civil War. Many such groups made up of those who wish to abandon society to its own failings can still be found today. Witness the many militantly anti-government groups that have sprung up around the country. The willingness, and even eagerness, of many to prepare for the Y2K non-event signals a profound dissatisfaction in contemporary society that hearkens back to biblical calls for immediate and profound chastisement of the existing order. Such attitudes dehumanize us since they often go hand in hand with inaction. By abandoning our privilege of personal responsibility and free will we give away the power to make that which we have been given *better*.

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Repeatedly through history there have been both those who mourned the passing of old orders and those who heralded a new dawn. Those who mourned are largely forgotten, but those who gave robust defense at the ramparts of our collective cultural inheritance live on. J.R.R. Tolkien once characterized history as a “long defeat.” This surely sounds pessimistic, but in the context of his thought one sees his thrust. He is alluding to the repeated heroic actions of a select rearguard, never giving in, bending but not breaking. Tolkien’s “long defeat” precludes the short defeat expected by the “worsters” and carries within it that essential note of hope so necessary to the heart of Western Civilization.

**-A Middle Road?-**

Whence comes the balanced and correct attitude, so often exhibited by the best minds in our history? It came, as did so much else, from Greece. Aristotle, while expounding the nature of virtue, came to the immortal conclusion that it lies in the mean. Such too is the case in our own outlooks on history. Exaggeration leads only to distortion and lack of action. Extremes will imperil not only our own objectivity, but will also color the actions that we must take in order to achieve our desired results. Where then lies the mean between facile optimism and strength-sapping pessimism?

Most clearly articulated, it comes from Saint Augustine. A man trained in all the best traditions of the Roman state and then schooled further in the college of Christianity, Augustine stood at a crossroads as perhaps none before or since. The Empire which had stood for nearly a thousand years was crumbling, its foundations in republican virtue long since eroded. Christianity, still so young and so newly legal, stood on uncertain ground as the religion of the city, the country still being very much pagan. While not as catastrophic as older historians have painted it, the descent of the various barbarian tribes was dissolving the old order. Rome was in its death throes. There were many in the Church who also saw Christianity's demise. Church fathers such as Rufinus and Orosius could see no other home for faith than within the empire, for without it there was chaos. Amidst all of this, of the fall of cities and empires, Augustine wrote the *City of God*. It was a charter for the Christian Middle Ages. With the barbarians literally at the gates and all of civilization seem-

ingly on the verge of disappearance, Augustine did not weep and gnash his teeth over the fall of everything that was good. Rather he looked out over a barren plain and saw a new society, not limited by the old borders of empire, and one that would include “barbarians.”

Amidst all this Augustine was the consummate realist. Experience and common sense have demonstrated time and time again the flawed nature of humanity, the proclivity to do evil. Such ruminations escaped Rousseau and his vulgarizers. They still escape those who seek to create earthly paradises. Common sense and Scripture both taught Augustine that people were sinful and flawed. As Christian theology developed it was natural that it would not adopt Rousseauian optimism, but guided by Augustine’s vision it also did not wholly fall into the trap of those who claim total depravity. In the Christian tradition, augmented by Greek virtue theory, humans, who are flawed, can work and labor and make themselves into better people. In making themselves better they will and can construct virtuous societies. Isolated virtue is sometimes heroic but often useless to others and to the community. Only in shared virtue can society be improved.

On one further rock can conservatives be assured in their conviction of hope. Human nature remains, unchanged and unchangeable. The radical post-modernists who deny any commonality among us should reflect more deeply on the historical sources, which will appear to an open mind to exhibit the greatest evidence for the unity of the human race. The experiences we share today, we share with the men and women of history. The same emotions, trials, and temptations that were theirs are ours also. Such a belief convicts the optimists and ought to give the pessimists pause. Such

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a belief is our greatest defense against the persecution of the weak and against the novel challenge of racism. In this way we can learn from history: we have faced these problems before. Our past intellectuals have given us arguments to fight the battles of today.

Proximity to our own time and place naturally accentuates the fights we ourselves face. The conflicts in which we engage are colored by our own participation in them and take on a psychologically greater value than those fought in the past. If we acknowledge this frankly then we can, with much greater effect, appropriate the lessons of our western history. The great challenges and the sometimes insurmountable obstacles of today are ours to face. We ought to feel privileged to be continuing the same war that our forebears all fought. But in doing that let us consider two things. Our fight is the greatest, the longest, the hardest only because we ourselves fight it, not because these are the toughest fights in history. And second, because it is our fight, we must fight it. We must not retreat from the culture wars like “conscientious objectors” who, feeling virtuous in themselves, leave others to fight and die in their name and for their privilege.

Let me say it frankly, as an historian and as a young person in this society, this is not the worst time that has ever been. Darker moments have been cast over humanity, both in the recent and the far past. Such discourse is not only discouraging but pointless. Speaking as an historian, Mao, Stalin, and Hitler are all dead, and their regimes of death with them. The challenges of our time are different. Speaking as a young person, the ascendancy of the self-absorbed Woodstock generation is also nearing its end. Disco is dead and no Naugas have been killed for their hydes in years. All these things are

signs of hope. Both serious reflection and a sense of humor are essential in realizing the correct equilibrium. The balance between irrational optimism and foolish despair lies therefore in hopeful realism.

As I said, the best minds in our history have realized this, and none has put it so well as Charles Dickens,

It was the best of times, it was the worst of times,  
it was the age of wisdom, it was the age of foolishness,  
it was the epoch of belief, it was the epoch of incredulity,  
it was the season of Light, it was the season of Darkness,  
it was the spring of hope, it was the winter of despair,  
we had everything before us, we had nothing before us,  
we were all going direct to Heaven, we were all going direct the other way...

Mr. Dickens then makes the salient connection

– in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

Let us leave behind the noisy authorities, and banish the “superlative degree of comparison” from our modern conversation about contemporary society. For it is in acknowledging all Dickens’ claims that we most nearly approach the truth of the matter.



The Precarious State of Liberty and Dignity  
in Herman Melville's *Moby-Dick*

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I

Over the past eighty years, as the so-called canon of American literature has been considered and re-considered by the scholarly community, Herman Melville's *Moby-Dick* (1851) has been established as one of the indisputable classics of our country's literature, and of the world's literature. Though unappreciated in its day and during the remaining years of Melville's lifetime,<sup>1</sup> *Moby-Dick* has come to be appreciated by countless readers for its deep probings of profound philosophical and theological questions. By way of Ishmael—Melville's brilliantly humorous and urbane, analytical and intuitive narrator—the reader is invited to consider the nature of the human self, of the universe, and of God; the value of the individual and of society; the capacities and limitations of human knowledge and insight.<sup>2</sup> Such philosophical-theological probings contribute greatly to the universal and timeless appeal of Melville's masterpiece; nevertheless, certain passages in *Moby-Dick* suggest that Melville also meant for his text to be read as a trenchant commentary upon the precarious state of liberty and human dignity in mid-nineteenth-century America. Melville's fervent belief in democracy and in the innate dignity of the common man is to be found in Ishmael's descriptions of the *Pequod's* crew, and especially in

his redeeming friendship with the pagan harpooneer, Queequeg; but the charismatic power of Captain Ahab represents Melville's doleful warning that the masses (the crew) and their ship of state (the *Pequod*) may be easily misled and ultimately destroyed by a demonic demagogue who is bent upon an immoral pursuit, cost what it may.

In his recently published cultural biography of Melville, award-winning scholar Andrew Delbanco argues convincingly that *Moby-Dick* "became in the broadest sense a political novel" during the two-year period of its composition (161). As the novel's themes and characters were taking shape in Melville's mind, the nationwide dispute over race and slavery was reaching a point of crisis, culminating in the Compromise of 1850, which included the passage of the Fugitive Slave Bill, a legislative act that greatly disturbed many of the opponents to slavery in the North. As Delbanco and others have demonstrated, the increasingly divisive rhetoric and events concerning the issue of slavery in this time period led to Melville's including political commentary and symbolism in *Moby-Dick* that far exceeded any of his previous fictional works.<sup>3</sup> Michael Rogin is correct in urging his readers to avoid unduly politicizing *Moby-Dick* by reading it as a strict political allegory, because ultimately the novel does not "choose one side or another in the political debates. . . . It points to no fixed political truth above and outside of its own story" (108). In broad terms, however, the *Pequod* and its crew are clearly emblematic of the ship of state and the interracial society that powers the ship. The thirty-man crew of the whaleship matches the number of states that comprised the Union in 1850, and the system of labor that we witness in this business of whaling largely reflects the system of white

overseer and dark underling. Perhaps the most ironic image of white authority is of Flask, the least self-conscious of the ship's three mates, perched on the shoulders of the "coal-black" harpooneer, Daggoo, in order to gain an aerial view of the hunting ground. As Ishmael incisively remarks, "the sight of little Flask mounted upon gigantic Daggoo was . . . curious," for, despite his burden, the "noble negro" manages to sustain himself "with a cool, indifferent, easy, unthought of, barbaric majesty," so much so that "the bearer looked nobler than the rider" (184). Melville's indictment of the racial exploitation and capitalist imperialism that fed America's expansion and economic growth is captured in all three of the ship's harpooneers, for, as Alan Heimert observes, those noble harpooneers—Queequeg, Tastego, and Daggoo—"are representative of the three races on which each of the American sections, it might be said, had built its prosperity in the early nineteenth century" (501-502). Tastego, an "unmixed Indian" with "long, lean, sable hair" (106), serves under Stubb, the ever-laughing second mate, while Queequeg, Ishmael's bosom friend from the Pacific islands, acts as harpooneer under Starbuck, the ship's first mate and a native of Nantucket who is firmly dedicated to the commercial enterprise of whaling. The remaining members of the crew are of various ethnic backgrounds hailing from many points on the globe, but the racial identities of the three harpooneers serve as a stark reminder of how the division of labor and structure of authority in antebellum America was almost always arranged according to racial distinctions and prejudices.

In the midst of two chapters assigned the identical title of "Knights and Squires," both devoted to describing the crew of the *Pequod*, Melville (via Ishmael) offers an eloquent af-

firmation of the “divine equality” to be discerned among all persons, no matter what their individual stations in life. In so doing, he puts forth a vision of “man in the ideal” that is akin to any celebration of democratic dignity to be found in the writings of Whitman or Emerson. The “august dignity” that he is intent upon recognizing “is not the dignity of kings and robes, but that abounding dignity which has no robed investiture” and is to be seen “shining in the arm that wields the pick or drives a spike; that democratic dignity which, on all hands, radiates without end from God. . . . The great God absolute! The centre and circumference of all democracy! His omnipresence, our divine equality!” (103). Through such words, Ishmael-Melville offers up a prayer of praise to the “just Spirit of Equality, which hast spread one royal mantle of humanity over all” humankind and has selected “champions from the kingly commons” (104). Though this crew may be classified as a motley grouping of “meanest mariners, and renegades and castaways” in the eyes of the cynical world, Ishmael pays homage to “the great democratic God” by boldly ascribing to them “high qualities,” “tragic graces,” “exalted moments,” and “ethereal light” (103). This passage, more than any other passage in *Moby-Dick*, depicts humanity in an optimistic, transcendental light, capable of heroic deeds amid ordinary life because of the divinity that stirs within each person. At the same time, however, if we as readers join Ishmael in celebrating the “august dignity” of each crew member and the “divine equality” that such dignity engenders, then we must ponder along with Melville’s youthful narrator the poignant lesson to be learned from the destruction of such a crew at the hands of their captain, who sees them as so many tools to be used in accomplishing his vendetta against the white whale.

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Ahab's manipulation of the crew may be read foremost as the threat posed by the extraordinarily determined but selfish individual, especially if that individual is a charismatic personality capable of swaying the masses. The chapter titled "Fast-Fish and Loose-Fish," however, suggests that Ahab's possession of the crew may be compared to all acts of unjust political force as well. The opening paragraph of the chapter promises "some account of the laws and regulations of the whale fishery," but it is clear that such "laws" are terse indeed: a loose-fish "is fair game for anybody who can soonest catch it," whereas a fast-fish is a piece of property that is now "connected with an occupied ship or boat, by any medium controllable by the occupant or occupants" (308). The remaining paragraphs are increasingly concerned with the potential injustice that occurs when "often possession is the whole of the law." That man-made law alone is insufficient to prevent unjust conquest and imperial rule is clearly declared in the chapter's final paragraphs, where the reader is baraged with questions that point to relatively recent examples of such international acts of injustice, including those enacted by the United States against Mexico. After pointing to the issue of slavery by asking the reader "what are the sinews and souls of Russian serfs and Republican slaves but Fast-Fish[?]" (308), Ishmael eventually asks: "What was America in 1492 but a Loose-Fish, in which Columbus struck the Spanish standard by way of waiving it for his royal master and mistress? What was Poland to the Czar? What Greece

to the Turk? What India to England? What at last will Mexico be to the United States? All Loose-Fish.” The final question in this series obviously reveals Melville’s pessimism concerning the motives of the United States in expanding its territory into the Southwest at the expense of Mexico. Melville’s greatest fears concerning the ultimate consequences of imperialistic conquest, however, are captured succinctly through two questions voiced in the final paragraph of the chapter: “What are the Rights of Man and the Liberties of the World but Loose-Fish? What all men’s minds and opinions but Loose-Fish?” (310). The insistent questions of the chapter have forced the reader to recognize the unfortunate fact that many once loose-fish are now fast-fish as a result of the “laws” of possession and the mastery that follows from such possession. Thus, though the “Rights of Man and the Liberties of the World” as well as “all men’s minds and opinions” may be loose-fish, the cynical and pessimistic tenor of the chapter suggests that even these sanctified principles and mental powers may be claimed and possessed by the selfish motives of another party bent upon imperialistic mastery.

The fame of Melville’s masterpiece is due in large part to the dynamic power of Ahab, an unforgettable literary creation whose eloquence may be likened to that of Shakespeare’s King Lear and whose spirit of self-elevating defiance is like Satan’s in Milton’s *Paradise Lost*. The influence of Shakespeare’s plays upon *Moby-Dick* is manifold, including the dramatic suspense that Melville creates by withholding the physical appearance of Ahab upon the stage of the *Pequod’s* deck until the reader has

consumed over one-quarter of the book's length. Ishmael's (and the reader's) expectations of that appearance have been heightened by the ominous assertion of Peleg, one of the Quaker owners of the ship, who describes Ahab to Ishmael before the ship has set sail as "a grand, ungodly, godlike man" (78). The "strange awe" (79) of Ahab that Ishmael feels as a result of Peleg's description is vividly reinforced when he sees Ahab himself finally standing on the deck in daylight after the ship has been sailing to the southeast from New England for several days. Of all the characteristics that Ishmael notes in his first sight of the aged captain, he is most "struck" by Ahab's forward-looking gaze, where one may see "an infinity of firmest fortitude, a determinate, unsunderable wilfulness" in the "fixed and fearless . . . glance" (109). Even at this point, before Ahab has spoken one word to the assembled crew, Ishmael senses the overpowering strength that they all will encounter in Ahab's unyielding, relentless will.

"The Quarter-Deck," that chapter when Ahab finally speaks to the entire crew, is a study in the dynamics of demagoguery. As we witness Ahab's ability to win over the hearts and minds of the men, we must remember that the gifted speaker was an heroic figure in Melville's day, for antebellum America was an oral world where such masters of political oratory as Daniel Webster and John C. Calhoun were capable of stirring the emotions of their listeners to a fever pitch. Near the end of a day when Ahab has seemed especially preoccupied with his own thoughts, he suddenly orders Starbuck to assemble the entire crew so that he may address them all.

Ahab begins by asking the crew a quick series of questions concerning the proper actions to be carried out when a whale is sighted. When he meets their quick answers with “wild approval in his tones” (137), he has deftly begun the process of convincing them to hunt the white whale by appealing to their hunger for his approval, as if he were an imposing father intent upon instilling self-confidence and a sense of camaraderie into his intimidated sons. Significantly, Ahab moves from this psychological appeal to a purely materialistic one, promising the reward of a Spanish gold doubloon to the sailor who first spies the white whale and then dramatizing the lustre of the promise by nailing the doubloon to the mainmast. By blatantly employing the lure of cash, Ahab manipulates his crew by appealing to their sordid desire for monetary gain. To lift up the lustre of gold before he has endeavored to explain his reasons for hunting Moby-Dick reveals Ahab’s clear intent from the beginning to treat his men as tools, as we learn several chapters later by way of the omniscient narrative voice: “To accomplish his object Ahab must use tools; and of all tools used in the shadow of the moon, men are most apt to get out of order” (177). Though Ahab is keenly aware that “in times of strong emotion mankind disdain all base considerations,” he also knows that “such times are evanescent.” The spectre of the white whale does sporadically incite the hearts of his “savage” crew, but because Ahab views “the permanent constitutional nature of the manufactured man” as sordid, he reasons prudently that he must not “strip these men . . . of all hopes of cash.” Despite his own obsessive desire

to slay only the white whale, he must allow the crew to pursue “the natural, nominal purpose of the *Pequod’s* voyage” (178), which is, of course, a cooperative commercial endeavor based upon the killing and processing of all whales that will bring them profit. Ahab’s use of the profit motive as his initial motivational ploy is based on his knowledge that the members of the crew have agreed to serve on the *Pequod* primarily and, in most cases, exclusively for the utilitarian purpose of increasing their purse. As such, the *Pequod* may be seen, as John Alvis has argued, as “an epitome of a society organized for the sake of commercial venturing,” a society that “rests solely upon self-interested material calculation” (230, 224). If the *Pequod* is read in such terms, the materialistic preoccupations of the majority of its crew throughout most of the journey may represent Melville’s criticism of mid-nineteenth-century American society, which, based upon Lockean principles of liberty and consent, has become a collection of self-serving individuals who are devoted much more to their own gain than to the welfare of all of its members.<sup>4</sup>

Ahab’s decision that the crew may be motivated by simple, acquisitive desires reflects the view of such contemporary thinkers as Carlyle, Emerson, and Thoreau that industrial society was transforming men into objects, or tools.<sup>5</sup> Ahab’s powers of persuasion, however, depend upon darker, more deeply embedded layers of the human psyche that feed our desires for vengeance, mastery, and possession. Soon after nailing the doubloon on the masthead and immediately following excited inquiries from the three harpooners concerning the physical peculiarities of Moby Dick, Ahab boldly

announces his determination to wreak vengeance upon the white whale for having bitten off his leg in a previous encounter: “Aye, aye, it was that accursed white whale that . . . made a poor begging lubber of me forever and a day. . . . Aye, Aye! And I’ll chase him round Good Hope, and round the Horn, and round the Norway Maelstrom, and round perdition’s flames before I give him up.” Upon the heels of these words, which elevate Ahab’s purpose into the realm of cosmic matters, Ahab challenges the crew to join him in the ferocious pursuit, and all but one of them readily assents. Starbuck, the virtuous and highly pragmatic first mate, bluntly states that he is on the ship “to hunt whales, not [his] commander’s vengeance” and then asserts that Ahab’s intent to seek vengeance against a “dumb brute” that harmed him “from blindest instinct” is “blasphemous” (139). Ahab’s response strikes to the very heart of why he is determined to destroy Moby Dick:

Hark ye yet again,—the little lower layer. All visible objects, man, are but as pasteboard masks. But in each event—in the living act, the undoubted deed—there, some unknown but still reasoning thing puts forth the molding of its features from behind the unreasoning mask! If man will strike, strike through the mask! How can the prisoner reach outside except by thrusting through the wall? To me, the white whale is that wall, shoved near to me. Sometimes I think there’s naught beyond. But ‘tis enough. He tasks me; he heaps me; I see in him outrageous strength, with an inscrutable malice sinewing it. That inscrutable thing is chiefly what I hate; and be the white whale agent, or be the white whale principal, I will wreak that hate upon him. Talk not to me of blasphemy,

man; I'd strike the sun if it insulted me. (140)

No passage in the entire novel reveals more succinctly what Moby Dick has come to signify for Ahab. Still enraged by the white whale's mutilation of (and thus affront to) his person, Ahab has come to see Moby Dick as the embodiment of both the imprisoning "wall" that follows from our human limitations and the "inscrutable malice" that permeates the "outrageous strength" of the universe, which, in Ahab's eyes, is indifferent and even hostile to humanity. Ahab's cry of indignation and outrage surely speaks for that "little lower layer" residing in all human hearts when we ponder the cruelties and injustices executed by nature. What distinguishes Ahab from most humans, however, is his unwillingness to acknowledge the benign dimensions of nature and his monomaniacal determination to defy nature's mastery over him by way of the fiery hunt.

The Ahab of "The Quarter-Deck" chapter offers bold and dramatic words and gestures meant to inspire allegiance among his men and to instill the same vindictive hatred toward Moby Dick that resides within himself. As such, Ahab is the captain as demagogue. In the short chapter that follows, however, Ahab renders a soliloquy of self-examination that reveals his will to be cold and calculating in its desire for power. While sitting alone in his cabin and staring out of the window, he notes how the beautiful colors of the sunset can no longer soothe him as they once did in his youth: "This lovely light, it lights not me; all loveliness is anguish to me, since I can ne'er enjoy. Gifted with the high perception, I lack the low, enjoying power; damned, most subtly and malignantly! damned in the midst of Paradise!" For a moment, Ahab genuinely regrets his inability to feel serene before nature's sublimity, but

his regret is forgotten when he considers the machine-like efficiency by which he has engaged the crew to his vengeful purpose: “I thought to find one stubborn, at the least; but my own cogged circle fits into all their various wheels, and they revolve. Or, if you will, like so many ant-hills of powder, they all stand before me; and I their match.” Exhilarated by the victory of his will—“What I’ve dared, I’ve willed; and what I’ve willed, I’ll do!”—Ahab ends his soliloquy by likening his determination to the iron path and indefatigable power of a locomotive: “The path to my fixed purpose is laid with iron rails, whereon my soul is grooved to run. Over unsounded gorges, through the rifled hearts of mountains . . . unerringly I rush! Naught’s an obstacle, naught’s an angle to the iron way!” (143). Melville’s use of such imagery has led several critics to read Ahab as the voice of heedless capitalism and industrial might. As Leo Marx puts it in his classic study of technological imagery in nineteenth-century American literature, Ahab is ultimately “the perverted, monomaniac incarnation of the Age of Machinery” whose powerful persona “stands forth as a pathological instance of the traits nurtured by a society obsessed with accumulation, competitive performance, and power” (318, 315). Like those advocates of technological and economic “progress” who view nature as nothing more than a collection of commodities to be possessed and mastered in order to serve humanity, Ahab would rebuild the physical universe to conform to the “iron way” of his will and thus redress the insult of its apparent indifference to his person.

In Ahab’s determination to wreak his hatred upon the white whale, he not only defies the “inscrutable malice” of the physical universe, but he also elevates himself to a god-like status, reminding us of Peleg’s description of Ahab early in

the narrative as “a grand, ungodly, god-like man” (78). Ahab’s self-glorification and the delusions of grandeur that follow from such self-elevation clearly represent Melville’s warning concerning the destructive potential of the individual who perceives himself as completely superior to and apart from his fellow human beings, thus lacking all humility and human compassion. Starbuck readily recognizes the despotism of Ahab’s sense of superiority when he remarks to himself: “Who’s over him, he cries,--aye, he would be a democrat to all above; look, how he lords it over all below” (144). Much later in the narrative, Ahab himself fully acknowledges and glories in the “ever egotistical” perspective of his vision as he interprets the figures stamped on the doubloon: “The firm tower, that is Ahab; the volcano, that is Ahab; the courageous, the undaunted, and victorious fowl, that, too, is Ahab; all are Ahab; and this round gold is but the image of the rounder globe, which, like a magician’s glass, to each and every man in turn but mirrors back his own mysterious self.” Ahab’s meditation on the doubloon reveals the degree to which he has surrendered himself to self-absorption, failing to see anything else in his study of “the rounder globe” but his own personal drama, his own “pains” and “pangs” (332-333). Later, as the *Pequod* floats languidly in the Japanese sea on a day when the “unrelieved radiance” of the blazing sun seems like “the insufferable splendors of God’s throne,” Ahab angrily destroys the quadrant, that “foolish toy” of science that forces him to determine his place in the universe by consulting the sun (378). Ahab’s disgust with the quadrant reflects his ongoing frustration with the limitations of human knowledge, for the quadrant can tell him of his own location but is unable to foretell the future or inform him of the whereabouts of Moby Dick.

Wishing to be omniscient and resenting the quadrant's dependence on the sun, Ahab curses "all things that cast man's eyes aloft to that heaven, whose live vividness but scorches him" in offering him another humiliating reminder of his earthbound condition. Ahab's egotistical defiance achieves its most dramatic expression in "The Candles" chapter, when the tips of the three tall masts have been set ablaze by the lightning of a typhoon and Ahab, amid the screaming winds of the storm, shouts his conviction that "defiance" is the "right worship" of this "clear spirit of clear fire." As if he speaks to all of the elemental destructive potential in the universe, Ahab declares himself "no fearless fool," but one who is elevated above the common person, a regal personality by virtue of his indomitable will: "In the midst of the personified impersonal, a personality stands here. Though but a point at best . . . while I earthly live, the queenly personality lives in me, and feels her royal rights" (382). Though his defiant words are addressed to the "personified impersonal," Ahab's insistence that his rights are "royal" also clearly reveals his sense of sovereign and deific power aboard the *Pequod*, a conviction of his own greatness that has made it nearly impossible for him to recognize the dignity and rights of the other men aboard the ship.

Only two human beings—Pip and Starbuck—manage to touch Ahab's heart, but in both cases he ultimately refuses to be deflected from his pursuit by any sympathy for others. Late in the drama, Ahab's emotions are deeply stirred by Pip, the black cabin boy whose speech and actions have seemed insane after his terrifying experience of being abandoned in the immensity of the ocean during the frenzy of one of the whale hunts. When Pip's speech reveals that his sense of self has been so obliterated that he can describe himself only in

the terms of a fugitive slave (“Reward for Pip! One hundred pounds of clay—five feet high—looks cowardly—quickest known by that!”), Ahab criticizes “the frozen heavens” who “did beget this luckless child, and have abandoned him.” Touched to “his inmost centre” by Pip’s crazed state, Ahab declares that Pip’s misfortune is proof of the cruel indifference of the gods, while his undying allegiance to Ahab is proof of the noble compassion among humans: “Lo! ye believers in gods all goodness, and in man all ill, lo you! see the omniscient gods oblivious of suffering man; and man, though idiotic, and knowing not what he does, yet full of the sweet things of love and gratitude. Come! I feel prouder leading thee by thy black hand, than though I grasped an Emperor’s!” (392). Nevertheless, though Ahab treats Pip with a tender, almost fatherly affection and is genuinely moved by Pip’s wish to “never desert” his “master,” Ahab will not allow the poor boy to cure his “malady,” warning him: “Weep so, and I will murder thee! have a care, for Ahab too is mad” (399). He ends his interactions with Pip by ordering him to stay below in the captain’s cabin, a fitting symbol of Ahab’s desperate repression of any compunctions he may still harbor in abandoning all human compassion toward those of his crew. Near the end of the narrative, on the day immediately preceding the climactic three-day chase of *Moby Dick*, Ahab is pensive and remorseful, the “lovely aromas in the enchanted air” of that gentle day having dissolved “for a moment, the cantankerous thing in his soul.” Noting the tears welling up in Ahab’s eyes, Starbuck moves near and listens as Ahab renders his only speech of regret and self-doubt in the entire tale, bemoaning the forty years he has spent whaling as a foolish waste of a life devoted to “mak[ing] war on the horrors of the deep” (405). After confessing that

he feels “deadly faint . . . as though [he] were Adam, staggering beneath the piled centuries since Paradise,” he finds a brief moment of peace by staring into Starbuck’s eyes and finding there an image of his wife and child, both of whom he has left behind in Nantucket: “Close! stand close to me, Starbuck; let me look into a human eye; it is better than to gaze into sea or sky; better than to gaze upon God. By the green land; by the bright hearth-stone! this is the magic glass, man; I see my wife and my child in thine eye.” Gazing into the eyes of Starbuck, Ahab acknowledges the “lovings and longings” of his “natural heart,” but when Starbuck urges Ahab to give up the chase and return to their dear New England, Ahab’s demeanor hardens. Glancing away from Starbuck’s eyes, he declares himself to be compelled by the commands of a “hidden lord and master,” a “cruel, remorseless emperor” who causes him to act against his heart (406). Ahab is convinced that God is that “remorseless emperor,” for when he asks “Is Ahab, Ahab? Is it I, God, or who, that lifts this arm?” he goes on to assert that it is God, “the judge” of the universe, who is guilty of placing within him the same penchant toward violence that causes the *Albicore* to “chase and fang” the flying fish (406-407). No longer able to consider his actions a result of his own will to choose, Ahab later asserts on the second day of the chase that he is “the Fates’ lieutenant,” acting “under orders” (418). Convinced that he is justified in his relentless pursuit of the white whale, he considers the men in his boat on the third and final day of the chase to be nothing more than extensions of his own inexorable will. “Ye are not other men,” he shouts, “but my arms and my legs; and so obey me” (423). Like those captains of industry of nineteenth-century America who would superimpose their will upon the objects and forces of nature, or like

those extremists of antebellum America (both secessionists and abolitionists) who would rather see the Union destroyed than accept the defeat of their convictions, Ahab pursues his vendetta against the white whale, against his incarnation of evil, thus bringing destruction to the *Pequod* and death to all of its crew (except Ishmael) when an enraged Moby Dick rams the ship and smashes all of their boats.<sup>6</sup>

### III

In many respects, the dramatic power of Melville's *Moby-Dick* concerns the self-destructive path that Ahab pursues in obeying the obsessive desires within him to defy the universe; as such, it presents that timeless drama of the individual self, or soul, and the possibility that the self, or soul, may be consumed by a self-created tyranny. At the same time, however, *Moby-Dick* is also a doleful tale concerning society and the possibility that it may be dragged to destruction by the socially destructive hubris of a captain (leader) if that captain is not sufficiently and effectively opposed. In this regard, Ishmael's judgment of the ship's three mates in comparison to Ahab's grandeur is especially relevant, for in the official power structure of the whale fishery, it would be very difficult for any insurrection or mutiny to occur without the support of the top three officers under the captain. According to Ishmael, such an insurrection is very unlikely because the crew is "morally enfeebled . . . by the incompetence of mere unaided virtue or right-mindedness in Starbuck, the invulnerable jollity of indifference and recklessness in Stubb, and the pervading mediocrity of Flask." Though Ishmael has proclaimed earlier in the narrative his belief that each member of the crew is endowed with "august dignity," he asserts that "such a crew, *so officered*,

seemed specially picked and packed by some infernal fatality to help [Ahab] to his monomaniac revenge” (158, emphasis mine). Ishmael’s conviction that the crew-society of the *Pequod* is “morally enfeebled” by its three officers requires some further examination if we are to discern what warning for society and democracy Melville may be rendering through the characters of Flask, Stubb, and Starbuck.

Flask and Stubb, the third and second mates of the *Pequod* respectively, are both incapable of countering the overbearing presence and spiritual insights of Ahab. Flask is indeed a man of “pervading mediocrity,” because he simply does not know anything beyond appearances. Apparently unable to conceive of a “little lower layer” residing beneath the “pasteboard mask” of visible objects, Flask sees the doubloon as nothing more nor less than a coin that would allow him to purchase “nine hundred and sixty cigars” (334). Lacking “all sense of reverence” for the great leviathans, Flask is that durable and hardy worker whose “ignorant, unconscious fearlessness” makes him very useful in the brutal enterprise of whaling (105). Unlike Flask, Stubb reveals a degree of sophistication and sensitivity in several of his observations throughout the narrative, but his use of humor to avoid thinking about life’s perils and mysteries is an abdication of his social responsibilities that makes him too easily swayed by Ahab’s demagoguery. When Stubb first encounters Ahab suffering from insomnia in the middle of the night, his acute observations of the captain cause him to wonder if he is mad (112), and several hours before Ahab renders his dynamic motivational speech of “The Quarter-Deck,” Stubb remarks to Flask that “the chick that’s in [Ahab] pecks the shell” and will “soon be out” (137). Despite his perceptive observations, however, Stubb’s response

to all things that are “queer,” i.e. all things that are unusual and unsettling, is to avoid pondering them at all: “Think not, is my eleventh commandment; and sleep when you can, is my twelfth” (112). His response, then, to the frightening spectacle of Ahab’s winning over the crew to the fiery hunt is laughter, a stubborn, grinning response to the travails and mysteries of life that is both cynical and submissive: “a laugh’s the wisest, easiest answer to all that’s queer; and come what will, one comfort’s always left—that unfailing comfort is, it’s all predestinated” (145). As Ishmael first describes him, Stubb is that “happy-go-lucky” man who is “neither craven nor valiant,” adopting a “good-humored, easy, and careless” demeanor as he faces the uncertainties of the future. Beneath his jovial exterior, however, is one who is “not a brave man” (380)—as he confesses to Starbuck amid the typhoon—and who harbors a resentment toward the indifferent universe that is akin to Ahab’s. Significantly, in the final speech he renders before his death, Stubb grins at the grinning whale, but he accuses the “sun, moon, and stars” of acting as the “assassins of as good a fellow as ever spouted up a ghost” (425). The man of laughter goes to his death with bitterness in his heart, sharing with Ahab the absolutist conviction that all is “predestinated.”

Among the three mates aboard the *Pequod*, Starbuck is the only one who never accepts the fiery hunt as his own. At dusk on the day when Ahab has mesmerized the crew with the eloquence of his motivational speech to hunt the white whale to his death, Starbuck admits to himself that his “soul is more than matched; she’s overmanned.” Inwardly, he opposes the impiety of Ahab’s purpose, but the virtuous principles of duty and obedience to authority compel him “to obey, rebelling,” while his tender heart causes him “to hate with touch of pity”

(144). Starbuck's inability to sway Ahab from his monomaniacal pursuit is the result of a weakness in his brave exterior that Ishmael identifies when he first describes the first mate. Though Starbuck's bravery is "firm in the conflict with seas, or winds, or whales, or any of the ordinary irrational horrors of the world," he is unable to "withstand those more terrific, because more spiritual terrors, which sometimes menace you from the concentrating brow of an enraged and mighty man" (103). As Ishmael incisively remarks in the previous paragraph, Starbuck is "no crusader after perils," because his courage "is not a sentiment; but a thing simply useful to him, and always at hand upon all mortally practical occasions" (102). Starbuck cannot effectively oppose Ahab because he does not bring the zealous courage and conviction of a true "crusader" to the eminently impractical occasion of Ahab's cosmic battle. The crew of the *Pequod* is indeed "morally enfeebled," as Ishmael keenly observes, for Starbuck brings "mere unaided virtue" into his confrontation with Ahab. As Philip Gleason puts it: "Starbuck's is a humane excellence rather than a strictly religious excellence. His religion is closely associated with home and security; his uprightness, courage and compassion are admirable . . . but they fall far short of heroic sanctity" (507). Starbuck's meditation upon the doubloon perhaps best reveals why he lacks the fortitude to oppose Ahab openly, or even to carry out the morally justifiable act of killing Ahab in his sleep with a pistol. At first, Starbuck sees the "three mighty, heaven-abiding peaks" on the doubloon as "the Trinity, in some faint earthly symbol." This orthodox vision consoles him with the comforting conviction that "in the vale of Death, God girds us round; and over all our gloom, the sun of Righteousness still shines a beacon and a hope." The comfort

of his convictions vanishes, however, when he notes that “at midnight . . . we gaze . . . in vain” for the sun of Righteousness. Rather than consider further how the coin does speak “truly” to him, Starbuck abruptly walks away, fearing “lest Truth shake [him] falsely” (333). When pondering the undeniable “Truth” that darkness is also an inevitable part of our earthbound existence, pious Starbuck lacks the intellectual courage and honesty to face it and the inner spiritual strength to combat it.

#### IV

The inadequacies of the three mates aboard the *Pequod* represent Melville’s warning that myopic utilitarianism, cynical indifference, and unexamined religious orthodoxies allow a democracy to be quite vulnerable to the influence of any charismatic demagogue. Through Ishmael, however, Melville may be offering a ray of hope for society and democracy. As the ever-reflective teller of the tale and as the only survivor who emerges from the destruction of the *Pequod* and its crew, Ishmael stands apart from all of the other characters in the novel. Unlike the three mates, he is not insensitive or indifferent, nor is he willing to shield himself from the ugliness and evil of life by way of comforting orthodoxies. Unlike Queequeg, whom Ishmael admires and befriends, he is not a misplaced primitive, but a man earnestly attempting to live in the nineteenth century. And, unlike Ahab, he approaches the task of knowing himself and the universe with an open heart and an open mind, learning along the way to treat his fellow human beings with tolerant respect and to appreciate the solace to be found in home and hearth. Because he is willing and able to consider and re-consider a variety of philosophical

perspectives throughout the progress of the tale, and because he is eventually humbled by the limitations of his knowledge as well as overcome by joy when contemplating the beauty of creation, Ishmael represents a democratic counter to Ahab's socially destructive despotism. Nevertheless, we as readers must not overlook the fact that Ishmael's eventual rejection of Ahab's perspective never takes the form of overt, political opposition to Ahab; instead, we are witnesses to Ishmael's own private evolution of self. Thus, though we may admire the humanitarian perspective that Ishmael eventually adopts, his passive silence as he observes the increasing ferocity of Ahab's mad pursuit may represent Melville's most dire warning concerning the precarious state of liberty.

Throughout the first two-thirds of *Moby-Dick*, Ishmael is sympathetic to and fascinated by Ahab's fiery hunt. As he bluntly admits just a few pages after "The Quarter-Deck" chapter: "I, Ishmael, was one of the crew; my shouts had gone up with the rest; my oath had been welded with theirs." In attempting to comprehend why "Ahab's quenchless feud" seems to be his own, Ishmael realizes that "a wild, mystical, sympathetical feeling" now resides within him after having heard Ahab's impassioned plea to join him in the fiery hunt (152). Ishmael's fascination with Ahab's pursuit is understandable when we consider to what degree the young narrator, like Ahab, is determined to know the truth to be found beyond appearances, to uncover the secrets of the universe by pondering its most impressive creation: the great leviathan. Over one-fourth of *Moby-Dick* consists of the so-called cetology chapters, where Ishmael "pursues" the whale in his own abstract and analytical way by contemplating its entire body, part by part, in the hope of uncovering the mysteries it may

hold. In short, Ishmael, like Ahab, is a highly meditative human being, which explains in part why he has embarked on the whaling voyage. As he submits in the opening chapter of the novel, he has been drawn to the ocean and its depths because he, like all human beings to some degree, has come to realize that “meditation and water are wedded forever” (19). That Ishmael’s own meditations will be greatly profound is clear even in these opening pages of the narrative, for when he goes on to ponder why we are so fascinated with gazing into the reflective depths, he eventually recalls the story of Narcissus, who drowned in his attempt to grasp “the tormenting, mild image he saw in the fountain.” Then, Ishmael offers one of the most penetrating assertions of the entire novel, submitting that the image Narcissus tried to grasp was “the image of the ungraspable phantom of life; and this is the key to it all” (20). In addition to his brilliant philosophical mind, Ishmael is prone to bouts of depression, claiming in the opening chapter that his decision to “get to sea” is his “substitute for pistol and ball,” i.e. his way of avoiding suicide (18). To a great degree, he is sympathetic to the dark view of the universe that Ahab presents in “The Quarter-Deck” chapter. In summarizing his view of what Moby Dick means to Ahab, Ishmael employs imagery that is both allegorical and cosmic, demonstrating how well he has come to comprehend the nature of Ahab’s monomaniacal rage:

he at last came to identify with [Moby Dick] not only all his bodily woes, but all his intellectual and spiritual exasperations. The White Whale swam before him as the monomaniac incarnation of all those malicious agencies which some deep men feel eating in them. . . . all truth with malice in it. . . all evil,

to crazy Ahab, were visibly personified, and made practically assailable in *Moby Dick*. He piled upon the whale's white hump the sum of all the general rage and hate felt by his whole race from Adam down. (156)

Through such words and the paragraphs that surround them, Ishmael renders a brilliant psychological and philosophical assessment of why Ahab is so obsessed with the white whale. In Ishmael's view, Ahab's primary emotion in confronting *Moby Dick* is hatred, but when Ishmael attempts to explain his own motivation for joining the fiery hunt, his contemplations reveal that it is the whiteness of the whale that haunts him more than his ferocity, and that whiteness fills Ishmael with dread and fear, rather than hatred. In the final paragraph of the chapter entitled "The Whiteness of the Whale," Ishmael confesses to the reader that, for him, the "Albino whale" came to symbolize the possibility that "all earthly hues . . . are but subtle deceits, not actually inherent in substances, but only laid on from without; so that all deified Nature absolutely paints like the harlot, whose allurements cover nothing but the charnel-house within." Because whiteness may be perceived paradoxically as "the visible absence of color, and at the same time the concrete of all colors," and because all colors may be nothing more than "subtle deceits," Ishmael reasons that to stare upon whiteness is to stare upon that "colorless, all-color of atheism from which we shrink" (165). Ishmael's thoughts concerning the "dumb blankness" of white reveal his fear that the search for meaning and purpose in the universe is a futile endeavor, for, as Ahab himself wonders briefly, perhaps "there's naught beyond" the "wall" of appearances (140).

If Ishmael's philosophical perspective were limited to this moment of atheistic despair and if he had failed to consider the possibility of other perspectives and convictions, then he surely would have pursued Moby Dick with a fervor akin to Ahab's, but by the time the *Pequod* finally gives chase to the white whale, Ishmael has consciously dissociated himself from Ahab's mad pursuit. Throughout much of the tale, for instance, the young narrator has pondered the curious behavior and formidable body of the sperm whale as if he were both scientist and philosopher, hoping to realize through an analytical process the secrets to be found in such a strange creature. Eventually, however, in a chapter devoted to the whale's tail, Ishmael accepts the limitations of his human knowledge, declaring humbly after devoting several chapters to "examining" the whale from head to tail: "Dissect him how I may, then, I but go skin deep; I know him not, and never will" (296). Though his inability to penetrate through the wall of appearances may exasperate Ishmael, it does not enrage him, perhaps because he has come to realize that the human self is more than an analytical intellect. As he has gladly acknowledged just a few pages before his analysis of the whale's tail, "doubts of all things earthly, and intuitions of some things heavenly; this combination makes neither believer nor infidel, but makes a man who regards them both with equal eye" (293). Ishmael's ability to value both the "dim doubts" of his mind and the "divine intuitions" that enter there certainly stands as a stark contrast to the self-confident, self-absorbed Ahab. As the narrative progresses, Ishmael's occasional observations of nature's beauty and order also contrast with Ahab's obsessive focus on nature's rapaciousness. The most memorable example of Ishmael's deriving joy from nature

occurs in “The Grand Armada” chapter, where he provides a wrapt description of the calm center to be found within the defensive formation of a whale herd, a center where he gazes down into the waters to see mothers nursing their newborns and other whales “serenely revell[ing] in dalliance and delight” as they mate. The sublime calm that he witnesses in the center of the whale herd inspires him to assert that “amid the tornadoed Atlantic” of his own being he “still forever centrally disport[s] in mute calm,” that deep within him he still “bathe[s] . . . in eternal mildness of joy” (303). Such an affirmation of joy when considering nature’s beauty is far from Ahab’s cry that he can no longer enjoy the sunset. Finally, Ishmael’s ability to value his comrades and human connections in general separates him from Ahab’s consciously chosen isolation and sense of superiority. More than two-thirds of the way through the narrative, Ishmael describes what may be labeled an epiphany of communal spirit that overwhelms him as he works with his fellow shipmates at squeezing out the lumps in the whale’s spermaceti in order to prepare it for the boiling process. While enjoying the sweet smell of the slippery liquid and the mystical sense of solidarity it suggests to him with his fellows, Ishmael, forgetting the “horrible oath” of hatred they have sworn against Moby Dick, suddenly feels “divinely free from all ill-will, or petulance, or malice” and is filled with “an abounding, affectionate, friendly, loving feeling” toward his “fellow beings” (322-323). In recalling the humane lesson of that moment, Ishmael submits that man would do well if he were to “shift, his conceit of attainable felicity; not placing it anywhere in the intellect or the fancy; but in the wife, the heart, the bed, the table, the saddle, the fire-side, the country” (323). The enthusiasm of this passage

may seem nothing more than the ebullient outburst of a naïve youth until we recall that Ishmael has devoted several of the narrative's opening chapters to the healing power of friendship. Because he is able to perceive "a simple honest heart" beneath the frightening exterior of the tattooed Queequeg, and because he does not dogmatically condemn but accommodates the pagan practices of his roommate from the Pacific islands, Ishmael forms a close bond with Queequeg that redeems him: "No more my splintered heart and maddened hand were turned against the wolfish world. This soothing savage had redeemed it" (56). Unlike Ahab, who sees only a reminder of his own blood lust when he looks to his "primitive" harpooners, Ishmael has discerned in Queequeg an admirable simplicity and calm self-possession that he admires and to which he aspires.

"The Try-Works" chapter contains that point in Ishmael's progress when he firmly repudiates Ahab's dark purpose. The opening paragraphs describe the try-works, those large masonry furnaces peculiar to American whalers that play a crucial role in rendering the whale's flesh into valuable commodities. As Ishmael describes the ghastly red glow of the furnaces and the "burning ship" speeding upon the ocean at midnight (325-326), Melville offers his readers a vivid, memorable metaphor of "heedless, unbridled, nineteenth century capitalism" (Marx 306). For Ishmael, "the rushing *Pequod*, freighted with savages, laden with fire . . . and plunging into that blackness of darkness, seem[s] the material counterpart of her monomaniac commander's soul." Caught up in the spell of the fire's glow while standing at the helm, Ishmael thinks that he can now better see "the redness, the madness, the ghastliness of others." He awakens, however, from "the unnatural hallucination

of the night” to realize that something is “fatally wrong” (327). Somehow, while gazing upon the fiery scene, he has turned himself around at the helm so that he now faces the stern and has allowed the ship to wander from its safe course. He recovers barely in time to prevent the ship from coming about and capsizing, having learned a profound lesson that leads to his direct repudiation of Ahab’s vision. In the ominous tone of an Old Testament prophet, he suddenly speaks directly to his readers, urging us not to believe “the artificial fire, when its redness makes all things look ghastly.” Instead, we should trust in the light of “the natural sun [when] . . . those who glared like devils in the forking flames . . . will show in far other, at least gentler, relief.” Ishmael’s tribute to the natural sun is by no means a way to avoid the darkness, however, for, as he is quick to point out, “the sun hides not Virginia’s dismal swamp, nor . . . the ocean, which is the dark side of this earth.” To see clearly and truly is to acknowledge fully the darkness and sorrow of life, which is why “that mortal man who has more of joy than sorrow in him . . . cannot be true—not true, or undeveloped.” For Ishmael, then, “the truest of all men was the Man of Sorrows, and the truest of all books is . . . Ecclesiastes [which] is the fine hammered steel of woe.” Ishmael’s frank recognition of the pervasive presence of sorrow in our earthly experience is certainly his way of acknowledging the truth that he has heard in Ahab’s complaint, but the advice he offers in the final paragraph of “The Try-Works” presents his most stern warning concerning the folly of seeing all of our world enveloped in darkness: “Give not thyself up, then, to fire, lest it invert thee, deaden thee; as for the time it did me. There is a wisdom that is woe; but there is a woe that is madness” (328). By virtue of his own receptive heart and enlight-

ened reflections, Ishmael avoids losing himself to the “woe that is madness,” thus offering what is perhaps Melville’s sane counter to the vindictive monomania that drives Ahab.

The accommodating social demeanor and flexibility of mind that Ishmael increasingly exhibits as the narrative progresses is certainly preferable to Ahab’s hardened heart and self-absorbed fixation. In this regard, Ishmael appears to have become the prototype of the affable intellectual within society who is very unlikely to impose his will and convictions upon anyone. As readers, we are very likely to approve of Ishmael’s evolution as a thinker and as a social being, but to consider his unwillingness to oppose Ahab outwardly after he has experienced the epiphany of “The Try-Works” chapter is to confront what may be Melville’s most stern warning concerning the fragility of liberty. Though Ishmael, the man of learning, enjoys the freedom to muse within his own private person, he is unwilling to employ his own eloquence publicly in order to oppose Ahab’s eloquence. For Ishmael to oppose Ahab would certainly be dangerous, especially when we consider the fervent support he has mustered among the crew, but an alliance between Ishmael and Starbuck could perhaps present a strong counter-argument that would weaken Ahab’s despotic hold upon the crew. A whaleship is certainly not a democracy, but as Melville makes clear in the chapter titled “The Town-Ho’s Story,” a determined crew can free itself from the despotism of an unreasonable captain through a well-considered mutiny. The crew of the doomed *Pequod*, however, never seriously considers mounting such an insurrection because no one among them is willing to oppose Ahab through word or deed. If we read the *Pequod* and its journey toward destruction as Melville’s warning to America in 1851, then Ish-

mael's public silence as the ship and its crew approach their destruction presents the very unsettling image of the citizen who passively witnesses the demise of the ship of state and all who labor upon its decks, quite aware that the destruction has been orchestrated by a malicious madman. Amid several paragraphs where Ishmael is intent upon understanding the source of Ahab's monomania, Melville's young intellectual narrator cynically submits that "the calculating people" who have hired Ahab to act as captain for the *Pequod* see his "dark symptoms" as the "very reasons he was all the better qualified . . . for a pursuit so full of rage and wildness as the bloody hunt of whales." Because Ahab is to lead a commercial enterprise that is to place the accumulation of wealth above all other considerations, the "calculating people" who have hired him see inhumane Ahab as "superlatively competent to cheer and to howl on his underlings to the attack" (158). Ten years before the onslaught of the American Civil War, young Ishmael chillingly describes the ability of the demagogue to lead and to enslave with no concern for the liberty and dignity of those who follow or are oppressed.<sup>7</sup>

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Notes

1. The so-called "Melville revival," which began in earnest with articles about his writings in 1919 on the centennial of his birth, is one of the most amazing stories in literary history. Melville and his writings were barely recognized at his death in 1891, but the revival of interest in Melville's work begun in the 1920s swept him from the ranks of relatively minor American writers into the rarefied company of Shakespeare and a few other authors of world renown so that only Whitman, James, and Faulkner are seen as his American equals.
2. Among those book-length studies that focus on the philosophical and theological dimensions of Melville's writings, the most noteworthy are William Braswell, *Melville's Religious Thought* (Durham: Duke UP, 1943); Paul Brodtkorb, *Ishmael's White World: A Phenomenological Reading of Moby-Dick* (New Haven: Yale UP, 1965); James Duban, *Melville's Major*

Fiction: Politics, Theology, and Imagination (DeKalb: U of Illinois Press, 1983); Bruce Grenberg, *Some Other World to Find: Quest and Negation in the Works of Herman Melville* (Urbana: U of Illinois Press, 1989); William Ellery Sedgwick, *Herman Melville: The Tragedy of Mind* (Cambridge: Harvard UP, 1944); Milton R. Stern, *The Fine Hammered Steel of Herman Melville* (Urbana: U of Illinois Press, 1968); Lawrance Thompson, *Melville's Quarrel with God* (Princeton: Princeton UP, 1952); and John Wenke, *Melville's Muse: Literary Creation and the Forms of Philosophical Fiction* (Kent, OH: Kent State UP, 1995).

3. Among the many analyses of political symbolism and commentary in *Moby-Dick*, four of the most engaging articles are Alvis (see "Works Cited"); Charles H. Foster, "Something in Emblems: A Reinterpretation of *Moby-Dick*," *New England Quarterly* 34 (1961): 3-35; Heimert (see "Works Cited"); and Willie T. Weathers, "Moby-Dick and the Nineteenth-Century Scene," *Texas Studies in Literature and Language* 1 (1960): 477-501.
4. Alvis goes so far as to argue that the crass commercial spirit of New Bedford and the owners of the Pequod represents Melville's overarching criticism of the secular, utilitarian nature of Lockean political theory and its stress upon the protection of individual property. In analyzing the commercial activity and the effects of commerce upon manners and morals within those pages leading up to Ahab's appearance on deck, he writes: "Commercial preoccupations follow naturally from Lockean ideas of atomistic individuals devising cooperative social arrangements to make themselves secure in their accumulation of property. A regime organized for commercial activity on a large scale answers to Locke's teaching that men seek, and ought to seek above all else, to preserve their lives, and then to preserve them in some comfort" (229).
5. Three book-length studies that provide excellent insight into the extent of Melville's reading and the use of such sources in his writings are Mary K. Bercaw, *Melville's Sources* (Evanston: Northwestern UP, 1987); Gail H. Coffer, *Melville's Classical Allusions: A Comprehensive Index and Glossary* (Westport, CT: Greenwood, 1994); and Merton M. Sealts, *Melville's Reading: Revised and Enlarged Edition* (Columbia: U of South Carolina Press, 1988). See also John B. Williams, *White Fire: The Influence of Emerson on Melville* (Long Beach: California State UP, 1991).
6. In the course of his thorough analysis of the political messages that may be embedded in Melville's *Moby-Dick*, Michael Rogin compares Ahab's monomania to the radical views and extremist rhetoric of the secessionist John C. Calhoun and the abolitionist Theodore Parker (134-137).
7. Though this essay has emphasized the ways in which Melville's *Moby-Dick* may be read as a dire warning to America in the 1850s, Andrew Delbanco is unfortunately quite right when he asserts in his recent cultural

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biography of Melville that the “suicidal charismatic” Melville invented in the character of Ahab is “an invention that shows no signs of becoming obsolete soon.” Though Melville lived and wrote in the nineteenth century, Delbanco points out that “it was not until the 1930s, when the power of demagoguery transformed the world into a charnelhouse, that the prescience of Melville’s creation was fully recognized” (175). Delbanco goes on to quote F. O. Matthiessen, the leading literary scholar of his generation, who, while writing after the fascists had seized most of Europe, saw in Ahab a figure who “provided an ominous glimpse of what was to result when the Emersonian will to virtue became in less innocent natures the will to power and conquest” (qtd. in Delbanco 175).

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NEWTON'S REACH

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Watch the stars, and from them learn,  
To the Master's honor all must turn,  
each in its track, without a sound,  
forever tracing Newton's ground.\*

--Einstein

Nearer the gods no mortal may approach.

--Edmond Halley,  
on Newton's Principia

Newton created a mathematically quantified account of gravitation that embraced terrestrial and celestial phenomena alike. In doing so he demolished the Aristotelian bifurcation of the universe into two realms, one above and one below the moon, and established a physical basis for the Copernican universe. The thoroughness and assurance with which he accomplished this task were such that his theory came to be regarded, for more than two centuries thereafter, as something close to the received word of God. Even today, when Newtonian dynamics is viewed as but a part of the broader canvas painted by Einstein's relativity, most of us continue to think in Newtonian terms, and Newton's laws still work well enough to guide spacecraft to the moon and planets. ("I think Isaac Newton is doing most of the driving now," said astronaut Bill Anders, when asked by his son who was "driving" the Apollo 8 spacecraft carrying him to the moon.)

Yet the man whose explication of the cosmos lives on in a billion minds was himself one of the strangest and most remotely inaccessible individuals who ever lived. When

John Maynard Keynes purchased a trunk full of Newton's papers at auction, he was startled to find that it was full of notes on alchemy, biblical prophecy, and the reconstruction from Hebraic texts of the floor plan of the temple of Jerusalem, which Newton took to be "an emblem of the system of the world." "Newton was not the first of the age of reason," a shaken Keynes told a gathering at the Royal Society. "He was the last of the magicians, the last of the Babylonians and Sumerians."<sup>1</sup> Newton was isolated, too, by the singular power of his intellect. Richard Westfall spent twenty years writing a highly perceptive scholarly biography of Newton, yet confessed, in the first paragraph of its preface, that

The more I have studied him, the more Newton has receded from me. It has been my privilege at various times to know a number of brilliant men, men whom I acknowledge without hesitation to be my intellectual superiors. I have never, however, met one against whom I was unwilling to measure myself, so that it seemed reasonable to say that I was half as able as the person in question, or a third or a fourth, but in every case a finite fraction. The end result of my study of Newton has served to convince me that with him there is no measure. He has become for me wholly other, one of the tiny handful of supreme geniuses who have shaped the categories of the human intellect, a man not finally reducible to the criteria by which we comprehend our fellow beings.<sup>2</sup>

Newton was an only child, the posthumous son of an illiterate yeoman. Born prematurely – so small, his mother used to say, that he could have fit in a quart bottle – he was not expected to survive. His mother, a widow with a farm to manage, soon remarried, and her new husband, the Reverend Barnabus Smith, sent the child off to be raised by his maternal grandmother; there he grew up, only a mile and a half away, within sight of the house where dwelt his loving mother and usurping stepfather. The product of all this – a fatherless birth on Christmas Day, survival against the odds, separation from his mother, and possession of a mind so powerful that he was as much its vassal as its master – was a brooding, simmering boy, sullen and bright and quick to anger. At age twenty Newton compiled a list of his youthful sins; among them were “threatening my father and mother Smith to burne them and the house over them,” “peevisness with my mother,” “striking many,” and “wishing death and hoping it to some.”<sup>3</sup>

The young Newton was as sensitive to the rhythms of nature as he was indifferent to those of men. As a child he built clocks and sundials and was known for his ability to tell time by the sun, but he habitually forgot to show up for meals, a trait that persisted throughout his life, and he was far too fey to help out reliably on the farm. Sent to gather in livestock, he was found an hour later standing on the bridge leading to the pasture, gazing fixedly into a flowing stream. On another occasion he came home trailing a leader and bridle, not having noticed that the horse he had been leading had slipped away. A sometime practical joker, he alarmed the Lincolnshire populace one summer night by launching a hot-air flying saucer that he constructed by attaching candles to a wooden to a wooden frame beneath a wax paper canopy.<sup>†</sup>

He seldom studied and customarily fell behind at grammar school, but applied himself at the end of each term and surpassed his classmates on final examinations, a habit that did little to enhance his popularity. A contemporary of Newton's reported that when the boy left for Cambridge, the servants at Woolsthorpe Manor "rejoiced at parting with him, declaring, he was fit for nothing but the 'Versity."<sup>4</sup>

At college he filled his lonely life with books. "*Amicus Plato amicus Aristoteles magis amica veritas*," he wrote in his student notebook – "Plato is my friend, Aristotle is my friend, but my greatest friend is truth."<sup>5</sup> He seems to have made the acquaintance of only one of his fellow students, John Wickins, who found him walking in the gardens "solitary and dejected" and took pity on him. Newton's studies, like those of many a clever undergraduate, were eclectic – he looked into everything from universal languages to perpetual motion machines – but he pursued them with a unique intensity. Nothing, least of all his personal comfort, could deter him when he was on to a question of interest: To investigate the anatomy of the eye he stuck a bodkin "betwixt my eye and the bone as near to the backside of my eye as I could," and he once stared at the sun for so long that it took days of recuperation in a dark room before his vision returned to normal.

For a time he drew inspiration from the books of René Descartes, a kindred spirit. Descartes like Newton had been a frail child, brought up by his grandmother, and both men were seized by an all-embracing vision while in their early twenties: Newton's epiphany was universal gravitation; Descartes's involved nothing less than a science of all human knowledge. Descartes died in 1650, more than a decade before Newton arrived at Cambridge, but his works were very much alive

among the “brisk part” of the faculty – those whose intellectual horizons were not bounded by Aristotle’s.<sup>‡</sup>

But if Newton learned a great deal from Descartes’s *Principia Philosophiae* – which included, among many other things, an assertion that inertia involves resistance to changes in motion and not just to motion itself – he was always happiest in contention, and Descartes’s philosophy promoted in him an equal and opposite reaction. Descartes’s disapproval of atomism helped turn Newton into a confirmed atomist. Descartes’s vortex theory of the solar system became the foil for Newton’s demonstration that vortices could not account for Kepler’s laws of planetary motion. Descartes’s emphasis on depicting motion algebraically encouraged Newton to develop a dynamics written in terms of algebra’s alternative, geometry; as this was not yet mathematically feasible, Newton found it necessary to invent a new branch of mathematics, the calculus. Infinitesimal calculus set geometry in motion: The parabolas and hyperbolas Newton drew on the page could be analyzed as the product of a moving point, like the tip of the stick with which Archimedes drew figures in the sand. As Newton put it, “Lines are described, and thereby generated not by the opposition of parts, but by the continued motion of points.” Here the unbending Newton danced.

Newton had completed this work by the time he received his bachelor’s degree, in April 1665. It would have established him as the greatest mathematician in Europe (and as the most accomplished undergraduate in the history of education) but he published none of it. Publication, he feared, might bring fame, and fame abridge his privacy. As he remarked in a letter written in 1670, “I see not what there is desirable in public esteem, were I able to acquire and maintain it. It would perhaps

increase my acquaintance, the thing which I chiefly study to decline.”<sup>6</sup>

Soon after his graduation the university was closed owing to an epidemic of the plague, and Newton went home. There he had ample time to think. One day (and it seems quite plausibly to have dawned on him all at once) he hit upon the grand theory that had eluded Kepler and Galileo – a single, comprehensive account of how the force of gravitation dictates the motion of the moon and planets. As he recounted it:

In those days I was in the prime of my age for invention & minded Mathematics & Philosophy more than at any time since...I began to think of gravity extending to the orb of the Moon &...from Kepler’s rule of the periodical times of the Planets being in sesquialterate proportion of their distances from the center of their Orbs, I deduced that the forces which keep the planets in their Orbs must [be] reciprocally as the squares of their distances from the centers about which they revolve: & thereby compared the force requisite to keep the Moon in her Orb with the force of gravity at the surface of the earth, & found them answer pretty nearly.<sup>7</sup>

Newton is said to have recalled, near the end of his life, that this inspiration came to him when he saw an apple fall from the tree in front of his mother’s house. The story may be true – Newton’s desk in his bedroom looked out on an apple

orchard, and even a Newton must occasionally have interrupted his work to gaze out the window – and it serves, in any event, to trace how he arrived at a quantitative description of gravitation that drew together the physics of the heavens and the earth.

Suppose, as Newton did that day, that the same gravitational force responsible for the apple's fall extends "to the orb of the Moon," and that its force decreases by the square of the distance over which it propagates.<sup>§</sup> The radius of the earth is 4,000 miles, meaning that Newton and his apple tree were located 4,000 miles from a point at the center of the earth from which (and this was one of Newton's key insights) the gravitational force of the earth emanates. The moon's distance from the center of the earth is 240,000 miles – 60 times farther than that of the apple tree. If the inverse-square law holds, the falling apple should therefore experience a gravitational force  $60^2$ , or 3,600, times stronger than does the moon. Newton assumed, from the principle of inertia, that the moon would fly away in a straight line, were it not constantly tugged from that path by the force of the earth's gravity. He calculated how far the moon "falls" toward the earth – i.e., departs from a straight line in order to trace out its orbit – every second. The answer was 0.0044 feet per second. Multiplying 0.0044 by 3,600 to match the proposed strength of gravitation at the earth's surface yielded 15.84 feet per second, or "pretty nearly" the 16 feet per second that an apple, or anything else, falls on Earth. This agreement confirmed Newton's hypothesis that the same gravitational force that pulls the apple down pulls at the moon, too.

Having done the calculation, Newton silently set it aside. Various explanations can be offered for his quietude: The cal-

culations fit “pretty nearly” but not perfectly, owing to inaccuracies in the estimated distance to the moon; Newton was interested in other matters, among them the binomial series and the nature of color; and, in any event, he seldom felt any impulse to call attention to himself: He didn’t publish the calculus, either, for twenty-seven years, and then anonymously.

The young Newton’s realization on universal gravitation went as follows: If the moon is 60 times as far from the center of the earth as is the apple (4,000 miles for the apple, 240,000 miles for the moon), and gravitation diminishes by the square of the distance, then the apple is subject to a gravitational force  $60^2$ , or 3,600, times that experienced by the moon. The moon, therefore, should “fall” along the curve of its orbit  $1/3,600^{\text{th}}$  as far each second as does the apple. And so it does.

A few academic colleagues did become acquainted with elements of Newton’s research, however, and two years after returning to Trinity College, Cambridge, he was named Lucasian Professor of Mathematics. (The position had been vacated by his favorite teacher, the blustery and witty mathematician Isaac Barrow, who left to take up divinity studies and died seven years later of an opium overdose.) But Newton the teacher had little more in common with his colleagues than had Newton the student. Numerous among the professors were the so-called “wet epicures,” their lives spent, wrote the satirist Nicholas Amherst, “in a supine and regular course of eating, drinking, sleeping, and cheating the juniors.”<sup>8</sup> Others were known as much for their eccentricities as for their scholarship; the master of Trinity, for one, was an effeminate shut-in who kept enormous house spiders in his rooms as pets. Not that Newton had any difficulty holding his own when it came to idiosyncrasies. Gaunt and disheveled, his wig askew, he

dressed in run-down shoes and soiled linen, seldom stopped working, and frequently forgot to sleep. Once, puzzling over why he seemed to be losing his mental agility while working on a problem, he reflected on the matter, realized that he had not slept for days, and reluctantly went to bed. He forgot to eat as well, often rising from his desk at dawn to breakfast on the congealed remains of the dinner that had been brought to him and left untouched the night before. His rare efforts at conviviality fared poorly; one night while entertaining a few acquaintances he went to his room to fetch a bottle of wine, failed to return, and was found at his desk, hunched over his papers, wine and guests forgotten.

As the years passed, Newton elaborated the calculus, advanced the art of analytical geometry, did pioneering work in optics, and conducted innumerable experiments in alchemy (possibly poisoning himself in the process; some of the symptoms of a mental breakdown he suffered in 1693 are consistent with those of acute mercury toxemia). All this he did in silence. Occasionally he reported on his research in his lectures, but few of the professors and fewer among the students could follow his train of thought, and so few came. Sometimes nobody at all showed up, whereupon Newton, confronted with the empty hall, would trudge back to his rooms, evidently unperturbed.

The outer world eventually intruded nonetheless. In the case of Newton, who shunned notoriety, as in that of Galileo, who welcomed it, the agency responsible was the telescope.

Newton was handy, and liked to build experimental devices. (A good thing, said a colleague, for he took no exercise and had no hobbies and would otherwise have killed himself with overwork.) He wanted a telescope with which to observe

comets and the planets. The only type of telescope in use at the time was the refractor – the sort that Galileo built, with a large lens at the front end to gather light. Newton disliked refractors; his extensive studies of optics had acquainted him with their tendency to introduce spurious colors. To overcome this defect he invented a new kind of telescope, one that employed a mirror rather than a lens to collect light. Efficient, effective, and cheap, the “Newtonian reflector” was to become the most popular telescope in the world. It brought Newton’s name to the attention of the Royal Society of London, which elected him to membership and prevailed upon him to publish a short paper he had written on colors. This decision he soon regretted; the paper drew twelve letters, prompting Newton to complain to Henry Oldenburg, the society’s secretary, that he had “sacrificed my peace, a matter of real substance.”<sup>9</sup>

The Royal Society was the most influential of the several scientific societies that had sprung up in the seventeenth century, each devoted to the empirical study of nature without interference by Church or State. The first of these, the Italian Academy of the Lynx, was founded in 1603 and had formed a platform from which Galileo, its most famous member, conducted his polemics. Founded under the amateur physicist King Charles II, the Royal Society was too poor to afford a laboratory or even an adequate headquarters, but was fiercely independent and proudly unfettered by tradition or superstition. Its temper had been expressed by Oldenburg in a letter to the philosopher Benedict Spinoza:

We feel certain that the forms and qualities of things can best be explained by the principles of mechanics, and that all effects of

Nature are produced by motion, figure, texture, and the varying combinations of these and that there is no need to have recourse to inexplicable forms and occult qualities, as to a refuge from ignorance.<sup>10</sup>

This clear new cast of mind was personified by the three members of the Royal Society – Edmond Halley, Christopher Wren, and Robert Hooke – who lunched together in a London tavern one cold January afternoon in 1684. Wren, who had been president of the Royal Society, was an astronomer, geometer, and physicist, and the architect of St. Paul's Cathedral—where his body is entombed, with an epitaph composed by his son inscribed on the cathedral wall that reads, IF YOU SEEK A MONUMENT, LOOK AROUND. Hooke was an established physicist and astronomer, the discoverer of the rotation of Jupiter; it was he who had worded the society's credo: "To improve the knowledge of natural things, and all useful Arts, Manufactures, Mechanic practices, Engines and Inventions by Experiments (not meddling with Divinity, Metaphysics, Morals, Politics, Grammar, Rhetoric or Logic)."<sup>11</sup> Halley at twenty-seven years old was a generation younger than his two companions, but he had already made a name for himself in astronomy, charting the southern skies from the island of St. Helena in the South Atlantic and there conducting pendulum experiments that showed a deviation in gravitational force caused by the centrifugal force of the earth's rotation. Ahead lay a distinguished career highlighted by Halley's compiling of actuarial tables, drawing maps of magnetic compass deviations and a meteorological map of the earth, and identifying as periodic the comet that has since borne his name.

Over lunch, Halley and Hooke discussed their shared conviction that the force of gravitation must diminish by the square of the distance across which it is propagated. They felt certain that the inverse-square law could explain Kepler's discovery that the planets move in elliptical orbits, each sweeping out an equal area within its orbit in an equal time. The trouble was, as Halley noted, that he could not demonstrate the connection mathematically. (Part of the problem was that nobody, except the silent Newton, had realized that the earth's gravitational force could be treated as if it were concentrated at a point at the center of the earth.) Hooke brashly asserted that he had found the proof, but preferred to keep it a secret so that others might try and fail and thus appreciate how hard it had been to arrive at it. Perhaps he meant to echo Descartes's *Geometry*, which ends with the infuriating declaration that the author has "intentionally omitted" elements of his proofs "so as to leave to others the pleasure of discovery."<sup>12</sup> In any event, Wren had his doubts about Hooke's mathematical ability if not Descartes', and he offered as a prize to Hooke or Halley a book worth up to forty shillings – an expensive book – if either could produce such a demonstration within two months. Hooke immediately agreed, but the two months passed and he failed to come up with the proof. Halley tried, and failed, but kept thinking about the matter.

The man who might be able to answer it, he realized, was Newton. Newton was forbidding, to be sure; his amanuensis, Humphrey Newton (no relation), said he had seen his master laugh only once in five years, this when Newton inquired of an acquaintance what he thought of a copy of Euclid he had loaned him, and the man asked what use or benefit its study might be in his life, "upon which Sir Isaac was very merry."<sup>13</sup>

But when the two men had met a couple of years earlier, Newton pumping Halley for data on the great comet of 1680, they had got along reasonably well. So, in August, while visiting Cambridge, Halley stopped in to see Newton again.

What, Halley asked Newton, would be the shape of the orbits of the planets if the gravitational force holding them in proximity to the sun decreased by the square of their distance from the sun?

An ellipse, Newton answered without hesitation.

Halley, in a state of “joy and amazement” as Newton recalled the moment, asked Newton how he knew this answer to be true.

Newton replied that he had calculated it.

Halley asked if he might see the calculation.

Newton searched through some of the stacks of papers that littered his quarters. There were thousands of them. Some bore the spiderweb tracings of his diagrams in optics. Others, adorned with medieval symbols and ornate diagrams of the philosophers’ stone, recorded his explorations of alchemy. A paper crammed with columns of notes compared twenty different versions of the Book of Revelations, part of the theological research Newton had conducted in substantiating his opposition to the doctrine of the Trinity – this a deep secret for the Lucasian Professor of Mathematics at Trinity College. Other pages were devoted to Newton’s attempts to show that the Old Testament prophets had known that the universe is centered on the sun, and that the geocentric cosmology upheld by the Roman Catholic Church was therefore a corruption. But, Newton said, he could not find his calculations connecting the inverse-square law to Kepler’s orbits. He told Halley he would write them out anew and send them to him.

*Timothy Ferris*

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Newton had calculated elliptical orbits five years earlier, upon his return from a stay of nearly six months at his mother's farm in Woolsthorpe, where he had gone when he learned that she had fallen mortally ill with a fever. His behavior there displayed a tenderness we do not normally associate with this frosty man: "He attended her with a true filial piety, sat up whole nights with her, gave her all her Physic himself, dressed all her blisters with his own hands, and made use of that manual dexterity for which he was so remarkable to lessen the pain which always attends the dressing," reported John Conduitt, who wrote notes for a memoir on Newton's life.<sup>14</sup> The semiliterate Hannah Newton Smith could not have understood much of what her firstborn son did and thought, but her devotion to him was unwavering. A letter she wrote him shortly before his graduation from Cambridge survives; one edge has been burned away (perhaps by Newton, who destroyed many of his papers) and a few words are missing, but what remains contains the word "love" three times in two lines:

*Isack*

*received your leter and I perceive you  
letter from mee with your cloth but  
none to you your sisters present thai  
love to you with my motherly lov  
you and prayers to god for you I  
your loving mother*

*hanah*<sup>15</sup>

She was buried on June 4, 1679. Conduitt described her as a woman of "extraordinary ... understanding and virtue."

When Newton returned to Cambridge after his mother's death, he returned as well to the study of universal gravitation. He had paid little attention to the problem since the time, years before, when he had watched the apple fall outside the window of his room in his mother's farmhouse. But now he was blessed with an antagonist – none other than Hooke himself, the tight-lipped claimant to the inverse-square law, who had written him with questions concerning the trajectory described by an object falling straight toward a gravitationally attractive body. Newton, aloof as usual, replied by declining Hooke's invitation to correspond further, but took the trouble to answer Hooke's questions, and in so doing made a mistake. Hooke seized upon the error, pointing it out in a letter of reply. Furious at himself, Newton concentrated on the matter for a time, and in the process verified to his own satisfaction that gravity obeying an inverse-square law could be shown to account for the orbits of the planets. Then he put his calculations aside. These were the papers he referred to when Halley came calling.

But they, too, turned out to contain an error – which may explain why the cautious Newton said he was “unable” to find them in the first place – and so Newton was obligated to resume work on the problem in order to satisfy his promise to Halley. This he did, and three months later, in November, he sent Halley a paper that successfully derived all three of Kepler's laws from the precept of universal gravitation obeying an inverse-square law. Halley, immediately recognizing the tremendous importance of Newton's accomplishment, hastened to Cambridge and urged him to write a book on gravitation and the dynamics of the solar system. Thus was born Sir Isaac Newton's *Mathematical Principles of Natural Philosophy and His System of the World—the Principia*.

Work on the book took over Newton's life. "Now I am upon this subject," he wrote the astronomer John Flamsteed, in a letter soliciting data on the orbits of Saturn's satellites, "I would gladly know the bottom of it before I publish my papers."<sup>16</sup> The effort only intensified his air of preoccupation. His amanuensis Humphrey Newton observed that

he ate very sparingly, nay, oftentimes he has forget [*sic*] to eat at all, so that going into his Chamber, I have found his Mess untouched of which when I have reminded him, [he] would reply, Have I; and then making to the Table, would eat a bit or two standing...At some seldom Times when he design'd to dine the Hall, would turn to the left hand, & go out into the street, where making a stop, when he found his Mistake, would hastily turn back, & then sometimes instead of going into the Hall, would return to his Chamber again.<sup>17</sup>

Newton still wandered alone in the gardens, as he had since his undergraduate days, and when fresh gravel was laid in the walks he drew geometric diagrams in it with a stick (his colleagues carefully stepping around the diagrams so as not to disturb them). But now his walks were more often interrupted by bolts of insight that sent him running back to his desk in such haste, Humphrey Newton noted, that he would "fall to write on his Desk standing, without giving himself the Leisure to draw a Chair to sit down in."<sup>18</sup>

Newton's surviving drafts of the *Principia* support Thomas Edison's dictum that genius is one percent inspiration and ninety-nine percent perspiration. Like Beethoven's drafts of the opening bars of the Fifth Symphony, they are characterized less by sudden flashes of insight than by a constant, indefatigable hammering away at immediate, specific problems; when Newton was asked years later how he had discovered his laws of celestial dynamics, he replied, "By thinking of them without ceasing."<sup>19</sup> Toil was transmuted into both substance and veneer, and the finished manuscript, delivered to Halley in April 1686, had the grace and easy assurance of a work of art. For the modern reader the *Principia* shares with a few other masterworks of science – Euclid's *Elements* among them, and Darwin's *Origin of Species* – a kind of inevitability, as if its conclusions were self-evident. But the more we put ourselves into the mind-set of a seventeenth-century reader, the more it takes on the force of revelation. Never before in the history of empirical thought had so wide a range of natural phenomena been accounted for so precisely, and with such economy.

Gone forever was Aristotle's misconception that the dynamics of objects depended upon their elemental composition, so that water, say, had a different law of motion from fire. In the Newtonian universe every object is described by a single quantity, its *mass* – Newton invented this concept – and mass possesses *inertia*, the tendency to resist any change in its state of motion. This is Newton's first law – that "every body perseveres in its state of rest, or of uniform motion in a right [i.e., straight] line, unless it is compelled to change that state..."<sup>20</sup>

Whenever an immobile object is set into motion, or a moving object changes its velocity or direction of motion, Newton infers that a *force* is responsible. Such a change may be expressed as *acceleration*, the rate of change of velocity with time. This is Newton's second law – that force equals mass times acceleration:

$$F = ma$$

The price paid for the application of force is that the action it produces must also result in an equal and opposite reaction. Thus, Newton's third law – that “to every action there is always opposed and equal reaction.”<sup>21</sup>

Applied to the motions of the planets, these concepts explicated the entire known dynamics of the solar system. The moon circles the earth; the law of inertia tells us that it would move in a straight line unless acted upon by an outside force; as it does *not* move in a straight line, we can infer that a force – gravity – is responsible for bending its trajectory into the shape of its orbit. Newton demonstrates that gravitational force diminishes by the square of the distance, and establishes that this generates Kepler's laws of planetary motion. It is because gravitation obeys the inverse-square law that Halley's Comet or the planet Mars moves rapidly when near the sun and moves more slowly when far from the sun, sweeping out equal areas along its orbital plane in equal times. The amount of gravitational force exerted by each body is directly proportional to its mass. (From these considerations Newton was able to account for the tides as being due to the gravitational tug of both the sun and the moon, thus clearing up Galileo's confusion on that score.)

From Newton's third law (for every action an equal and opposite reaction) we can deduce that gravitational force is *mutual*. The earth not only exerts a gravitational force on the moon, but is subjected to a gravitational force *from* the moon. The mutuality of gravitational attraction introduces complexities into the motions of the planets. Jupiter, for instance, harbors 90 percent of the mass of all the planets, and so perturbs the orbits of the nearby planet Saturn to a degree "so sensible," Newton comments dryly, "that astronomers are puzzled with it." With the publication of the *Principia*, their puzzlement was at an end. Newton had provided the key to deciphering all observed motion, whether cosmic or mundane.

Halley had to exert himself to get the *Principia* published in financially thirsty times. The Royal Society had taken a loss the year before by publishing John Ray's *History of Fishes*, a handsome book that nevertheless had not exactly flown from the booksellers' shelves. Unsold copies lay stacked in the society storeroom, and at one point, Halley's salary was being paid in copies of the *History of Fishes*. Further complications arose when Hooke proposed, groundlessly, that Newton had stolen the theory of universal gravitation from him, and Newton responded by threatening to leave the *Principia* unfinished by omitting Part Three, a more popularized section that Halley hoped would "much advance the sale" of the book.<sup>5</sup>

But Halley persisted, paying the printing costs out of his own pocket, and the *Principia* appeared in 1687, in an edition of some three or four hundred copies. The book was (and is) difficult to read, owing in part to Newton's having, as he told his friend William Derham, "designedly made his *Principia* abstruse...to avoid being baited by little Smatterers in Mathematicks."<sup>22</sup> But Halley promoted it tirelessly, sending copies

to leading philosophers and scientists throughout Europe, presenting King James II with a gloss of it, and going so far as to review it himself, for the *Philosophical Transactions of the Royal Society*. Thanks in large measure to his efforts, the *Principia* had a resounding impact. Voltaire wrote a popular account of it, and John Locke, having verified with Christian Huygens that Newton's mathematics could be trusted, mastered its contents by approaching it as an exercise in logic. Even those who could not understand the book were awed by what it accomplished; the Marquis de l'Hopital, upon being presented with a copy by Dr. John Arbuthnot, "asked the Doctor every particular thing about Sir Isaac," recalled a witness to their exchange, "even to the color of his hair, said does he eat & drink & sleep. Is he like other men?"<sup>23</sup>

The answer, of course, was no. Newton was a force of nature, brilliant and unapproachable as a star. "As a man he was a failure," wrote Aldous Huxley, "as a monster he was superb." We remember the monster more than the man, and the specter of a glacial Newton portraying the universe as a machine has furthered the impression that science itself is inherently mechanical and inhuman. Certainly Newton's personality did little to alleviate this misconception. Indifferent to the interdependence of science and the humanities, Newton turned a deaf ear to music, dismissed great works of sculpture as "stone dolls," and viewed poetry as "a kind of ingenious nonsense."<sup>24</sup>

He spent his last forty years in the warming and stupefying embrace of fame, his once lean face growing pudgy, the dark luminous eyes becoming puffy, the wide mouth hardening from severity to petulance. His penetrating gaze and unyielding scowl became the terror of the London counterfeiters he enjoyed interrogating as warden of the mint, sending many to

the gallows. He denied requests for interviews submitted by the likes of Benjamin Franklin and Voltaire. He was friendlier with Locke, with whom he studied the Epistles of Saint Paul, and with the diarist Samuel Pepys, who had been president of the Royal Society, but alarmed them when in 1693 he succumbed to full-scale insomnia and suffered a mental breakdown, writing them strange, paranoid letters in a spidery scrawl in which he implied that Pepys was a papist and told Locke that "being of opinion that you endeavoured to embroil me with woemen & by other means I was so much affected with it as that when one told me you were sickly & would not live I answered twere better if you were dead."<sup>25</sup> Newton was confined to bed by friends who, unable otherwise to assess the health of an intellect so far above the timberline, judged him well when at last he regained the ability to make sense of his own *Principia*. Elected to Parliament, he is said during the 1689-1690 session to have spoken but once, when, feeling a draft, he asked an usher to close the window. He died a virgin.

Newton cast a long shadow, and is said to have retarded the progress of science by seeming to settle matters that might otherwise have been further investigated. But he himself was acutely aware that the *Principia* left many questions unanswered, and he was forthright in confronting them.

Of these, none was more puzzling than the mystery of gravitation itself. If nature operated according to cause and effect, its paradigm the cue ball that scatters the billiard balls, then how did the force of gravitation manage to make itself felt across gulfs of empty space, without benefit of any medium of contact between the planets involved? This absence of a causal explanation for gravity in Newton's theory prompt-

ed sharp criticism: Leibniz branded Newton's conception of gravity "occult," and Huygens called it "absurd."

Newton agreed, calling the idea of gravity acting at a distance "so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking, can ever fall into it."<sup>26</sup> and conceding that he had no solution to the riddle: "The Cause of Gravity is what I do not pretend to know," he said.<sup>27</sup> In the *Principia* appears his famous phrase *Hypotheses non fingo* – "I have not been able to discover the cause of those properties of gravity from phenomena, and [so] I frame no hypothesis."<sup>28</sup> He would have approved of the quatrain that adorned one of his portraits:

See the great Newton, he who first surveyed  
The plan by which the universe was made;  
Saw Nature's simple yet stupendous laws,  
And proved the effects, though not explained the cause.

One might say, then, that evidence of Newton's genius survives in his questions as well as in his answers. Human understanding of gravitation has been greatly improved by Einstein's conception of gravity as a manifestation of the curvature of space, but the road to full comprehension still stretches on ahead; its next, dimly perceived way station is thought to be a hyperdimensional unified theory or a quantum account of general relativity. Until that goal is achieved, and perhaps even thereafter, Newton's prudent tone will remain the byword of gravitational physics.

Newton was equally straightforward in pointing out that he could not hope to calculate all the minute variations in the orbits of the planets produced by their mutual gravitational

interactions. As he put it in the *Principia*:

The orbit of any one planet depends on the combined motion of all the planets, not to mention the action of all these on each other. But to consider simultaneously all these causes of motion and to define these motions by exact laws allowing of convenient calculation exceeds, unless I am mistaken, the force of the entire human intellect.<sup>29</sup>

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Today this is known as the “many body problem,” and it remains unsolved, just as Newton foresaw. Calculation of the precise interactions of all the planets in the solar system – much less that of all the stars in the Milky Way – may as Newton prophesied forever elude “the force of the entire human intellect,” or it may one day yield, if not to the mind, then to the inhuman power of giant electronic computers. No one knows. For now, let Einstein pronounce Newton’s eulogy: “*Genug davon. Newton verzeih’ mir,*” Einstein wrote, in his “Autobiographical Notes,” after discussing weaknesses in Newton’s assumptions:

Enough of this. Newton, forgive me: you found the only way which, in your age, was just about possible for a man of highest thought and creative power. The concepts, which you created, are even today still guiding our thinking physics, although we now know that they will have to be replaced by others farther removed from the sphere of

immediate experience, if we aim at a profounder understanding.<sup>30</sup>

In any case, the ultimate unsolved questions were for Newton not scientific but theological. His career had been one long quest for God; his research had spun out of this quest, as if by centrifugal force, but he had no doubt that his science like his theology would redound to the greater glory of the Creator. “When I wrote my treatise upon our System I had an eye upon such Principles as might work with considering men for the belief of a Deity & nothing can rejoice me more than to find it useful for that purpose,” he replied to a query from a young chaplain, the Reverend Richard Bentley, who was writing a series of sermons on God and natural law.<sup>31</sup> At the conclusion of the *Principia*, Newton asserted that “this most beautiful system of the sun, planets, and comets, could only proceed from the counsel and dominion of an intelligent and powerful Being.”

Newton saw science as a form of worship, yet Newtonian mechanics had a dolorous effect upon traditional belief in a Christian God. Its determinism seemed to deny free will; as Voltaire wrote, “It would be very singular that all nature, all the planets, should obey eternal laws, and that there should be a little animal, five feet high, who, in contempt of these laws, could act as he pleased.”<sup>32</sup>

Newton himself did not believe that his theory had diminished the role of the deity. As he saw it, the real miracle is existence itself, and he invoked the hand of God at the origin of the universe: “The Motions which the Planets now have could not spring from any natural Cause alone, but were impressed by an intelligent Agent,” he wrote Bentley.<sup>33</sup> In modern scientific terminology the question he was addressing is

called the problem of initial conditions. We think that the formation of the solar system can be explained in terms of the workings of natural law, but the authorship of the laws remains a mystery. If for every effect there must have been a cause, then what, or who, was responsible for the *first* cause? But to ask such questions is to leave science behind, and to enter precincts still ruled by Saint Augustine of Hippo and Isaac Newton the theologian.

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\* Translation by Dave Fredrick.

† I have tried this one myself and can testify that, like many of Newton's inventions, it works very well indeed.

‡ A devotee of warmth who had experienced his transcendent moment in an overheated room he called "the oven," Descartes succumbed at age fifty-two to the impetuous attentions of the twenty-three-year-old Queen Christina of Sweden, who insisted that he brave the Nordic chill to tutor her in science and philosophy each morning at five. The less accommodating Newton declined most invitations, never traveled abroad, and lived to be eighty-five.

§ This, the "inverse square" law, can be arrived at intuitively if we imagine the force of gravity as being spread out across the surface of a sphere. Consider two planets orbiting a star in such a way that the distance of planet B from the star is twice that of planet A. Let each planet rest on the surface of an imaginary sphere centered on the star. Since the radius of the sphere encompassing the orbit of planet B is twice that for planet A, its surface area is equal to the square of the surface area of planet A's sphere. (The area of the surface of a sphere equals  $4\pi r^2$ , where  $r$  is the radius of the sphere.) This means that the total amount of gravitational force emanating from the star must be spread out over sphere B with a surface equal to that of sphere A squared. The gravitational force experienced by planet B will, therefore, be the inverse square of that experienced by planet A. Newton derived this much from Kepler's third law, but Kepler himself had failed to obtain it, evidently because he thought of gravitation as being propagated in only two dimensions, not three.

\*\* He was of an active, restless, indefatigable Genius even almost to the last, and always slept little to his death, seldom going to Sleep till two three, or four a Clock in the Morning, and seldomer to Bed, often continuing his Studies all Night, and taking a short Nap in the Day. His Temper was

Melancholy. . .” Sound familiar? That’s Hooke, not Newton, as described by a contemporary. Inevitably, we tend to quarrel most bitterly with those who most nearly resemble ourselves.

RECOMMENDED BOOKS  
FOR FURTHER READING

87



*Freedom and Its Betrayal : Six Enemies of Human Liberty*  
– Isaiah Berlin

*Earth* – David Brin

*A Gentle Madness : Bibliophiles, Bibliomanes, and the Eternal  
Passion for Books* – Nicholas A. Basbane  
[For a further look at the world of book collectors.]

*The Gutenberg Elegies: The Fate of Reading in an Electronic Age*  
– Sven Birkerts



“THE RIGHT TO IGNORE THE STATE”<sup>1</sup>

**Herbert Spencer**  
(1820-1903)

89

I. As a corollary to the proposition that all institutions must be subordinated to the law of equal freedom, we cannot choose but admit the right of the citizen to adopt a condition of voluntary outlawry. If every man has freedom to do all that he wills, provided he infringes not the equal freedom of any other man, then he is free to drop connection with the State, – to relinquish its protection and to refuse paying toward its support. It is self-evident that in so behaving he in no way trenches upon the liberty of others; for his position is a passive one, and whilst passive he cannot become an aggressor. It is equally self-evident that he cannot be compelled to continue one of a political corporation without a breach of the moral law, seeing that citizenship involves payment of taxes; and the taking away of a man’s property against his will is an infringement of his rights. Government being simply an agent employed in common by a number of individuals to secure to them certain advantages, the very nature of the con-

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1 From the first edition of “Social Statics,” published in London in 1850. When, after ten years, the first small edition was exhausted, the book was allowed to go out of print in England; but for some twenty-five years thereafter Spencer’s publishers continued to supply the English market by importing editions in sheets printed from the plates of Messrs. Appletons’ American reprint. In 1892 Spencer published in both England and America a volume of excerpts from “Social Statics,” in which the chapter here given, along with about half the remaining contents of the original work, did not appear.

nection implies that it is for each to say whether he will employ such an agent or not. If any one of them determines to ignore this mutual-safety confederation, nothing can be said except that he loses all claim to its good offices, and exposes himself to the danger of maltreatment, – a thing he is quite at liberty to do if he likes. He cannot be coerced into political combination without a breach of the law of equal freedom; he *can* withdraw from it without committing any such breach; and he has therefore a right so to withdraw.

2. “No human laws are of any validity if contrary to the law of nature; and such of them as are valid derive all their force and all their authority mediately or immediately from this original.” Thus writes Blackstone, to whom let all honor be given for having so far outseen the ideas of his time, – and indeed, we may say of our time. A good antidote, this, for those political superstitions which so widely prevail. A good check upon that sentiment of power-worship which still misleads us by magnifying the prerogatives of constitutional governments as it once did those of monarchs. Let me learn that a legislature is *not* “our God upon earth,” though, by the authority they ascribe to it and the things they expect from it, they would seem to think it is. Let them learn rather that it is an institution serving a purely temporary purpose, whose power, when not stolen, is at the best borrowed.

Nay, indeed, have we not seen that government is essentially immoral? Is it not the offspring of evil, bearing about it all marks of its parentage? Does it not exist because crime exists? Is it not strong, or, as we say, despotic, when crime is great? Is there not more liberty – that is, less government – as crime diminishes? And must not government cease when crime ceases, for very lack of objects on which to perform its

functions? Not only does magisterial power exist *because* of evil, but it exists *by* evil. Violence is employed to maintain it; and all violence involves criminality. Soldiers, policemen, and jailers; swords, batons, and fetters, – are instruments for inflicting pain; and all infliction of pain is in the abstract wrong. The State employs evil weapons to subjugate evil, and is alike contaminated by the objects with which it deals and the means by which it works. Morality cannot recognize it; for morality, being simply a statement of the perfect law, can give no countenance to anything growing out of, and living by, breaches of that law. Wherefore legislative authority can never be ethical – must always be conventional merely.

Hence there is a certain inconsistency in the attempt to determine the right position, structure, and conduct of a government by appeal to the first principles of rectitude. For, as just pointed out, the acts of an institution which is in both nature and origin imperfect cannot be made to square with the perfect law. All that we can do is to ascertain, firstly, in what attitude a legislature must stand to the community to avoid being by its mere existence an embodied wrong; secondly, in what manner it must be constituted so as to exhibit the least incongruity with the moral law; and, thirdly, to what sphere its actions must be limited to prevent it from multiplying those breaches of equity it is set up to prevent.

The first condition to be conformed to before a legislature can be established without violating the law of equal freedom is the acknowledgement of the right now under discussion – the right to ignore the State.

3. Upholders of pure despotism may fitly believe State-control to be unlimited and unconditional. They who assert that men are made for governments and not governments

for men may consistently hold that no one can remove himself beyond the pale of political organization. But they who maintain that the people are the only legitimate source of power – that legislative authority is not original, but deputed – cannot deny the right to ignore the State without entangling themselves in an absurdity.

For, if legislative authority is deputed, it follows that those from whom it proceeds are the masters of those on whom it is conferred: it follows further that as masters they confer the said authority voluntarily: and this implies that they may give or withhold it as they please. To call that deputed which is wrenched from men whether they will or not is nonsense. But what is here true of all collectively is equally true of each separately. As a government can rightly act for the people only when empowered by them, so also can it rightly act for the individual only when empowered by him. If A, B, and C debate whether they shall employ an agent to perform for them a certain service, and if, whilst A and B agree to do so, C dissents, C cannot equitably be made a party to the agreement in spite of himself. And this must be equally true of thirty as of three: and if of thirty why not of three hundred, or three thousand, or three million?

4. Of the political superstitions lately alluded to, none is so universally diffused as the notion that majorities are omnipotent. Under the impression that the preservation of order will ever require power to be wielded by some party, the moral sense of our time feels that such power cannot rightly be conferred on any but the largest moiety of society. It interprets literally the saying that “the voice of the people is the voice of God,” and, transferring to the one the sacredness attached to the other, it concludes that from the will of the people – that

is, of the majority – there can be no appeal. Yet is this belief entirely erroneous?

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Suppose, for the sake of argument, that, struck by some Malthusian panic, a legislature duly representing public opinion were to enact that all children born during the next ten years should be drowned. Does any one think such an enactment would be warrantable? If not, there is evidently a limit to the power of a majority. Suppose, again, that of two races living together – Celts and Saxons, for example – the most numerous determined to make the others their slaves. Would the authority of the greatest number be in such case valid? If not, there is something to which its authority must be subordinate. Suppose, once more, that all men having incomes under 50 lbs. a year were to resolve upon reducing every income above that amount to their own standard, and appropriating the excess for public purposes. Could their resolution be justified? If not, it must be a third time confessed that there is a law to which the popular voice must defer. What, then, is that law, if not the law of pure equity – the law of equal freedom? These restraints, which all would put to the will of the majority, are exactly the restraints set up by that law. We deny the right of a majority to murder, to enslave, or to rob, simply because murder, enslaving, and robbery are violations of that law – violations too gross to be overlooked. But if great violations of it are wrong, so also are smaller ones. If the will of the many cannot supersede the first principle of morality in these cases, neither can it in any. So that, however insignificant the minority, and however trifling the proposed trespass against their rights, no such trespass is permissible.

When we have made our constitution purely democratic, thinks to himself the earnest reformer, we shall have brought

government into harmony with absolute justice. Such a faith, though perhaps needful for the age, is a very erroneous one. By no process can coercion be made equitable. The freest form of government is only the least objectionable form. The rule of the many by the few we call tyranny: the rule of the few by the many is tyranny also, only of a less intense kind. "You shall do as we will, and not as you will," is in either case the declaration; and if the hundred make it to the ninety-nine, instead of the ninety-nine to the hundred, it is only a fraction less immoral. Of two such parties, whichever fulfills this declaration necessarily breaks the law of equal freedom: the only difference being that by the one it is broken in the persons of ninety-nine, whilst by the other it is broken in the persons of a hundred. And the merit of the democratic form of government consists solely in this, that it trespasses against the smaller number

The very existence of majorities and minorities is indicative of an immoral state. The man whose character harmonizes with the moral law, we found to be one who can obtain complete happiness without diminishing the happiness of his fellows. But the enactment of public arrangements by vote implies a society consisting of men otherwise constituted – implies that the desires of some cannot be satisfied without sacrificing the desires of others – implies that in the pursuit of their happiness the majority inflict a certain amount of *un-*happiness on the minority – implies, therefore, organic immorality. Thus, from another point of view, we again perceive that even in its most equitable form it is impossible for government to dissociate itself from evil; and further, that unless the right to ignore the State is recognized, its acts must be essentially criminal.

5. That a man if free to abandon the benefits and throw off the burdens of citizenship, may indeed be inferred from the admissions of existing authorities and of current opinion. Unprepared as they probably are for so extreme a doctrine as the one here maintained, the radicals of our day yet unwittingly profess their belief in a maxim which obviously embodies this doctrine. Do we not continually hear them quote Blackstone's assertion that "no subject of England can be constrained to pay any aids or taxes even for the defense of the realm or the support of government, but such as are imposed by his own consent, or that of his representatives in parliament"? And what does this mean? It means, say they, that every man should have a vote. True: but it means much more. If there is any sense in words, it is a distinct enunciation of the very right now contended for. In affirming that a man may not be taxed unless he has directly or indirectly given his consent, it affirms that he may refuse to be so taxed; and to refuse to be taxed is to cut all connection with the State. Perhaps it will be said that this consent is not a specific, but a general one, and that the citizen is understood to have assented to everything his representative may do, when he voted for him. But suppose he did not vote for him; and on the contrary did all in his power to get elected some one holding opposite views – what then? The reply will probably be that, by taking part in such an election, he tacitly agreed to abide by the decisions of the majority. And how if he did not vote at all? Why then he cannot justly complain of any tax, seeing that he made no protest against its imposition. So, curiously enough, it seems that he gave his consent in whatever way he acted – whether he said yes, whether he said no, or whether he remained neuter! A rather awkward doctrine, this. Here stands an unfortunate

citizen who is asked if he will pay money for a certain preferred advantage; and whether he employs the only means of expressing his refusal or does not employ it, we are told that he practically agrees, if only the number of others who agree is greater than the number of those who dissent. And thus we are introduced to the novel principle that A's consent to a thing is not determined by what A says, but by what B may happen to say!

It is for those who quote Blackstone to choose between this absurdity and the doctrine above set forth. Either his maxim implies the right to ignore the State, or it is sheer nonsense.

6. There is a strange heterogeneity in our political faiths. Systems that have had their day, and are beginning here and there to let the daylight through, are patched with modern notions utterly unlike in quality and color; and men gravely display these systems, wear them, and walk about in them, quite unconscious of their grotesqueness. This transition state of ours, partaking as it does equally of the past and the future, breeds hybrid theories exhibiting the oddest union of bygone despotism and coming freedom. Here are types of the old organization curiously disguised by germs of the new – peculiarities showing adaptation to a preceding state modified by rudiments that prophesy of something to come – making altogether so chaotic a mixture of relationships that there is no saying to what class these births of the age should be referred.

As ideas must of necessity bear the stamp of the time, it is useless to lament the contentment with which these incongruous beliefs are held. Otherwise it would seem unfortunate that men do not pursue to the end the trains of reasoning which have led to these partial modifications. In the pres-

ent case, for example, consistency would force them to admit that, on other points besides the one just noticed, they hold opinions and use arguments in which the right to ignore the State is involved.

For what is the meaning of Dissent? The time was when a man's faith and his mode of worship were as much determinable by law as his secular acts; and, according to provisions extant in our statute-book, are so still. Thanks to the growth of a Protestant spirit, however, we have ignored the State in this matter – wholly in theory, and partly in practice. But how have we done so? By assuming an attitude which, if consistently maintained, implies a right to ignore the State entirely. Observe the positions of the two parties. "This is your creed," says the legislator; "you must believe and openly profess what is here set down for you." "I shall not do anything of the kind," answers the nonconformist; "I will go to prison rather." "Your religious ordinances," pursues the legislator, "shall be such as we have prescribed. You shall attend the churches we have endowed, and adopt the ceremonies used in them." "Nothing shall induce me to do so," is the reply; "I altogether deny your power to dictate to me in such matters, and mean to resist to the uttermost." "Lastly," adds the legislator, "we shall require you to pay such sums of money toward the support of these religious institutions as we may see fit to ask." "Not a farthing will you have from me," exclaims our sturdy Independent: "even did I believe in the doctrines of your church (which I do not), I should still rebel against your interference; and if you take my property it shall be by force and under protest."

What now does this proceeding amount to when regarded in the abstract? It amounts to an assertion by the individual of the right to exercise one of his faculties – the religious sen-

timent – without let or hindrance, and with no limit save that set up by the equal claims of others. And what is meant by ignoring the State? Simply an assertion of the right similarly to exercise *all* the faculties. The one is just an expansion of the other – rests on the same footing with the other – must stand or fall with the other. Men do indeed speak of civil and religious liberty as different things: but the distinction is quite arbitrary. They are parts of the same whole, and cannot philosophically be separated.

“Yes they can,” interposes an objector; “assertion of the one is imperative as being a religious duty. The liberty to worship God in the way that seems to him right is a liberty without which a man cannot fulfill what he believes to be Divine commands, and therefore conscience requires him to maintain it.” True enough; but how if the same can be asserted of all other liberty? How if maintenance of this also turns out to be a matter of conscience? Have we not seen that human happiness is the Divine will – that only by exercising our faculties is this happiness obtainable – and that it is impossible to exercise them without freedom? And if this freedom for the exercise of faculties is a condition without which the Divine will cannot be fulfilled, the preservation of it is, by our objector’s own showing, a duty. Or, in other words, it appears not only that the maintenance of liberty of action *may* be a point of conscience, but that it *ought* to be one. And thus we are clearly shown that the claims to ignore the State in religious and in secular matters are in essence identical.

The other reason commonly assigned for nonconformity admits of similar treatment. Besides resisting State dictation in the abstract, the dissenter resists it from disapprobation of the doctrines taught. No legislative injunction will make him

adopt what he considers an erroneous belief; and, bearing in mind his duty toward his fellow-men, he refuses to help through the medium of his purse in disseminating this erroneous belief. The position is perfectly intelligible. But it is one which either commits its adherents to civil nonconformity also, or leaves them in a dilemma. For why do they refuse to be instrumental in spreading error? Because error is adverse to human happiness. And on what ground is any piece of secular legislation disapproved? For the same reason – because thought adverse to human happiness. How then can it be shown that the State ought to be resisted in the one case and not in the other? Will any one deliberately assert that if a government demands money from us to aid in *teaching* what we think will produce evil, we ought to refuse it, but that if the money is for the purpose of *doing* what we think will produce evil, we ought not to refuse it? Yet such is the hopeful proposition which those have to maintain who recognize the right to ignore the State in religious matters, but deny it in civil matters.

7. The substance of this chapter once more reminds us of the incongruity between a perfect law and an imperfect state. The practicability of the principle here laid down varies directly as social morality. In a thoroughly vicious community its admission would be productive of anarchy. In a completely virtuous one its admission will be both innocuous and inevitable. Progress toward a condition of social health – a condition, that is, in which the remedial measures of legislation will no longer be needed – is progress toward a condition in which those remedial measures will be cast aside, and the authority prescribing them disregarded. The two changes are of necessity coordinate. That moral sense whose supremacy

will make society harmonious and government unnecessary is the same moral sense which will then make each man assert his freedom even to the extent of ignoring the State – is the same moral sense which, by deterring the majority from coercing the minority, will eventually render government impossible. And as what are merely different manifestations of the same sentiment must bear a constant ratio to each other, the tendency to repudiate governments will increase only at the same rate that governments become needless.

Let not any be alarmed, therefore, at the promulgation of the foregoing doctrine. There are many changes yet to be passed through before it can begin to exercise much influence. Probably a long time will elapse before the right to ignore the State will be generally admitted, even in theory. It will be still longer before it receives legislative recognition. And even then there will be plenty of checks upon the premature exercise of it. A sharp experience will sufficiently instruct those who may too soon abandon legal protection. Whilst, in the majority of men, there is such a love of tried arrangements, and so great a dread of experiments, that they will probably not act upon this right until long after it is safe to do so.

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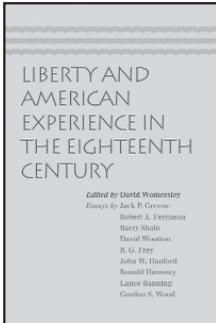
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