

# The Pulse

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*Scientia Crescat*

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***The Pulse***

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†Winner of the 2009 Wallace L. Daniel Award for Undergraduate Writing, presented by the Zeta of Texas chapter of Phi Beta Kappa. This prize is awarded annually to the best paper (exclusive of any written by staff members) in *The Pulse's* print and online publications, as judged by a Phi Beta Kappa panel. In addition to a \$200 cash prize, the recipient is invited to give *The Pulse* Student Lecture on the subject of his or her research.

On the cover: *St. Augustine in His Studio* (1480), fresco by Sandro Botticelli, Church of Ognissanti, Florence.  
Cover design by Maria Petrozzi.

## FOREWORD

The Honors Program celebrates its fiftieth anniversary this year, coinciding with the fifth anniversary of *The Pulse*. The Honors Program and *The Pulse* both find their home in the Honors College, but that is not the only thing they have in common. Since its earliest days, the Honors Program has encouraged, enabled, and rewarded high-quality student research in the form of the Honors thesis. The founding documents of the program, drafted in 1959, emphasize the central place of the thesis in the Honors curriculum. In the five years of *The Pulse's* existence, our goals of advancing undergraduate research have closely coincided with those of the Honors Program. A number of our published articles, including several winners of the Wallace Daniel Award for Undergraduate Writing, have been condensed from Honors thesis chapters. By highlighting undergraduate student scholarship—both within and outside of the Honors Program—*The Pulse* helps knowledge to flourish all across campus by providing examples of and incentives for commendable student scholarship.

In celebration of this relationship, *The Pulse* is pleased to present a special Honors Jubilee supplement in this year's journal. Beginning on page 82, you'll find represented some key documents, figures, and moments in the history of the Honors Program. Our thanks to Dr. Albert Beck, Assistant Director of the Honors Program, for research in the Texas Collection archives where many of these items were found, and to Dr. Andrew Wisely, Director of the Honors Program, for the impetus, funding, and brainstorming leading to the creation of this supplement. We are also grateful to *Pulse* IT staff member Josh Daniliuc, who put in the extra time to typeset this supplement.

A record fifty-one submissions were received for *The Pulse* this spring, yielding an acceptance rate of just under ten percent. This edition's articles come from a wide variety of disciplines. Eric Headstream's essay gives an account of knowledge, ignorance and skepticism through the lens of philosopher David Lewis. Stephanie Frazon's paper explains the role of the hippocampus in consolidating declarative memory during slow wave sleep. Arianna Phillips, in her second appearance in *The Pulse*, contributes her award-winning essay arguing that Chopin's Sonata in B-Flat Minor, Op. 35, can be considered sublime. Rachel Beil is featured in this edition with a chapter of her Honors thesis: a study on the Hebrew understanding of the wilderness as a place of Yahweh's

provision. A *Pulse* staff member, Sarah Casey, presents a paper on the relationship between origins and obedience in Milton's *Paradise Lost*.

The wide range of disciplines reflected in this semester's papers is mirrored in the staff of *The Pulse*, a group responsible for evaluation and editing of the papers, publicizing the journal, designing the artwork, and managing the technology required to typeset the journal. This staff, formed entirely of student volunteers, donates its time and talents to serve the university with this publication. We cannot thank them enough for their professionalism, hard work, and dedication to *The Pulse* and its mission.

This edition is available on our website, [www.baylor.edu/pulse](http://www.baylor.edu/pulse), along with previous issues in our archive. The fall 2008 online edition, which featured papers from Baylor's natural science departments, forms the third issue in our series of online publications featuring a specific department or group of departments. Next fall's edition will present papers from the Religion department.

The staff of *The Pulse* is deeply grateful to our sponsoring unit, the Honors College, for its financial and logistical support of our operations. We are likewise indebted Phi Beta Kappa, Zeta of Texas, for sponsoring the Wallace L. Daniel Award for Undergraduate Writing, presented to the top paper in *The Pulse*. The winner of this award is also invited to present the annual *Pulse* Student Lecture, generously hosted and sponsored by the Honors Residential College.

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## **Defining the Center and Periphery in Ancient Near Eastern Cultures**

Rachel Beil

The biblical wilderness tradition provides a framework for the monotheistic perspective of the Jewish faith. For the Israelites, the wilderness was the locus of God's revelation to his people. Robert Leal notes that “[a]ll the basic revelations of God's nature and God's will occur in the wilderness,” including the revelation of God's name, his covenant with Israel, and his standard of holiness for his people.<sup>1</sup> The significance of the geophysical location of these revelations must be understood in order to grasp the revelation fully. Within the Hebrew symbolic and spatial interpretation of the wilderness lies a central tenet of the Hebrew faith—the supremacy of Yahweh.

It is necessary to contextualize the Hebrew treatment of the wilderness within the scope of other ancient Near Eastern perspectives to comprehend how the wilderness tradition shapes much of the Jewish understanding of God. Only through the lens of a cross-cultural comparison of wilderness ideas and a holistic approach to the wilderness motif—one that neglects neither the catastrophes nor the ecstasies found in the wilderness—can biblical scholars today understand the context in which Hebrew monotheism took shape. This essay will first explore ancient Near Eastern urban spatial and symbolic understandings of the cosmos through distinctive physical, supernatural, and mythic characteristics. As a case study, the Ugaritic use and interpretation of geographical center and periphery will be used to provide a specific comparison with the Israelites. I will then discuss the biblical function of negative wilderness elements as a reinterpretation of ancient stereotypes by analyzing the Hebrew biblical term *midbar*, or wilderness. A brief

study of the garden, or center, will point toward a paradoxical biblical understanding of center and periphery which is significant for defining a theology of wilderness. Finally, though a full analysis of the biblical wilderness motif is beyond the scope of this paper, I will draw upon some Old Testament scripture to characterize Yahweh's sovereignty as farther-reaching than the power typical of other ancient deities, resulting in the distinctive Hebrew monotheistic faith.

### **Ancient Near Eastern Understanding of the Cosmos**

Cultures in the ancient Near East understood life holistically, melding politics, religion, geographical location, occupation, and family life together.<sup>2</sup> Most ancient Near Eastern cultures worshiped a pantheon of gods in which each god was sovereign over a particular aspect of life, thus religion was drastically influenced by elements from the culture.<sup>3</sup> One essential component of the ancient Near Eastern worldview that illustrates this difference is the spatial and symbolic distinction between the center and the periphery. Mark Smith discusses the importance of the location of the household, place of worship, and general commerce of a culture in affecting the geographical development of center. Where the urban elite lived, worshiped, and traded defined the center; the periphery, by contrast, was the dangerous and uncertain land of the unknown and uncultivated, the wilderness.<sup>4</sup>

In the ancient Near East, there were two primary ways of understanding the spatial order of the universe. The first was a vertical understanding, expressed through the sacred mountain in which the gods dwell above, man populates the earth, and the dead are beneath the earth.<sup>5</sup> Nick Wyatt describes the mountain as the "point of intersection between the three realms."<sup>6</sup> The second was a horizontal representation of the universe, which portrays reality as the center of a plateau. The value and significance of the land decreases the further away from the center it is, "until it becomes the amorphous and featureless desert, bounded by the cosmic ocean, beyond which lies the realm of the dead and chaos."<sup>7</sup> Using Wyatt's standards as a guideline, it seems the wilderness would have been viewed as a completely undesirable, intolerable place to live because of the danger associated with it and the uselessness of uncultivated land.<sup>8</sup> Because the wilderness was regarded as such a difficult place to live, the center's value increased by comparison since it was the cultural, economic, and spiritual location of human growth and development.

In his article, “The Mountain of the Gods,” Evan Eisenberg discusses how the conceptualization of the center was fundamentally affected by the topography of each ancient culture. Mesopotamian societies, for example, lived in valleys where large-scale farming occurred. As users of large irrigation systems, Mesopotamians believed they controlled water, the powerful generator necessary for life in all varieties of plants and animals. Bustling metropolises also emerged, and the city came to be viewed as the heart of all life. According to Eisenberg, the city was the center of commerce, social gatherings, and religious worship. The source of life, or “world-pole” for Mesopotamian society developed around the city’s tower, which they believed, drew gods and paradise from the mountains into their cities.<sup>9</sup>

### Center and Periphery at Ugarit

Mesopotamians were not alone in their admiration for the city. As a result of its geographical location, Ugarit also developed a city-centered understanding of the cosmos. Situated at the base of Mount Saphon and on the Mediterranean Sea, Ugarit was central to commercial activity during the second millennium. The rich land produced a plethora of barley, olives, and wheat.<sup>10</sup> The kingdom of Ugarit also contained almond and pistachio trees, and hills covered in cedar, pine, and cypress trees.<sup>11</sup> As an agriculturally rich kingdom, the center was sometimes referred to by the agrarian term, *sonm*.<sup>12</sup> The base of Mount Saphon was not only a hub for agricultural and commercial activity; it was also a focal point for religion. According to Smith, “Ugarit’s trade may constitute the basis for the mythological rendering of the connections between home and foreign within the center” causing the mythological center to manifest “a subdivision between home and foreign space.”<sup>13</sup> The division between center and periphery is further expressed in the ramparts which divided the city from the more dangerous periphery and wilderness.<sup>14</sup> Archeologists have found that Ugaritic city centers existed with defensive walls and small streets beginning in about 3000 B.C.E.<sup>15</sup>

In contrast to the center, Smith describes the periphery as the outback, or “transitional zone and the site of human activities such as grazing and hunting.”<sup>16</sup> Here the security of the city was removed, and humans were vulnerable to the demonic, monstrous spirits that resided in the wilderness. Deities who wandered from their mountains into the periphery were also subject to attack. Baal, the storm-god and

local deity of Ugarit, for example, defeated his enemy Yamm because the battlefield was within the city-limits, part of Baal's domain. Later in this myth, however, Baal is challenged out in the periphery by the personification of death, Mot. In this chaotic realm even the powerful storm-god is defeated.<sup>17</sup>

Not only was the human cultivation of land helpful for defining the center, but the Ugaritic deities also played important roles in understanding the character of the city. Mark Smith points to the local gods that protected or helped humanity and occupied sacred mountains within the "area of human cultivation and civilization."<sup>18</sup> Mount Saphon, for example, was home to Baal. El, Anat, Athtart, Dagan, and Resheph were also a part of the Ugaritic pantheon given mountains or cult-sites as dwelling places. According to Smith, foreign beneficent deities were also welcomed in the city, because Ugarit was the locus of trade between many different types of people. While these deities were admitted into the center, however, they were refused admittance to local mountains and cult-sites. Unlike Baal and the other beneficent gods, demonic enemies did not have holy mountains and were found beyond the periphery of a city.

Mot and Yamm, the two most significant pre-cosmic, malevolent deities, are allowed to infringe upon the Ugaritic center, but they cannot rest or dwell there.<sup>19</sup> Smith distinguishes Mot from beneficent local gods, even though he was associated with the mountain *knkny*, because his mountain was connected to the underworld and was thus isolated from human civilization. Yamm's domain was also isolated from the center of Ugarit, argues Smith, because of its association with the wild and perilous sea. Wyatt describes the sea as "a non-world beyond the cosmic ocean," further removed from the city than even the wilderness, and associated with complete disorder, chaos, and evil.<sup>20</sup> Mot, Yamm, and other cosmic enemies threaten to destroy human life in the periphery, and sometimes even attack civilization within the *somm*.<sup>21</sup>

Ancient civilizations also used various animals to represent the safety of the city or the danger of the wilderness. Animals are domesticated and helpful to the society in the center.<sup>22</sup> Smith shows the contrasts present in the use of animal imagery by juxtaposing the beneficent gods' positive representations as a bull, calf, bird, or cow, to the antagonistic gods' portrayals as monstrous creatures like the snake or dragon. These distinctions further emphasize the contrasting safety of the center and danger of the periphery.

The Ugaritic texts *KTU* 1.12 and *KTU* 1.23 are parallel stories about two exiled women and their offspring who reflect the “exile of disinherited kin” motif, one common theme that contributed to the Ugaritic understanding of wilderness.<sup>23</sup> In ancient Near Eastern mythology, stories of shunting the patriarch’s lower-status sons into rough lives as destitute wanderers were rather common. These stories reflect on the parasocial element, the existence of men who lived neither in urban nor in rural society, but instead resided in the wilderness. In both stories, maidservants of El and their offspring were sent into the wilderness, eventually leading to the birth of the Devourers who aided Baal’s destruction. In *KTU* 1.12, El exhorted his maidservants, “Go out from the tree in the centre towards the vast and awful desert,” suggesting they had done something to deserve expulsion.<sup>24</sup>

Parallels have been drawn to the biblical story of Hagar and Ishmael who were exiled as a result of Sarah’s jealousy, just as El’s jealous household expels the maidservants and their illegitimate sons (Genesis 16:1-15). In another version of the story, recorded in *KTU* 1.23, El sent his exiled wives and sons this message, “Raise an offering in the holy desert, there sojourn mid rock and brush.”<sup>25</sup> It was not until the women reached the guardian of the *somm* after wandering for seven years that they were given nourishment. John Gray argues that a closer relationship can be seen between this story and that of Cain and Lamech, because the narrative ought to be identified as “an etiological myth explaining and sanctioning the punishment or expiation of fratricide” as a result of the destruction of Baal, the Devourers’ brother.<sup>26</sup> Baal met the exiled sons in the wilderness while hunting and died as a result of fighting with them. All of these stories reveal the importance of the wilderness within the ancient Near Eastern cultures. The mythology of the wilderness or desert was at least partially formed as a result of narratives like the expulsion of disinherited kin by associating the wilderness with the shame, isolation, and poverty experienced by the rejected.

### ***Midbar*: A Modern Interpretation of Biblical Tradition**

As part of the ancient Near East, the Hebrew biblical tradition expressed some of the same negative perceptions of the wilderness evident among its contemporaries. However, the particular function of these negative elements was unique in the Israelite interpretation, giving rise to a significant theological difference. The negativity associated

with the wilderness in the Hebrew tradition served as an indicator of Yahweh's complete sovereignty, whereas other ancient Near Eastern cultures simply employed negative aspects to illustrate the peril of the wilderness.

Historically, scholars have debated to what extent the wilderness ought to be negatively and positively viewed. Between 1920 and 1930, the idealization of the wilderness tradition was popular, and an emphasis on the positive wilderness reading of Hosea was prevalent. Paul Humbert, in particular, argued that the desert is Hosea's ideal period in Israel's history. Shemaryahu Talmon contested Humbert's analysis in his article, "The Desert Motif," by deconstructing the idea that Israel was ever a nomadic society. In his analysis, Talmon properly identifies the wilderness as a dangerous, threatening environment, but he overemphasizes its negativity and consequently misinterprets the biblical function of wilderness. The Hebrew wilderness tradition portrays not only the perils of wilderness life, but also the sovereignty and power of Yahweh in this chaotic realm. If the wilderness illuminates Yahweh's power and sovereignty, it must also hold positive elements for his people, and thus the exclusive association of the wilderness with judgment and testing is unbalanced. A reanalysis of the Hebrew terms used to describe wilderness is important for understanding Talmon's perspective, as well as for attaining a more balanced view that considers the importance of the wilderness in illuminating Yahweh's power and sovereignty.

Several different Hebrew words are used to refer to the wilderness or desert, but the most significant term for this paper is *midbar*. The term is used throughout the Hebrew Bible to describe a variety of spatial-geophysical and temporal-historic places.<sup>27</sup> The spatial-geophysical nuance focuses on *midbar* as uncultivated areas in southern Palestine. This understanding seems to tie directly into the Ugaritic view that the periphery is functionally useless because of its lack of cultivation. However, unlike the people of Ugarit, the Israelites reserved value for the peripheral lands as grazing land helpful for raising cattle near "semi-permanent shepherd encampment—or semi-permanent and urban settlements."<sup>28</sup>

*Midbar* can also be translated as "drift-land" or "drift." Talmon specifies this interpretation as wilderness as a motif in the ancient Hebrew world. By doing so, he licenses *midbar* to describe the destiny of man in a hostile environment, as well as the sociological aspects of

the shepherd lifestyle and ecological impacts of the tent-life. In addition to the literal *midbar* location, the “drift” is associated with the peripheral lands outside cultivated areas. It is sparsely inhabited and understood as the less-valued outskirts of society in terms of ecological productivity and sociological activity. One other biblical use of *midbar* is to describe the true wilderness, or desert. In these cases, the term represents the harshest form of the unknown, a land truly uninhabitable for humans. This use of *midbar* best supports Talmon’s perspective of the Bible’s negative portrayal of the wilderness; however, this notion of wilderness illustrates more than Yahweh’s justice. It also showcases his loving character as he extends grace to them through miraculous provision in a place where they could not have survived their own.

The difficult lifestyle and harsh geographical location associated with *midbar* is the background for understanding Yahweh’s provision for the Israelites during their post-Exodus sojourn through the wilderness. In each use of *midbar*, the severe climate was integral to the wilderness concept. Streams and rivers were unknown in this arid land, and most plants had difficulty surviving. With the exception of a few nomads, the land was devoid of people. It was a perilous, cruel place where beasts, men, and demons all fought against one another for survival. Due to the exceptionally remote circumstances of the wilderness, outlaws and fugitives ventured into this outback to avoid the certain repercussions that awaited them in civilized society.<sup>29</sup>

Contrary to Talmon’s interpretation of the perilous wilderness elements, the natural dangers of the wilderness became the springboards God used to reveal himself to his people. After safely escaping from the Egyptians, Moses and all of the Israelites celebrated the Lord’s provision: “In your steadfast love you led the people whom you redeemed; you guided them by your strength to your holy abode.”<sup>30</sup> This praise is echoed in Moses’ discourse to the Israelites while they wait east of the Jordan River to enter the land. As he reviews all of Israel’s history beginning with the Exodus, Moses reminds the people, “The Lord your God, who goes before you . . . carried you [in the wilderness], just as one carries a child, all the way that you traveled until you reached this place.”<sup>31</sup> In the perilous wilderness, Yahweh proved strong and faithful, even when the people did not. He quenched their thirst at Marah, Massah, and Meribah, quelled their hunger with manna in the wilderness of Sin, and defeated the Amalekites after they had attacked the people at Meribah. The scriptures repeatedly refer back to the exodus wilderness tradition

as setting the pattern for Israel's relationship with God. Grace and provision were showered upon the people throughout the wilderness experience in order to draw them back into a proper relationship with God. Natural disasters were transformed from catastrophes to blessings because discomfort was met with the lavish provision of the sovereign God. This pattern is echoed throughout the Old Testament in the reigns of good and bad judges and kings, faithful and unfaithful men and women.

Talmon's analysis seems to jump to unbalanced conclusions in his negative reflection of the desert experience as "an unavoidable transition period in which Israel recurrently is prepared for the ultimate transfer from social and spiritual chaos to . . . order."<sup>32</sup> Though he is correct in judging time spent in the wilderness as transitional, Talmon seems to misunderstand the "transfer" from chaos to order as a negative change. Rather, the increase in order should be a positive one, even if the transitional period derives from judgment or punishment. Furthermore, the Israelites' involuntary placement in the desert does not preclude the possibility of either a great period of growth or a face-to-face meeting with God from occurring in the wilderness (1 Kings 19). Even though Talmon correctly defines the primary, superficial function of the wilderness experience as punishment, a concession to the importance of this punishment in revealing God as faithful provider and just judge may have led him to less one-sided conclusions about the function of the wilderness in the Hebrew Scriptures.

### **The Garden as the Ancient Center**

Ancient Near Eastern peoples' fear of the wilderness was partially formed by the ancient concept of world-poles and their role in associating the city-center with the garden (often considered to be the antithesis of the wilderness). According to biblical cosmology, "the earth is an island floating on the cosmic waters that surface in the Garden of Eden to benefit humankind," and thus holy cities were formed with gardens and rivers at the center.<sup>33</sup> Additionally, in many ancient Near Eastern cultures, the world-pole, or linking point between heaven and earth, was another influential factor on the location of city development. The world-pole was normally located at the mountain where the beneficent gods were worshiped.<sup>34</sup> Israel was not an exception; its holy city was constructed near the holy mountain and centered at the garden.



The Canaanites, Israelites, and Ugarits all understood the world-pole to be at the mountain. The cosmic mountain (Mt. Zion for the Israelites, Mt. Saphon for the Ugarits) was the linking point between heaven and earth. During Solomon's reign, both the cult-site and noble palace were located in Jerusalem at the top of Mt. Zion.<sup>35</sup> The center of all orderliness, tranquility, and creativity flowing from Yahweh throughout creation was therefore manifest in the city. Lawrence Stager argues that as such, Jerusalem was understood to be the center of Yahweh's interaction with humans and the place where he was establishing his kingdom.

Due to its location on a cosmic mountain, Jerusalem was also thought to be "situated above the primordial waters," connected with the order, peace, and creativity of God in the human experience.<sup>36</sup> Stager connects the river of life found in Genesis 2 with four branches from the cosmic water flowing from the Temple in Ezekiel 47 and Joel 3:18 to show that the garden center was associated with Jerusalem since at least the tenth century B.C.E. Beginning with Solomon, he argues, the waters were physically manifest in aqueducts that watered gardens and parks in the Kidron Valley. The entire valley was full of gardens and parks, as was much of the Near East. The Assyrian monarch Ashurnasirpal II, for example, recorded the building of an aqueduct to conduct water from the distant mountains to the gardens of his capital city, Aššur, as one of his many achievements. Full of exotic plant species that were transplanted from all over the empire, these gardens symbolized the "ecumenic sovereignty of the ruler."<sup>37</sup>

The Temple was also connected with the Garden of Eden, the polar opposite of wilderness, through botanical comparisons. Transplanted cedars and hundreds of other trees, plants, flowers, and animals associated Mt. Zion and Jerusalem with Mt. Amanus and the West. According to Stager, mythological ideas from the northern Levant about sacred space, creation, gardens, and mountains were transplanted to the south and transformed so that Yahweh's Temple on Mt. Zion corresponded to El's home on Mt. Saphon. The Psalms reflect this transformation by describing the Temple as the house of the cedars of El, and the Israelite Vine as being carried into the Sea (*Yamm*) and River (*Nabar*). The Garden of Eden is further identified with the Jerusalem Temple in Psalm 36:

They feast on the rich fare of your House;

You give them drink from your abundant streams.  
 For with you is the Fountain of Life,  
 In your light we see light.<sup>38</sup>

Stager's association of Jerusalem with the orderly paradise seems to agree with Talmon's interpretation of the wilderness as a place of utter chaos and havoc, the antithesis of the Holy City. This view, however, depicts the Hebrew tradition as nothing more than another expression of the Ugaritic understanding of a human-developed, peaceful center and a hazardous, desolate wilderness. The biblical record does not support this direct correspondence.

The complexity of the biblical expression of wilderness first appears in the Genesis narrative of the fall of Adam and Eve. Eden was viewed as the center of divine revelation and establishment, and thus exile into the wilderness was the repercussion for their sin. As part of the Adamic curse, God promised the couple they would experience the difficulties of uncultivated land and have enmity with the serpent. Though this story seems to match the stereotypical ancient Near Eastern geophysical understanding, there is a paradox within Genesis 3 that foreshadows the complex representation of wilderness throughout the rest of the Bible. Generally, toiling at the earth to produce food was an activity that occurred at the center, where land was cultivated and human civilization attempted to rule the earth. In the primordial garden, however, no work needed to be done. Cultivating the land was part of the Adamic curse that would occur in the wilderness. Furthermore, in the ancient Near East, serpents were often associated with the wilderness, yet Eve is tempted by the serpent in Eden. This shift is not a direct reversal of the typical distinction between center and periphery, because the curse is still banishment from the center into the hostile unknown, but it certainly portrays the complexity of the biblical expression of wilderness.

The banishment of Adam and Eve is not the only incident in which exile to the wilderness was a direct result of judgment; in Ezekiel 28:11-19, the wilderness is again correlated to exile. Ezekiel lamented the king of Tyre by connecting him with Adam and reflecting on the universal fall from perfection (Eden) to abhorrence (the forsaken wilderness):

You were in Eden, the garden of God;

With an anointed cherub as guardian I placed you;  
you were on the holy mountain of God...  
You were blameless in your ways  
from the day that you were created,  
until iniquity was found in you...  
So I cast you as a profane thing from the mountain of God,  
and the guardian cherub drove you out.<sup>39</sup>

Here Eden is associated with Yahweh's presence and blessing. The original state of humanity was to be placed on the holy mountain where God created humanity "blameless."<sup>40</sup> Eden was the center of Yahweh's revelation and establishment of his kingdom; banishment had a purely negative connotation associated with judgment, similar to the Ugaritic expression of wilderness as a place for fugitives and Talmon's interpretation of the biblical use of wilderness.

Though interpreting Eden as a metaphor for Jerusalem is helpful in highlighting correlations between the Israelite and Ugaritic interpretations of center, it is important that we do not assume scholars agree on this interpretation of Eden. The Garden of Eden is not exclusively a metaphor for Jerusalem city, it is also the original paradise—unadulterated nature.<sup>41</sup> Evan Eisenberg suggests that Eden can be viewed as the most basic form of wilderness on earth because it was untouched by human hands, and therefore is not a direct mirror of the typical city-center ideology. He argues instead that the garden would have been viewed as the savored last bit of wildness within a city. At the heart of unadulterated nature is God, and thus, wildness and wilderness are good things. Just as humans could not live in Eden, they could not live in the wilderness because they were incapable of handling pure Godhead; "it's like wanting to live in the sun."<sup>42</sup>

Eisenberg's argument, though underdeveloped, brings to light an interesting point when discussing the biblical understanding of wilderness. Is the biblical expression of wilderness exclusively a judgment that exiles uncooperative people to the dangerous periphery? Or is the wilderness a stronger, less-domesticated form of God's presence on the earth? If the first is true, then it would seem the biblical perspective is reduced to its Ugaritic counterpart. However, the biblical record makes clear that wilderness experiences are not merely judgmental, but also transformative in positive ways. In the Hebrew scriptures, wilderness experiences are part of a larger pattern to show Yahweh as uniquely

and universally sovereign through the self-revelation of his judgment, covenant, and kingdom, even, or perhaps especially, in the chaotic periphery.

### Sovereignty in the Wilderness

There are several Old Testament passages that show Yahweh's sovereignty extending past the normal boundaries of Ugaritic deities through his victory over enemies shared by the beneficent Ugaritic deities. Smith continues his comparison of the Ugaritic and ancient Israelite cultures by pointing out the similar origin of these cosmic enemies from West Semitic culture.<sup>43</sup> Baal and Yahweh were both recorded as being the enemy of Sea (*yam; ym*), Leviathan (*ltn*), Tunnanu (*tannin*), and Death (*mawet; mot*). Psalm 74:12-17 is critical to understanding the deviation in Israelite understanding of geographical and symbolic sovereignty from Ugarit understanding:

Yet, O God, my king from of old,  
 Maker of deliverance throughout the world,  
 You are the one who smashed *Sea* with your Might,  
 Cracked the heads of the *Tannin* in the waters;  
 You are the one who crushed the heads of *Leviathan*,  
 Left him as food...  
 You are the one who broke open springs and streams,  
 You are the one who dried up the Mighty Rivers.  
 To You belongs the day, Yours too the night,  
 You are the one who established the Light of the Sun.  
 You are the one who fixed all the boundaries of the world,  
 Summer and winter—it was You who fashioned them.

The Psalmist records the defeat of each of these enemies as precursors to the creation of the world.<sup>44</sup> Yahweh defeated Tannin beyond the periphery, “in the waters,” a place of utter chaos and unknown to the ancient Near Eastern cultures. Not only did Yahweh defeat Tannin and Leviathan, but he also defeated Sea by drying up the rivers and streams. This passage was a proclamation of the sovereignty of God—everything in creation is under His dominion, including cosmic enemies, the days, seasons, and general boundaries of the world. In the Ugarit understanding of deities and realms, the pantheon of gods did not

have power outside of their individual centers. When they encountered enemies in the periphery, the outcome was uncertain. As a monotheistic religion that combined key attributes of the ancient Near Eastern pagan gods into the one Godhead, the Jewish faith accorded Yahweh an extraordinary degree of sovereignty in comparison with the Ugaritic deities. As a result, the Psalmist has no doubt of Yahweh's ability to conquer any menace in any realm, as he crushed powerful deities in their own abodes.

Isaiah also has a few references to Yahweh's power over typical cosmic enemies. In Isaiah 25:8, as Smith suggests, "The image of God here swallowing up Death reverses the comparable image of Death's demanding to swallow Baal in Ugaritic."<sup>45</sup> Where Baal could not succeed over Mot, Smith explains, Yahweh easily "swallows up Death forever."<sup>46</sup> This was an eternal victory for Yahweh; Death could never have power over him. Isaiah 27:1 significantly gives Yahweh the supreme role as the apocalyptic judge who will punish and kill Leviathan.

Not only did Yahweh defeat these cosmic opponents, but he also domesticated and diminished them into his personal playthings. Sea and Leviathan were stripped of any power and transformed from monstrous beasts into revelations of Yahweh's supreme authority and omnipotence. God described the Sea as a newborn in Job 38:8-11 and Leviathan as a creature merely caught on God's "fishhook."<sup>47</sup> The Hebrew Scriptures placed the power over the wilderness completely in Yahweh's hands, thereby stripping everyone else of control in this chaotic realm. Similarly, Smith shows how El (or Yahweh) was given supreme legal power over Yamm and Mot in Ugaritic texts. He chose both monsters as his playthings, giving them the power in the wilderness to defeat Baal. Baal, as simply a local Ugaritic deity, had no control over El's anointing of Yam as the "champion of gods" and no sovereignty over El's territory in the wilderness. As in the Hebrew texts, it was El who had supreme authority over every region and creature, including other deities.<sup>48</sup>

The biblical portrayal of Yahweh as being sovereign over every realm and deity transforms the wilderness from an uninhabitable realm to the place of God's grace and revelation. Yahweh's sovereignty in the wilderness enables a positive role of the wilderness in the lives of Yahweh's people. It is in the wilderness that "the establishment of the relationship between Israel and Yahweh is accomplished through miraculous acts of provision used to teach them the fundamental

principles in that relationship.<sup>249</sup> Specifically, the revelation of God's name, the establishment of the covenant with Israel, the gift of manna, the theophany on Sinai, and the presentation of the Ten Commandments all occur in the wilderness. The presence of Yahweh, the God and provider of Israel, in the wilderness encourages the Hebrews to endure the trials of the wilderness faithfully, knowing that they are not abandoned, as well as to observe Yahweh's commandments in all times and places.

The biblical understanding of the Godhead caused a reversal in the traditional Near Eastern understanding of the center and wilderness. Paradoxically, the dangerous unknown became regarded as the locus of God's self-revelation.<sup>50</sup> In the dualistic mythology of most ancient Near Eastern cultures, the cosmic order of center, periphery, and beyond the periphery promoted a heroic deity and was thus essential to the depiction of hope. However, the Israelites' unique theology brought about key adjustments to this schema. For the Hebrews, Yahweh's provision and revelation even in the wilderness arose from their belief that Yahweh is the *only* God.

## NOTES

- <sup>1</sup> Leal, *Wilderness*, 52.
- <sup>2</sup> Leal, "Negativity towards Wilderness," 370.
- <sup>3</sup> Smith, *Origins*, 29.
- <sup>4</sup> *Ibid.*, 27.
- <sup>5</sup> Wyatt, "Sea and Desert," 40.
- <sup>6</sup> *Ibid.*
- <sup>7</sup> *Ibid.*, 41.
- <sup>8</sup> Leal, "Negativity towards Wilderness," 370.
- <sup>9</sup> Eisenberg, "The Mountain of the Gods," 110ff.
- <sup>10</sup> Schniedewind, "Ugarit," 1343.
- <sup>11</sup> Freedman, "Ugarit," 695-706.
- <sup>12</sup> Smith, *Origins*, 28.
- <sup>13</sup> *Ibid.*, 29.
- <sup>14</sup> Freedman, "Ugarit," 699.
- <sup>15</sup> *Ibid.*
- <sup>16</sup> Smith, *Origins*, 29.
- <sup>17</sup> *Ibid.*
- <sup>18</sup> *Ibid.*, 28.
- <sup>19</sup> *Ibid.*, 31.

- <sup>20</sup> Wyatt, "Sea and Desert," 46.
- <sup>21</sup> Smith, *Origins*, 31.
- <sup>22</sup> *Ibid.*, 32-33.
- <sup>23</sup> Schloen, "The Exile of Disinherited Kin," 209.
- <sup>24</sup> Wyatt, *Religious Texts from Ugarit*, 20.
- <sup>25</sup> Parker, *Ugaritic Narrative Poetry*, 214.
- <sup>26</sup> Schloen, "The Exile of Disinherited Kin," 212.
- <sup>27</sup> *Ibid.*, 40.
- <sup>28</sup> Talmon, "Wilderness," 946.
- <sup>29</sup> Talmon, "Desert Motif," 42.
- <sup>30</sup> Exodus 15:13
- <sup>31</sup> Deuteronomy 1:30-31
- <sup>32</sup> *Ibid.*, 37.
- <sup>33</sup> Stager, "Jerusalem and the Garden of Eden," 188.
- <sup>34</sup> *Ibid.*, 183.
- <sup>35</sup> *Ibid.*
- <sup>36</sup> *Ibid.*
- <sup>37</sup> *Ibid.*, 185.
- <sup>38</sup> Psalm 36:8-9.
- <sup>39</sup> Ezekiel 28:13-19.
- <sup>40</sup> Ezekiel 28:15.
- <sup>41</sup> Eisenberg, "The Mountain of the Gods," 117.
- <sup>42</sup> *Ibid.*
- <sup>43</sup> Smith, *Origins*, 36.
- <sup>44</sup> *Ibid.*
- <sup>45</sup> *Ibid.*
- <sup>46</sup> Isaiah 25:8.
- <sup>47</sup> Job 40:25.
- <sup>48</sup> Smith, *Origins*, 35.
- <sup>49</sup> Burden, *Kerygma*, 54.
- <sup>50</sup> Isaiah 64:10.

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*Throughout the account of creation and disobedience in Paradise Lost, Milton emphasizes the importance of knowledge of one's origins. This paper investigates the connection between obedience and awareness of one's createdness, showing how the differences between Satan's fall and Adam and Eve's fall allow for humanity's redemption.*

## **“Believing lies against his Maker”: Competing accounts of origin in *Paradise Lost***

Sarah Casey

Milton scholar Philip Gallagher calls Milton “*the* poet of the genesis of all created things” (84), and indeed, from the opening passage of *Paradise Lost*, Milton is concerned with the issue of origin. The poem is, after all, an account of the origins of many different things. In fact, the word “first” appears no less than five times in the opening invocation of the Holy Spirit, in which the poet invites his muse to describe “Mans First Disobedience” (1.1). In the process of giving an account of the origin of man’s sinfulness, Milton also describes other pivotal “firsts”: the creation of angels, the creation of the universe, the first human beings, and the birth of Sin and Death. Origin, therefore, emerges as a central theme of the poem from the beginning. However, another issue inherent in Milton’s investigation of origin complicates this theme: that is, the fact that no created being can have first-hand knowledge of his or her own creation. As God asks Job in the Hebrew scriptures: “Where wast thou when I laid the foundations of the earth? Declare, if thou hast understanding” (Job 38:4). This issue complicates not only the characters’ access to creation accounts within the narrative of the poem, but also Milton’s project, which involves the depiction of the origins of his own world and of humanity’s sinful nature, which he has inherited from Adam and Eve. Regina Schwartz points out that “[Milton’s] creation stories are always mediated—by accounts and accounts of accounts—by Raphael, by Uriel, by angelic hymns, by the reconstructions of memory” (Schwartz 1). Despite the acknowledged difficulties of fully believing another’s account of one’s own creation, *Paradise Lost* implies that this very knowledge is necessary for both humans and angels. I argue that in *Paradise Lost* a correct understanding

of one's origins is necessary for correct conduct. I will examine several passages in which Satan, Adam, and Eve either affirm, deny, or forget their origins and the differing consequences of such actions. I will argue that the differences in their respective falls show that Adam and Eve, unlike Satan, have the opportunity for redemption because, although they are distracted from the relevant truth about their origins, they never blatantly reject God's paternity.

### **Satan's Fall**

I will first examine Satan's fall and how it relates to his account of creation. In his debate with Abdiel in Book 5, Satan explicitly denies that God created him. When Abdiel repudiates Satan for challenging God, Abdiel points out that it is God "who made / Thee what thou art, and form'd the Pow'rs of Heav'n / Such as he pleased, and circumscrib'd thir being" (5.823-25). The foundation of Abdiel's argument is an appeal to God as creator, an appeal to the correct conception of the origin they both share. Building on the fact that God is their creator, Abdiel points out that if even if God's creation were not enough to warrant their obedience:

of our good, and of our dignitie  
How provident he is, how farr from thought  
To make us less, bent rather to exalt  
Our happie state under one Head more neer  
United. (5.827-31)

Here he also appeals to God's beneficence as an important part of their common origin. Satan scoffs at Abdiel's claim, calling it "strange point and new!" (5.855). His subsequent series of questions mockingly mimics God's words to Job: "who saw / When this creation was?" and "rememberst thou / Thy making, while the Maker gave thee being?" (5.856-58). It is, of course, impossible for Abdiel to give a first person account of his own creation, because, as Satan rightly recognizes, "We know no time when we were not as now" (5.859). This scene is one of many instances throughout the poem in which Milton grapples with the problem of the lack of direct knowledge of one's own origins that every created being experiences. Milton makes it clear that Satan's solution to this issue is not the correct one, as his logic is obviously

dubious, especially in contrast to Abdiel's more convincing account of their common origin. Satan's fallacious argument moves from a lack of knowledge to the positive assertion that he was "self-begot" and "self-raised" by his own power (5.860-61). Rejecting the true account of his creation necessitates the invention of new mythology of origins to replace it.

What he denies in public, however, he later affirms in private. As Satan approaches Eden for the first time, the beauty of Creation reminds him of what he was before he fell. In his reflection on his revolt, he admits that "Heav'ns matchless King ... deservd no such return / From me, whom he created what I was / In that bright eminence" (4.41-43). This scene shows Satan at his most honest; these verses are Satan's private admission of what he knows to be true. This passage is important to our understanding of the passage in Book 5, because it shows that Satan does in fact recognize that God created him, thereby making him culpable for his rebellion. If he did not have access to this information or if he was unable to understand where he came from, he could not be condemned for his rejection of his creator.

Abdiel's argument in Book 5 reinforces Satan's culpability. In addition to his function as Satan's interlocutor (which gives Satan the opportunity to make his alternative account of origin explicit), Abdiel also represents the correct opinion that Satan could have had. Abdiel's affirmation of the angels' createdness in the face of Satan's denial shows that all the angels did have access to correct information about their origins. By contrasting Satan with Abdiel, Milton eliminates the possibility that Satan might genuinely not know who created him.

John Carey and other critics have noted that these two passages, taken together, present an interesting problem: it is clear from his private admission Book 4 that Satan knows that God created him, yet in his debate with Abdiel in Book 5, he denies it. How can Satan hold these contradictory views? Carey presents several different explanations of what he calls "Satan's ability to dismiss unattractive facts from his consciousness" (Carey 166). Satan's admission in Book 4 might come from some new realization or he could just be confused, although this seems unlikely; in both of these cases, though, his contradiction would be unintentional. In the former, his position has evolved, while in the latter he may not recognize the dissonance. Yet he could also be willfully deceiving himself or just lying in his conversation with Abdiel. Carey never resolves this problem: he ends his discussion of this passage by

claiming that “we cannot adjudicate between these interpretations with any confidence” (Carey 166).

On the other hand, Roy Flannagan, in his footnote of these lines in Book 5, argues that “Milton’s audience would have recognized his lie” (502). The footnote also points us to a passage in Book 3 that offers a definitive answer where Carey’s article does not. In this passage, God the Father discusses the angels’ and humans’ respective falls with the Son. Most relevant to our interpretation of the other two passages is the Father’s declaration that the angels, whom he calls “the first sort” so as to distinguish them from humans, fell “by thir own suggestion” (3.129). He calls them “Self-tempted, self-deprav’d,” (3.130), creating a pointed parallel to Satan’s claim that they are “self-begot, self-rai’sd.” From this passage, we see that Milton intended the reader to recognize that Satan’s misrepresentation of his creation is intentional. Other Milton scholars, including Kent Lehnhof, make arguments consistent with this position, saying that Satan did indeed know that God created him, but willfully chooses to deny what he knows to be true. In his war against Heaven and his temptation of Adam and Eve, Satan makes his denial manifest in his actions.

Having established that Milton portrays Satan’s denial of his origins as intentional, I will now demonstrate how this denial constitutes the first instance of sin. Gallagher argues that Satan first sins when he finally asserts that he is “self-begot” and “self-raised.” Prior to this moment, the narrator tempers descriptions of Satan’s actions with words like “intends” and “in his thoughts” to show that he is only considering sin; he has not yet asserted his equality with God. Gallagher points out that Abdiel’s initial arguments with Satan are questions, not yet condemnations. Abdiel asks Satan:

Shalt thou give Law to God, shalt thou dispute  
 With him the points of libertie, who made  
 Thee what thou art . . . ?  
 . . . dost thou count,  
 Or all Angelic Nature joind in one,  
 Equal to him begotten Son, by whom  
 As by his Word the mighty Father made  
 All things, even thee . . . ? (5.822-24, 833-37)

In both of these questions, Abdiel clearly identifies denying God’s

paternity as a sin, but he does not yet accuse Satan of this sin. At this point, Satan has not yet denied God's sovereignty and asserted his own sovereignty, so Abdiel asks him to clarify exactly what he believes so as to determine whether he is truly sinful. Gallagher affirms the importance of the question of origins, saying that "the matter of sin turns on one question only: who made whom?" (Gallagher 89). In response to Abdiel's question, Satan formally rejects God's authority for the first time. This denial is the first instance of active sin. Gallagher concludes, therefore, that Satan's sin occurs the moment he denies his true origin by claiming to be "self-begot" and "self-raised" because, in doing so, he blasphemously elevates himself to the level of God by assuming the role of the creator. As Phillip Donnelly notes, Satan is trying to "make himself out to be what Milton depicts the Son to be—uncreated" (188). This false portrayal of himself is not only arrogant, but also deceptive.

### **Humanity's Fall**

Although humanity's fall is very different from the angels' fall, the lack of right belief with respect to origins is common to both. Here again access to knowledge of one's origins is an issue, and Milton is equally careful to point out that Adam and Eve knew about their origins before their fall, even though they, like the angels, did not witness their own creation. They each explain how they acquired this necessary knowledge. As with the angels, they could not have been witnesses of their own creation, so they have no direct access to their origins. Adam's account of his first moments in Book 8 shows us how he arrived at a correct conception of his creation. When Adam suddenly awakens and investigates himself and the world around him, he has no idea "who I was, or where, or from what case" (8.271). Almost immediately, he realizes that he came "Not of my self; by some great Maker then" (8.278). This assumption may not seem unusual, but he goes on to ascertain characteristics of his creator: "in goodness and in power praecminent" (8.280). From his being and what he sees in the world around him, he concludes that his source must be great, good, and powerful. He responds correctly, asking, "how may I know him, how adore, / From whom I have that thus I move and live, / And feel that I am happier then I know" (8.281-83). Even before he knows God, he surmises that his Maker is good, because he recognizes that it is through God that he is "happier then I know."

Juliet Cummins sheds some light on Adam's reasoning here, arguing that created beings can have limited knowledge of God because creation resembles its creator. She traces the interplay between monistic and dualistic conceptions of God in order to show his simultaneously divided and united nature. Because of the centrality of this tension—namely, that Milton presents everything in creation as made “of God” while maintaining God's transcendence and otherness—Cummins argues that God's doubleness of identity is what allows him to create. The interplay of the dual aspects of God that Cummins notes explains Adam's reasoning process. Because Adam is part of the creation that God made out of himself, Adam can see that some “great Maker” must have created him. However, he also has to ask “how may I know him” because God's otherness makes his essence unintelligible to unaided human reason. Only with God's divine revelation can Adam have fuller knowledge of God's nature. God does appear to him and confirm that a “great Maker” did indeed create him. God then affirms his authority as Adam's creator by informing Adam of his only prohibition: Man must not eat of the Tree of Knowledge of Good and Evil. In this passage, Milton shows that Adam must not only be aware that he has been created; he must also have some knowledge of his creator. Some divine attributes, namely God's greatness, goodness, and power, are immediately apparent to Adam from what he sees in himself and Creation, but others must be revealed to him. These divine attributes are important aspects of Adam's knowledge of his origins because they motivate him to praise and obey God, which is the conduct proper to a human being created by God.

Eve's story of her first moments is similar to Adam's in many ways. She too wonders “what I was, whence thither brought, and how” (4.452). She, like Adam, recognizes that something other than herself brought her to her current location but, unlike Adam, she does not immediately recognize the hand of a “great Maker.” She investigates herself by gazing at her reflection in the water until a divine voice intervenes and leads her to Adam, who instructs her by passing down information from God. In her story, just as in Adam's, divine intervention is necessary for knowledge of origin. As was the case with Adam, this knowledge of God's nature, although it is limited, is necessary for correct behavior because it elicits worship in response.

The emphasis Milton places on knowledge of origins is especially apparent in Books 5 through 8, in which Raphael seeks to educate

Adam and Eve to protect them from Satan's temptation. The Father sends Raphael to Eden to warn Adam and Eve of Satan's impending attack. Raphael begins his response to Adam's questions about the universe by reminding him that "one Almighty is, from whom / All things proceed, and up to him return" (5.469-70). The priority of this reminder demonstrates the centrality of the creator in Adam and Eve's education. Raphael reemphasizes the importance of this message in his reply to Adam's question about astronomy. He exhorts Adam not to allow a proper observation of planets and stars to lead to an improper fascination with the mysteries of the heavens, but rather "let [the heavens] speak / The Makers high magnificence . . . that Man may know he dwells not in his own" (8.100-3). Even astronomy is used as a lesson to reinforce their understanding of God as their creator.

In their conversation, Adam demonstrates his understanding of Raphael's message by asking "Can we want obedience then / To him, or possibly his love desert / Who form'd us from the dust, and plac'd us here" in Paradise (5.514-16). He cannot imagine a situation in which he would forget his creator. In fact, he goes on to vow that "we never shall forget to love / Our maker, and obey him whose command / Single, is yet so just" (5.549-51).<sup>1</sup> From these lines, it is evident that Adam recognizes that God is his creator and is just, and that he also sees how this knowledge translates into obedience to God's single command. Thus, this scene exemplifies the way in which a correct view of one's creation leads to correct behavior.

However inconceivable disobedience seems to Adam, both he and Eve do fall, although the fall of humanity is fundamentally different from Satan's fall. God himself distinguishes between the two kinds of falls when he says in Book 3 that Satan falls "self-tempted and self-depraved" whereas "Man falls deceiv'd" by Satan (3.129). The key point to note here is that Satan's deception specifically involves casting doubt on what Adam and Eve have demonstrated that they know to be true about their origins. In his temptation of Eve, Satan subverts God's authority by attributing many of God's characteristics to the Tree of Knowledge of Good and Evil. He lavishly and almost ridiculously praises the tree, calling it "Sacred" and "Wise" (9.679). Many of his praises imply some kind of creative agency or origination. He calls the tree "Wisdom-giving" and the "Mother of all Science" as if it, rather than God, were the origin of all wisdom and knowledge (9.680). When he says that the tree will give Eve the ability "to discern / Things in



thir Causes” and “trace the wayes / Of highest Agents,” he implies that her current knowledge is not sufficient (9.681-83). Knowing the identity and the nature of her creator is not enough, there is still more to know, and this plant, rather than her creator, can give it to her. Satan relegates God to the role of the “Threatener” (9.687). His deception consists of distracting Eve from her creator by presenting a competing account of the origin of knowledge.

In Eve’s musings to herself just before she eats the fruit, Satan’s influence is clear; Eve is focused on the tree, praising its virtues and speculating about its effects, but suspiciously silent about God. Throughout the passage, she never mentions God directly or uses any of the many names for God, such as “Maker wise” and “great Author” that punctuate her speech elsewhere in the poem. In fact, her only reference to God, “he who forbids thy use,” has more to do with the tree than with God (9.751). Satan’s deception has apparently distracted her from her correct knowledge of her origins, but it has not caused her to explicitly deny God as her creator. Lehnhof says, “When Eve loses sight of the Creator-creature relationship that governs her existence, she disowns her Maker and shrugs off her creaturely obligations to him” (38). Distracted by Satan’s deception, Eve chooses to disobey God’s commandment and, at that moment, she sins.

Adam’s fall, on the other hand, does not seem to involve a lack of consciousness of his origins, at least on the surface. Maggie Kilgour calls Milton’s account of Adam’s fall “notoriously unusual” because it is separated from Eve’s fall; she believes that Milton separates their falls in time to emphasize the difference in the causes of their respective falls (Kilgour 331). Indeed, Adam’s fall differs from Eve’s in many ways; first of all, Adam still affirms that God is the “Creator wise” during his conversation with Eve after her fall but before his own (9.938). Because he still acknowledges God as his creator, the narrator says that Adam fell “Against his better knowledge, not deceav’d”; rather, he is “fondly overcome with Femal charm” (9.998-99). This female charm poses a different kind of distraction, but a distraction nonetheless because Adam allows his love for Eve to supersede the obedience he owes to God, substituting another creature for the creator as the object of worship and obedience.

It is important to note that while they both apparently “lose sight of their Creator-creature relationship” as Lehnhof says,<sup>2</sup> neither of them ever rejects God as creator. Unlike Satan who brazenly asserts

that he created himself, Adam and Eve never verbally deny their origins, though their actions do betray their creator. They do, however, directly question specific aspects of God's nature in an attempt to justify their sins afterward. Eve's speech after her fall clearly reflects Satan's influence; when she calls God "Our great Forbidder" (9.815), she shows that she has forgotten God's beneficence and justice that she previously praised. Now Eve is "believing lies / Against [her] Maker," allowing Satan to influence her perception of God (10.42-43). However, unlike Satan she never denies her creaturely origin outright. Similarly, even at the most despairing point of his soliloquy, Adam still acknowledges God as his creator. Although he accuses God of making him without his consent, which implies a misunderstanding of God as arbitrary rather than just, he affirms God as his "Maker" in this very accusation (10.743-46). He has forgotten what he knows to be true about his creator, what he said that they would never forget: "to love / Our maker, and obey him whose command / Single, is yet so just" (5.550-51). Now Adam sees his own creation as unfairly unsolicited.

Adam's praise of God's justice before the Fall and his accusation of arbitrariness in Book 10 seem to present a contradiction similar to Satan's inconsistency discussed earlier. Is he intentionally lying, as Satan was? The answer to this question is clear from the lines that follow Adam's accusation. He realizes the answer to the question "Wherefore didst thou beget me?" (10.763):

God made thee of choice his own, and of his own  
To serve him, thy reward was of his grace,  
Thy punishment then justly is at his Will.  
Be it so, for I submit, his doom is fair. (10.766-68)

He finally remembers that his creator is beneficent and just, not threatening and arbitrary. After remembering the creator he had forgotten, Adam begins a contrite lament of his disobedience, which Eve later joins. Through this reversal, in which Adam and Eve remember their creator and express their regretful sorrow for their sin, Milton differentiates their disobedience from Satan's. Their sin is the result of distraction from relevant truth about their origins, rather than a deliberate effort to deny their createdness.

Although both falls constitute sin, humanity's fall leaves open the possibility for redemption through remembrance. Because they merely

forget their origins and do not reject them, Adam and Eve are willing to restore their relationship with God to the proper relationship between creator and creature. They are able to repent because they remember. Schwartz, who is very interested in the relationship between memory and creation in *Paradise Lost*, identifies this “renewal of human memory” as a key theme, and she associates remembering with returning here and elsewhere in the poem (91). She too identifies Adam and Eve’s sin as “a lapse of memory,” asserting that “Memory plays a key role in their movement toward repentance” (Schwartz 106). It is by remembering the truth about their forgotten creator that Adam and Eve repent and are able to be redeemed. The connection Milton makes between remembrance and redemption prefigures the Christian sacrament of the Eucharist, in which the Church participates “in remembrance” of Christ as a part of their sanctification.

In contrast, as Schwartz says, “Satan’s memory is more selective” (109). His contradiction of his origins results from dismissal rather than distraction; it is deliberate forgetting. Satan, by denying any relationship whatsoever to God, cuts himself off from his only source of redemption. Lehnhof says that this outright rejection “allows for a sustained posture of disobedience” which precludes the possibility of redemption (Lehnhof 39). In this way, competing accounts of one’s origins lead to contrasting consequences for the characters in *Paradise Lost*. Adam and Eve are distracted from their origins, leading to their disobedience and requiring proper punishment, but Satan denies his origins outright, which leads to eternal damnation.

Milton privileges a kind of knowledge to which individuals do not have direct access, knowledge of one’s origins, instead of self-knowledge, which could be considered more easily accessible to individuals. In an interesting departure from thinkers like Plato, Milton chooses to emphasize knowledge of one’s creator because knowledge of one’s creator enables a fuller understanding of the self than self-knowledge could on its own. In spite of, but also through, the complication that individuals can never have any first-hand knowledge of their own origins, Milton pieces together an account of the genesis of all things, universal and particular, portraying the causes and consequences of competing claims about creation.

## NOTES

<sup>1</sup> Adam's use of the word "forget" here is interesting; it will become important in the discussion of humanity's distraction from their knowledge of their origins.

<sup>2</sup> The distinction Lehnhof makes between humanity's fall and Satan's fall is largely consistent with mine; however, he asserts that God's uncreatedness is the sole attribute Adam and Eve must recognize for redemption. I believe a reading that recognizes the importance of other divine attributes is more complete because it is consistent with the emphasis characters such as Abdiel, Raphael, and Adam place on God's justice, omniscience, and beneficence.

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*Different sleep stages are selectively beneficial for the consolidation of different types of memory. This article first reviews experimental evidence for the beneficial relationship between slow wave sleep (SWS) and declarative memory. Researchers have further investigated the nature of this advantageous relationship, finding that hippocampal reactivation during SWS, most prevalent in the early night, consolidates declarative memory and improves retention. Current research examines physiological states of the brain that may help explain the enhancing effect.*

## **Hippocampal Reactivation During Slow Wave Sleep Enhances Declarative Memory**

Stephanie Frazon

If an individual were to get the recommended hours of sleep every night, he would spend over one third of his life asleep. A complete scientific understanding of why sleep is so necessary, however, has been elusive, given the complexity of the question and of the brain's operation. We will examine here one way in which sleep is beneficial to our everyday lives: it enhances memory. At the same time, our overview of how this has come to be known will illustrate the difficulty researchers face in trying to understand the effects of sleep on cognition.

Early studies revealed that memories were enhanced by sleep. Soon, investigations began looking at the different types of sleep (rapid eye movement [REM] and slow wave sleep [SWS]) to determine if they have different effects on the different types of memory. There are two broad categories of memory, namely, explicit and implicit memory. These may also be referred to as declarative (explicit) and either non-declarative or procedural (implicit) memory. As we will look in more depth at declarative memory in this paper, it is important to know what it includes. Declarative memory is memory of factual knowledge. It encompasses semantic memory, including memory of events (episodic memory) and spatial layouts and images (spatial or relational memory). More broadly, it is memory of which one is consciously aware (explicit memory).

Early studies established that procedural memory is improved by REM sleep. Furthermore, they showed that SWS selectively benefits

explicit declarative memory. However, further studies into SWS and declarative memory failed to corroborate these results. Researchers began to look for reasons for this discrepancy. Eventually they determined that early studies that showed SWS to be beneficial for declarative memory were faulty. These studies were criticized for two main reasons. First, these experiments all had confounding variables, or two variables that could both potentially cause a given effect. Because learning took place at different times of day for wake and sleep groups in early studies, critics argued that the sleep or wake condition was confounded with circadian rhythms that alter mental characteristics throughout the day. The second major criticism was that no study convincingly showed that the detrimental effects of sleep deprivation following learning remained after recovery sleep. More recent sleep studies have eliminated these confounds in an effort to make their findings valid and indisputable.

In this paper, we will examine those experiments that give unquestionable evidence of the benefit of SWS on multiple types of declarative memory. We will not only prove that memory is enhanced but also examine how this occurs. Physiological changes in the brain reveal the unique chemical environment of SWS that is so beneficial to memory consolidation. Finally, I will discuss some further areas of study that could aid in our understanding of the beneficial interaction of SWS and memory and examine how this information can be applied to everyday life.

### **Memory Encoding and Storage**

To analyze the effect of SWS on declarative memory, one must first examine the nature of SWS. SWS is characterized by slow, large-amplitude oscillations or delta-waves that occur in the neocortex (Gais & Born, 2004b; Hasselmo, 1999; Ribeiro & Nicolelis, 2004). Slow wave sleep allows for hippocampal dependent memories to be encoded and stored more permanently, a process known as memory consolidation. After a brief overview of SWS, we will look at two hypotheses about the way in which consolidation occurs while we sleep. Other physiological characteristics that distinguish slow wave from other sleep states and wakefulness have been found to enhance declarative memory consolidation; these will be discussed later.

Some scientists (Gais & Born, 2004b) argue that the amount of SWS does not correlate directly with declarative memory performance.

Although SWS permits declarative memories to consolidate, SWS occurs whether or not there has been any declarative learning. Furthermore, the amount of time in SWS does not correlate with the number of declarative memories made during wakefulness. Therefore, a slight decline in the percentage of SWS experienced during the night does not imply a decline in consolidation. However, memory consolidation can be impaired if the body is deprived of large amounts of SWS.

A replay of hippocampal activity seen during declarative memory encoding occurs during SWS (Wilson & McNaughton, 1994; Plihal & Born, 1997). The neocortex is also actively replaying during sleep. Therefore, some scientists (Buzsáki, 1996; Gais & Born, 2004a; Paller & Voss, 2004; Wilson & McNaughton, 1994) hypothesize that declarative memories, temporarily stored in the hippocampus during wakefulness, get transferred to the neocortex for more permanent storage by this reactivation during sleep. This is the basis for the two hypotheses we will now examine for how memories become independent through storage and encoding.

Studies of rodents, other lesser mammals, and humans determined that explicit, declarative memory is hippocampus-dependent whereas implicit non-declarative memory is hippocampus independent (Squire, 1992). It is well known and unquestioned that the hippocampus, within the medial temporal lobe of the brain, is involved in the encoding and storage of declarative memory. However, the point at which memories become long-term and independent from the hippocampus, and how they do so, remains unclear. We will examine two hypotheses regarding the process of memory consolidation from the hippocampus to long term storage. The first is concerned with the hippocampus, where memories are temporarily stored, and the transfer of memories to more permanent storage in the neocortex. The second hypothesis, presented in Paller and Voss (2004), is concerned more with how declarative memories are selected and organized within the neocortex to ensure permanent storage and recall. Paller and Voss (2004) use this hypothesized process of cross-cortical consolidation to distinguish declarative and non-declarative memories. These are not competing hypotheses, but they do examine memory consolidation in different ways.

### *The Hippocampus and Neocortex*

The hippocampus is a series of groups of neurons and their supporting cells. The entorhinal cortex throughout the hippocampal

formation creates an excitatory pathway to the dentate granule cells, the CA1 and CA3 pyramidal cells, and back again to the entorhinal cortex. The entorhinal cortex has neural connections throughout the neocortex used to direct information between the neocortex and hippocampus. The medial septum-diagonal band complex (MSDB) and other neuronal networks are also spread throughout the hippocampal formation and influence the operations of the hippocampus. They regulate the rhythms, synchrony, and plasticity of neurons within the hippocampal formation (Buzsáki, 1996).

During declarative memory tasks, the entorhinal cortex directs new information into the hippocampus for temporary storage (Gais & Born 2004a). This majority hypothesis suggests that during sleep these newly acquired memories are transferred to the neocortex via the entorhinal output cortex for more permanent storage (Wilson & McNaughton, 1994). Memories are transferred via hippocampal reactivation, especially during slow wave sleep. Researchers can confirm reactivation using an electroencephalograph because reactivation induces sharp wave-ripple patterns of EEG activity (Gais & Born, 2004; Sutherland & McNaughton, 2000).

The delta waves of SWS promote calcium influx into neuronal synapses reactivated during sleep. Calcium influx induces spindle activity that predisposes a neuron to synaptic plasticity. Plasticity allows synaptic changes that consolidate the reverberated memories and encourage long term storage of the reactivated pattern (Born et al., 2006; Buzsáki, 1996; Gais & Born, 2004a; Gais & Born, 2004b; Hasselmo, 1999).

### *Cross-Cortical Consolidation*

Paller and Voss (2004) distinguish declarative from non-declarative memory by the process of cross-cortical storage. The cross-cortical storage hypothesis suggests that consolidation and storage of declarative memory may depend on multiple neocortical regions. Fragments of the memory from the various regions must be cohesively associated in order to obtain the memory. The emotional and spatial context in which learning occurred and the associations between new and old information work together to form declarative memory. The various aspects of a memory, separated during consolidation, provide multiple cues for memory retrieval. This shows the necessity of relational representations for declarative memory.

Neural events occurring during sleep lead to enduring storage



and organization of memories formed prior to sleep. Connections between neocortical networks and the hippocampus aid in the formation and strengthening of associations between these memories. The hippocampus allows newly acquired information to be connected in separate cortical representations but only temporarily. Cross-cortical networks consolidate connections between neural networks to enhance declarative memories during sleep (Paller & Voss, 2004). This process is essential for the endurance of declarative memories that are fragile after initial learning and highly susceptible to forgetting and change. According to this hypothesis, declarative memories endure only after memories are sufficiently consolidated through cross-cortical storage and the hippocampus is no longer necessary for connections (Born, Rasch, & Gais, 2006; Paller & Voss, 2004).

The rate at which memories become consolidated is largely dependent on their importance to the individual and the extent to which they are related to other stored information. New memories are reorganized within preexisting schemata and are thereby better related to past experiences and knowledge (Paller & Voss, 2004). New perspectives, insights, and better memory are produced by enriching consolidation through elaborative reorganization (Wagner, Gais, Haider, Verledger, & Born, 2004). This reflects the reactivation and reprocessing of memory that takes place during sleep. Cross-cortical consolidations also occur during wakefulness, but it is unknown if this process is the same as that seen during sleep. Paller and Voss (2004) hypothesize that the cross-cortical consolidation during sleep and wakefulness play complementary roles in memory consolidation.

Furthermore, Paller and Voss (2004) hypothesized that different steps of the cross-cortical process of memory consolidation take place during different stages of sleep. The interplay of these sleep stages may influence consolidation. Evidence from human and other mammal studies indicates that activity in the hippocampus during SWS and REM sleep mimics the activities of learning and memory consolidation seen during wakeful hours. The brain retransmits activity patterns in order to connect them to related memories previously stored in long-term memory (LTM) and others received throughout the day.

During sleep, the brain ranks the importance of encoded information based on prior knowledge of that and related subjects and selectively consolidates based on that ranking. While unconscious, the brain does the organizing and arranging that require too much thought

to be done consciously. Memory seems to be processed during sleep similarly to how it is consciously processed during wakefulness. New information is acquired, related to information already known, and put together and organized in new ways. This selectively enhances the storage of seemingly important information for the future.

### **Experimental Evidence**

Here we will look at multiple experiments that prove that declarative memory consolidation occurs during SWS and leads to enhanced recall and recognition on memory tasks. In the following section we will examine some proposed physiological changes that may account for why SWS specifically consolidates declarative memories.

Plihal and Born (1997) examined the effects of early and late sleep on procedural and declarative memory. Procedural memory was tested using a mirror-tracing task for straight and smooth lined stars and human figures. Declarative memory was tested by a paired-association list for German noun pairs. Two groups of ten randomly assigned males became the sleep and wake groups. Within these groups, individuals were tested under conditions of late or early sleep, or late and early wakefulness, respectively. In all learning conditions, the mirror-tracing task preceded the paired associative word lists. In all recall conditions, the paired associative word lists preceded the mirror-tracing task.

On the first night, both the sleep and wake group learning conditions took place in the late evening. For the sleep condition, this was followed immediately by 3 hours of sleep and then a tested recall in the middle of the night. For the wake condition, subjects remained awake for 3 hours until recall was tested. A week later both groups were called in for the second part of the experiment. This time, both groups were allowed to sleep until 2 a.m., at which time they were awakened for the learning condition. Again, the sleep group was allowed to return to sleep while the wake group was forced to remain awake. Memory recall for both groups was tested 3 hours later. A comparison of early and late sleep showed that early sleep consisted of about 5 times more time spent in SWS and only one-third the time spent in REM. This is congruent with prior evidence that early sleep consists primarily of SWS and late sleep consists primarily of REM sleep.

For the paired-associate lists, recall after sleep in both the early and late conditions showed improvement compared to the last learning trial

prior to sleep. However, the improvement was not the same for both conditions. Early sleep was substantially more effective in aiding recall after the sleep period than was late sleep. Improvements in recall for the early and late wake conditions showed no significant difference. When compared with retention intervals of wakefulness, early sleep showed marked improvement compared to late sleep. This demonstrates that recall improved more significantly for the early sleep condition than any of the other three. A similar result was found for mirror-tracing tasks, with the late sleep condition showing significant improvement instead of the early sleep condition. Neither sleep nor wakefulness prior to the learning condition was shown to have any influence on memory.

In summary, beneficial effects of sleep vary according to the time of sleep (early or late) and the type of memory task (declarative or procedural). Early sleep, which is dominated by periods of SWS, enhances learning for declarative memory tasks. Late sleep, dominated by periods of REM sleep, improves learning for procedural memory tasks. The benefit of early sleep on declarative memory proves the significance of SWS on memory consolidation. SWS exhibited hippocampal replay of firing patterns in the same cell assemblies as those fired during the paired-associative task. This replay strengthens long-term consolidation of declarative memories by transferring information to the neocortex. Additionally, in an effort to determine the role of cortisol in the relationship between sleep stages and hippocampal activity, researchers tested cortisol concentrations for saliva samples obtained before and after retention intervals of all conditions. The results of this aspect of the experiment will be analyzed in the section below on the role of cortisol and other physiological changes that take place during sleep that support the beneficial relationship found between sleep and memory.

An experiment by Drosopoulos et al. (2005) looked more narrowly at the effects of early and late sleep on declarative memory alone. They performed a similar experiment, investigating the effect of sleep stages on recognition memory, a type of declarative memory that is more visual than semantic. They used three lists of German words for each retention interval. Two lists, in different fonts, were presented during the learning session to all groups. At retrieval, the third list of new words was added and mixed with words from the first two lists. The fonts for half the old words from each list were changed to that of the other list. Subjects were not given the English equivalent of these words to recall, but rather were given a recognition task to indicate one of four things:

the presented word was an old word from list 1, an old word from list 2, an old word but they are unsure of which list it was from, or a new word. Subjects were only allowed 3.5 seconds to respond to each word.

Twenty-four participants were divided into two groups, a wake group and a sleep group, for two rounds of testing using early and late sleep conditions. At 11 p.m. in the early sleep condition, after learning and an immediate recognition task, the sleep group was allowed to sleep. Three hours later, both groups were tested. In the late sleep condition, all subjects were allowed to sleep 3 hours during the early night. Then the subjects were awakened, and the learning procedure took place. The sleep group was allowed to sleep after the learning procedure, while the wake group remained awake. At the end of this 3-hour period, both groups were tested.

Recognition tests following the retention intervals showed enhanced explicit recognition in the sleep group, especially in the early night condition. Although subjects were not consciously aware of the font change, improved recognition was seen only for “congruent words” whose font remained the same in both tests. The ability to recognize new words was not significantly different between wake and sleep conditions or early and late sleep conditions. The improvement of explicit memory during early sleep indicates the benefit of SWS on hippocampus-dependent declarative memories. The fact that congruent words were retained over incongruent words implies that the hippocampus encodes information in context. Sleep did not enhance the recognition of old words compared to new words, but rather was found to enhance the subjects’ ability to associate words with the proper list from the learning condition.

In an effort to eliminate criticisms of early studies on SWS and declarative memory, Gais, Lucas and Born (2006) conducted a two-part experiment to determine sleep’s effect on declarative memory. The first part of the experiment tested whether sleep shortly following learning enhanced memory recall. In the learning condition, subjects of each group were given 10 minutes to learn 24 English-German vocabulary word pairs. The morning-learning group had 15 hours between learning tasks and sleep, whereas the evening-learning group had only 3 hours between learning and sleep. Memory was tested at either 24 or 36 hours later for both the morning and evening learning conditions. This method eliminated the circadian rhythm confound by providing four learning conditions: evening-learning morning-recall, evening-learning evening-

recall, morning-learning morning-recall, and morning-learning evening-recall. Experimenters found that the length of time between learning and recall tasks did not have any significant effect on recall rates. Neither did the time of day of the recall task prove to have any effect on its outcome. However, the morning-learning condition had a much higher rate of forgetting than the evening-learning condition. This suggests that it is not the time between learning and recall, but rather the length of time between learning and sleep that plays a role in remembering.

The goal of Gais et al. (2006), in the second part of their experiment, was to determine if the benefit of evening learning found in the first part was due to time of day or to its proximity to sleep. In this part, subjects were divided into a sleep and wake condition, both with learning tasks at 8 p.m. The sleep group was allowed to sleep while the wake group was held for a period of sleep deprivation. Testing took place 48 hours later. This allowed the wake group a night of recovery sleep, something which prior experiments had failed to do. If better test scores found in the first experiment were dependent on sleep, an increased rate of forgetting would be expected in the sleep-deprived condition, even given recovery sleep. This was exactly what was found. Sleep within a few hours of learning enhanced memory recall, and sleep deprivation showed a detrimental effect on the maintenance of memory.

### **The Physiological Basis of Memory Consolidation**

Electrophysiological changes that occur in the brain between waking and sleeping, and even between sleep states, are believed to cause the differing effects of sleep states on different types of memory. Scientists are investigating whether any of those changes could be linked to the beneficial effect of various sleep states on different types of memory, and if so, to what extent. Due to these investigations, we can conclude that the physiological environment of the brain during SWS is most conducive to declarative memory consolidation. Many of the experiments we have looked at thus far (Drosopoulos et al., 2005; Gais & Born, 2004; Hasselmo, 1999; Marshall, Mölle, Hallschmid, & Born, 2004; Schmidt et al., 2006) have included some measure of physiological changes that will be summarized here, including sleep spindles, acetylcholine, direct current potentials, and cortisol.

*Sleep Spindle Density*

Electroencephalography (EEG) recordings chart electrical brain activity. A sleep spindle is a pattern of activity graphed by an EEG that characterizes slow wave sleep. Gais and Born (2004a) found an increase in sleep spindle density after periods of declarative learning which correlates with the theory that sleep spindles signify reactivation of the hippocampus. Schmidt et al. (2006) investigated the effects of declarative learning on EEG oscillations and spindle activity during daytime sleep. They also examined the effect the difficulty of the encoding task had on post-learning sleep architecture.

In the Schmidt et al. (2006) within-subject design experiment, participants were involved in three conditions, each separated by at least one week. Subjects' normal sleep patterns were conformed to; whatever time a subject typically went to sleep at home is when he or she went to sleep in the study. Each participant was allowed eight hours sleep. Three hours after waking, one of three conditions (two learning, one non-learning) was presented.

In each condition, 154 word pairs were randomly presented. For the control condition, subjects were asked to count the number of letters containing curved lines. The two learning conditions asked participants to "imagine a visual relationship" between the word pairs. The word pairs for the easy condition were highly semantically related, concrete words. The word pairs for the difficult condition were abstractly related words. After each learning condition, subjects were given an immediate recall test. Two hours after the onset of the experimental condition, subjects were allowed to take a 4-hour nap. A half hour after arousal from the nap, an additional delayed recall test was given.

Generally, during daytime sleep, sleep spindles are less prevalent, with lower amplitudes and shorter durations than during nocturnal sleep. EEG for the difficult condition, compared with the control condition, revealed an increase in low-frequency spindle density during the post-learning nap. However, this increase was not observed for the easy or control condition. This density change was positively correlated with the change in memory performance between immediate and delayed recall tests.

Daytime sleep, after declarative learning, induces the same physiological changes as does nocturnal sleep when the learning is difficult. The change in spindle densities observed relates to hippocampal ripples and induces synaptic plasticity by provoking a calcium influx into

spindling cells, changes previously proven to enhance consolidation. From this, Schmidt et al. (2006) hypothesized that the difficult encoding task requires that subjects create new associations that must be consolidated during sleep. The ability to rely on pre-existing associations of concrete word pairs in the easy condition helps explain the absence of physiological changes for consolidation.

#### *Role of Acetylcholine*

SWS is known to restrict cholinergic activity to an absolute minimum compared to the wake state (Gais & Born, 2004b). Changes in acetylcholine (ACh) levels between these states may determine the direction of the flow of information between the hippocampus and neocortex (Hasselmo, 1999). During wakefulness and REM sleep, ACh is input into neurons of the thalamus to activate the cortex. The amount of information sent from the hippocampus to the neocortex is reduced by the high ACh level (Gais & Born, 2004; Hasselmo, 1999).

In studies involving acetylcholine, a cholinergic deficiency inhibited the extent to which new memories were acquired. A model for cholinergic memory hypothesizes that high cholinergic levels aid the encoding of new declarative memories into the hippocampus while the subject is awake. Strikingly low levels of ACh observed in SWS bring about a replay of those memories in the hippocampus and allow transfer to the neocortex prohibited by high levels of ACh. Thus, the low ACh levels encourage consolidation and the transfer to permanent neocortical storage (Gais & Born, 2004a). Low ACh levels are also responsible for stronger feedback in the hippocampal formation and entorhinal cortex (Hasselmo, 1999).

#### *Direct Current Potential*

Negative direct current potential (DC) during SWS is closely linked with spindle activity and is thought to contribute to declarative memory reprocessing during sleep. In studies where DC-negativity was induced by anodal transcranial direct current stimulation (tDCS), word retention during SWS was significantly increased. When administered during wakefulness, tDCS did not yield improvements on declarative or nondeclarative memories. SWS following a period of declarative learning, compared to non-learning, showed an increased coherence of EEG waves. The coherence of waves found during sleep hint at cortical reprocessing of recently encoded memories (Gais & Born, 2004a; Marshall, Mölle, Hallschmid, & Born, 2004).

### *Role of Cortisol*

Low cortisol levels during the beginning of sleep seem to coordinate with enhanced declarative memory consolidation. Cortisol levels during nighttime hours are lower during the early hours, when SWS is more prevalent, than during the late hours. However, the rise of cortisol levels during the night occurs whether one is awake or asleep and thus appears to be independent of sleep or wakefulness (Drosopoulos et al., 2005). As physician-administered rises in cortisol levels are detrimental to consolidation (Gais & Born, 2004), it may be that declarative consolidation is selectively enhanced during the early hours of sleep because of the low levels of cortisol. Drosopoulos et al. (2005) found that cortisol concentrations in saliva samples they collected were significantly higher during both of the late sleep and wake conditions than during either of the early conditions. They proposed that the hippocampus may inhibit the secretion of cortisol in the early night to provide a more conducive environment for information transfer to the neocortex.

### **Conclusion**

The evidence presented here supports the claim that declarative memory consolidation, and thus retention, is aided by slow wave sleep in the early night. Consequently, it is not only important that we sleep, but also when we sleep. Sleep is most beneficial to declarative memory when it occurs during the early night and when it is not far removed in time from learning. During the early night, sleep is filled with SWS that preferentially consolidates declarative memory. Material learned prior to sleep is reactivated in the hippocampus during sleep and transferred to the neocortex for permanent storage. When sleep follows soon after learning, memories from learning remain in the hippocampus and are thus still present for reactivation by the time sleep occurs.

Given these findings, it is interesting to note that the majority of declarative learning typically occurs in the early part of the day, far removed from sleep. For school students, classes begin in the early morning and end in early afternoon. The results of recall tests for the morning-learning conditions of the Gais et al. (2006) experiment should cause us to question if this is most beneficial to education insofar as education requires the memorization of facts and conceptual relations. One must also consider that declarative memory includes memory of



our emotions, subjective experiences, and daily events. Memories such as these, though they may not be tested for recall, certainly enrich our lives and help to make us who we are. Memories such as these are important for all individuals, and this fact should encourage us to rethink our sleep habits for maximal retention of these memories.

There is definitely room in this field of memory research to further examine how sleep enhances consolidation and recall, especially in the life of a student. For instance, waking up early to continue studying before an exam does not allow time for the consolidation that occurs during sleep. However, staying up and sleeping during the late night is also ineffective for memory consolidation. It would be interesting to investigate which condition is less disadvantageous.

Another area that could benefit from further investigation would be determining if there is an optimal amount of elapsed time between learning and sleep. We have seen that long periods of wakefulness between learning and sleep hinder consolidation, but it would be interesting to see at what length of time sleep starts and stops having its enhancing effect. The studies reviewed in this paper had lengths of 15, 10, 3, and 0 hours between learning and sleep onset, but there was no one study that compared elapsed times for maximal retention. One would assume that the shorter the elapsed time the more beneficial sleep would be, but experimental support for this hypothesis would be worthwhile.

As we learn more about the physiological characteristics that encourage memory consolidation, it is hard not to wonder what implications these findings could have for increasing memory consolidation in the future. There may one day be a cognitive enhancing drug, taken before bedtime, that reduces cortisol levels and thus increases the amount of time the body spends in SWS. The ethical implications of such drugs are another thing to consider in further study.

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*The philosopher David Lewis gives an account of how knowledge might be grounded in ignorance: we have knowledge only when we are unaware of those skeptical scenarios that improperly cause us to doubt. Though fascinating, this account cannot be proven. If it is correct, any attempt to examine our knowledge will only lead us into skepticism. This account lacks the anti-skeptical power which we would expect from a satisfactory theory of knowledge. The possibility that it may be correct, however, calls into question the value of knowledge.*

## **David Lewis, Infallible Knowledge, and Epistemic Satisfaction**

Eric Headstream

In the history of philosophy, knowledge has traditionally been understood as “justified true belief,” where justification is the added component that elevates mere true belief to the status of knowledge. Contemporary epistemology has explored a variety of different approaches to the problem of justification, including evidentialism, reliabilism, and defeasibility theory. Each of these approaches describes a way of grounding knowledge, whether in a sufficient body of evidence, use of reliable methods, or endurance in the face of “defeaters” (propositions that contradict a given belief). None of these approaches, however, has proven decisive.

The twentieth-century American philosopher David Lewis hopes to offer an alternative to the debate over justification. In his article “Elusive Knowledge,” Lewis sketches a theory of knowledge that begins on familiar evidentialist grounds but then incorporates a contextualist twist. Evidentialist accounts of knowledge locate justification in the knower’s body of evidence: a person’s evidence tends to either confirm or disconfirm any particular belief. Lewis chooses not to deal with justification directly. The question of the type, amount, and/or degree of evidence needed to justify a belief is deferred in favor of a coherence model where possibilities (states of affairs) are compared with the state of a knower’s evidence. Contextualism, on the other hand, is the position that knowledge must always be ascribed in a particular context. Any belief’s claim to the status of knowledge is dependent on a host of supporting factors, both in the mind and in the external situation of the knower.

Two dangers are associated with contextual accounts of knowledge: fallibilism and skepticism. Infallible knowledge is knowledge that guarantees truth; but when knowledge is made a function of the knower's context, shifts in context can produce shifts in the knower's body of knowledge without regard for truth or falsity. Skepticism is linked to fallibilism: when knowledge no longer guarantees truth, it loses its force against skeptical scenarios. The most radical of these scenarios posit situations in which nearly all our beliefs are radically and imperceptibly mistaken. Descartes, for example, considered the possibility that an "Evil Genius" was deceiving him about the content of all his thoughts and sense perceptions. The "brain in a vat" scenario is an updated version of the same: it is possible that I exist as nothing more than a brain suspended in a life-supporting vat, being electrically stimulated such that I form beliefs and perceptions. The point of these scenarios is that they are entirely consistent with anything we can possibly believe or perceive.

Lewis claims to overcome these dangers in his theory of knowledge. He argues that his theory both guarantees truth and is closed under strict implication; these two features defeat fallibilism and skepticism, respectively. Furthermore, he claims to maintain this theory apart from and despite radical skeptical possibilities such as Descartes' Evil Genius or the brain in a vat scenario. Whether Lewis succeeds in his efforts is difficult to determine. In this paper I intend to examine Lewis's theory of knowledge, giving special attention to the twin dangers of fallibilism and skepticism. I will show that the infallibility of Lewis's account is bought at the expense of its anti-skeptical power. Because of this, his account is unsatisfactory even if it should prove correct. I will then offer a brief outline of what a more satisfactory account might be.

### **Lewis's Definition of Knowledge**

Lewis's first attempt at a definition is as follows: "Subject *S* knows proposition *P* iff *P* holds in every possibility left uneliminated by *S*'s evidence" (Lewis 551). Under such a definition, truth is one and knowledge is infallible since *P*, if known, "is known always and everywhere" (Lewis 552).

Lewis then examines the various elements of this definition, including what counts as a proposition and as a possibility, what it is to eliminate a possibility, and what "every possibility" should be taken to

mean. Of the first, he states that possibilities *de se et nunc*—of the thing itself and now—must be considered.<sup>2</sup> On the matter of elimination, Lewis takes a phenomenological approach which complements his end-run around justification.<sup>3</sup> A possibility is uneliminated, he says, “iff the subject’s perceptual experience and memory in [that possibility] exactly match his perceptual experience and memory in actuality” (Lewis 553). That is, a possibility cannot be ruled out if it is entirely coherent with or indistinguishable from one’s current perceptual and cognitive state (which includes one’s evidence). This model would seem to border upon, if not encompass, the concept of sensitivity. A belief is said to be “sensitive” to truth if the untruth of that belief would prevent a subject from believing it. In similar fashion, one’s current perceptual and cognitive state is sensitive to a possibility if the actuality or inactuality of that possibility would determine one’s retention or elimination of the possibility. That is, if there is a possibility which could either obtain or not obtain without contradicting our current evidence, then our cognitive state is insensitive to that possibility.

The most important of these elements, however, is the final one: the matter of scope and range in possibilities. Lewis is quite correct to note that, ironically, the word *every* “is normally restricted to some limited domain” (Lewis 553). When we speak of “everything,” we almost always mean “everything relevant.” We are therefore entitled, Lewis argues, to ignore irrelevant alternatives in our consideration of “every possibility.” In accordance with this entitlement, Lewis amends his original definition as follows: “*S* knows that *P* iff *S*’s evidence eliminates every possibility in which *not-P* . . . except for those possibilities that we are properly ignoring” (Lewis 554).

With these qualifications, Lewis has his definition in its final form. To know *P* is to have eliminated all possibilities in which *P* does not obtain (*not-P*)—except for those properly ignored. But two obvious questions remain. First, what can be properly ignored? And second, what are the implications and strengths of this theory of knowledge? Does it guarantee truth, thus meeting the high standard of infallibility, and yet also avoid or survive skeptical hypotheses? In response to the first question, Lewis offers a set of rules concerning what may or may not be properly ignored; and to the second question, he gives a concluding discussion. I will focus on three elements of these responses in my analysis: two from the former and one from the latter. It is around these three that any evaluation of Lewis’s success must turn. The first

two are his Rules of Actuality and Attention. The third is his assertion that under this theory, knowledge is closed.

### Lewis's Rules and Closure

The Rule of Actuality states simply that “the possibility that actually obtains is never properly ignored” (Lewis 554). We may not use selective ignorance, then, to presuppose anything false; or rather, ignoring actuality is never proper. That which is real must be considered and taken into account. The Rule of Actuality is crucial for Lewis because it is upon this rule that his infallibilism rests. Infallible knowledge is knowledge which guarantees truth, but truth is not even mentioned in Lewis's definition, much less guaranteed. Instead, this rule serves to guarantee truth. If *not-P* is in fact true, and no actuality may be properly ignored, then *not-P* would warrant consideration and would thereby block knowledge of *P*.

Lewis notes that the rule is an externalist one: *S* may or may not be able to tell what is actual and what is not. This raises the question of what or whose sense of “actuality” should be used to judge success or failure in knowing. Lewis here reaffirms his earlier insistence that propositions *de se et nunc* must be included. What he seems to mean by this and by the attendant clarification is that when we ascribe knowledge, we must ascribe it to a particular person at a particular time. *Not-P* might be true today or for ourselves but not have been true for *S* at time *t*. Thus, the rule is still externalist: the subject's situation and her attendant reality matter but not her awareness or belief of that situation.

The final element of Lewis's rules, the Rule of Attention, is equally simple and equally powerful: no possibility which is *not* ignored is ever properly ignored. Lewis claims that this precept is “more a triviality than a rule” (Lewis 559), but in fact it is quite potent, as we shall soon see. It is clear, though, that Lewis at least partly recognizes the power of attention, for he acknowledges that it enables us to place ourselves “in a context with an enormously rich domain of potential counter-examples to . . . knowledge” (Lewis 559). When we conjure up such scenarios as the brain in a vat or the Evil Genius, we inhabit a context radically different than that of our ordinary knowledge claims. In this manner, Lewis says, “epistemology destroys knowledge” (Lewis 559).

The third element of Lewis's theory is his conclusion on the matter of closure. Under such a system, in which knowledge is analyzed

as a modality,<sup>4</sup> he argues that “we cannot escape the conclusion that knowledge is closed under (strict) implication” (Lewis 563). Two terms merit explanation here: “closure” and “strict implication.” Closure is a property of sets and is possessed when a set already contains all the results of a given operation.<sup>5</sup> Thus, when we say that knowledge is closed with respect to strict implication, what we mean is that all things strictly implied by our knowledge are also known. That is, all things implied by the given set (our knowledge) are also members of that set. Strict implication is simply material implication to which a modal necessity operator has been applied:  $\Box(P \rightarrow Q)$ . This means that  $P$ 's implication of  $Q$  holds in all possibilities. If it is given that we know both  $P$  and that  $P$  necessarily implies  $Q$ , then we must also know  $Q$  for our knowledge to be closed under strict implication.

The obvious objection to closure is that all too often we do not know the things implied by our knowledge, at least not immediately. Experience, it would seem, denies the consequent of the closure principle given above. For example, if closure applied to our knowledge of geometry, it would seem to mean that, given knowledge of the geometric axioms, we would be omniscient in regard to the theorems.<sup>6</sup> This is clearly not the case, for I know perfectly well that all right angles are equal to each other, that the shortest distance between two points is a straight line, and that two parallel lines will never intersect, yet my geometric knowledge falls far short of Euclid's. Perhaps this is due to a lack of foresight and attention, or perhaps the justification I possess for my initial knowledge does not hold for my implied knowledge.

Since Lewis makes closure a testable consequence of his theory of knowledge, this objection, if it truly defeats closure, provides a simple and direct refutation of the theory. That is, if we side firmly against closure, then we may rest our case here. I would suggest, however, that we not make this move too hastily. Closure is not something we ought to dismiss out of hand. It is an intuitive feature of our knowledge, so much so that Richard Feldman states that “some version of the closure principle . . . is surely true” (Feldman 487).<sup>7</sup> It seems that closure, in one form or another, is a Moorean ‘fact.’<sup>8</sup> Closure is intimately linked to truth and infallibility. The deduction of implied or entailed propositions is essential to the preservation of truth. If I know that I have two hands ( $P$ ), then it is imperative that I also know that I am not somehow being deceived about  $P$ —perhaps, for example, by the Evil Genius. If truth, which is correspondence to the real world (and to only *one* real world),



is to have any meaning, a true proposition such as  $P$  may not be both affirmed and denied. Any epistemology which seeks to describe how our knowledge works must explain our experience of closure, and therefore some sort of closure principle is an epistemological *desideratum*.<sup>9</sup>

For this reason, let us give Lewis the same benefit of the doubt that we would give ourselves. Let us assume that knowledge is closed, even if we must remain critical of the principles through which this closure might be possible. Perhaps what Lewis intends is some sort of *known* implication where knowledge is only closed for implications of which the subject is aware and certain. This principle is problematic as well, and we should be hesitant to put words in Lewis's mouth. Nevertheless, this is one possibility; and in the end, it is not the precise mechanism of closure with which we are concerned, but the very concept and its consequences.

If closure should fail, one of the primary consequences would be skepticism. In response to this possibility, Lewis again reminds us of the contextual nature of his theory. Closure invites skepticism, he argues, because the context is allowed to shift between premise and conclusion. For instance, if I assert that I have two hands and therefore I know I am not a brain in a vat, then the context has shifted dramatically, from one of ordinary, everyday experience to one of radical, skeptical possibilities. To avoid this, we must always evaluate the conclusion in light of the premise's context. This mandate concurs with his earlier insistence on propositions *de se et nunc* and the subject-centered evaluation of actuality.

### Closure and Context

It is precisely upon the matter of closure that Lewis encounters serious problems. Lewis's argument for closure and the preservation of truth within particular, everyday contexts comes with a stipulative condition. If in order to preserve truth we must "evaluate the conclusion for truth . . . with respect to the different context in which the premise was uttered," then reflexively, truth is preserved iff "the conclusion could have been said in the same unchanged context as the premise" (Lewis 564). The question to ask is whether it can be. I intend to argue that under Lewis's own rules, in particular the Rule of Attention, it cannot. Furthermore, I will show how failure on this point (and subsequent susceptibility to skepticism) proves fatal to the infallibility of any such knowledge.

If knowledge is truly closed, then we must be able to entertain and know any conclusion that is entailed by the known proposition  $P$ , even those that touch upon skeptical hypotheses. Thus, if I know that I have two hands, then I know that I am not a (presumably handless) brain in a vat (BIV). Considerations of skeptical hypotheses such as the BIV scenario, however, are not part of the ordinary context in which the knowledge that I have two hands is ascribed. Such a possibility is (presumably) properly ignored. Any assertion of the truth or falsity of BIV within such a context is either nonsensical or destructive of the context itself.

The only hope for a third option, one which would preserve the unproblematic assertion of an anti-skeptical conclusion, is to separate the conclusion regarding a skeptical hypothesis from any consideration of the skeptical hypothesis itself. Such an attempt might take the form of a half-hearted, joking, or otherwise non-serious and non-believing encounter with the relevant skeptical possibilities. Let us say, for example, that  $P$ , “I know that I have two hands,” implies  $Q$ , “I can safely assume, [*baha*], that I’m not a brain in a vat.” The skeptical possibility is touched upon but seemingly not in any way that is dangerous to the original knowledge. However, this sort of separation fails because it runs into a regress problem. If knowledge is truly closed then an implication of an implication of something known is known as well. In regard to our example above, let us consider what is implied by the concept of “safety.” A belief is safe for me iff my belief in a proposition guarantees the truth of the proposition. If I may safely assume that I am not a BIV, then it is implied that I am really not a BIV. Therefore, I must be able to conclude that I know I am not a BIV, and we are back to the original conclusion with its attendant consideration of the skeptical possibility. And why again is the skeptical possibility a problem? Because as Lewis admits, it destroys knowledge. Once we are pressed on the matter, we simply do not know whether we are BIVs or not.

Since a divorce of conclusion and supporting context is impossible, we return to the original two options for interpreting such a conclusion in the everyday, non-skeptical context: nonsense or anathema. I use the term “nonsense” because a statement about a skeptical possibility without an allowance for reference to or consideration of that possibility cannot hold any meaningful content, if such a statement is even possible. I incline to the latter option, for I do not in fact believe such a nonsensical statement to be possible. If we speak, for example,

of red balloons or the possession of two hands, we can hardly do so without making mention of balloons, hands, or the color red. The content of a statement consists of its referents and the logical structure by which those referents are related. Do away with either and the necessary conditions for a meaningful thought are no longer met. As a result we are left with the latter option. The formulation of such a conclusion expands the boundaries of the context, and in the case of ordinary contexts, this expansion—to the consideration of skeptical possibilities—is anathematic to the original context. Lewis's own Rule of Attention says as much. Once the skeptical possibility is considered or brought to mind, it cannot be properly ignored. Knowledge slips away and skepticism reigns.

The implications of these two options are equally unappealing. They threaten in turn both of Lewis's goals: infallibility and anti-skepticism. If we decide that a conclusion cannot be meaningfully evaluated in the context of its premise, that it is nonsense, then knowledge is not closed and the unity of truth is lost. Perhaps I still know that I have two hands, but I cannot conclude and cannot know the things implied by that knowledge. On the other hand, if the context is destroyed and we must consider skeptical possibilities in order to preserve closure and the unity of truth, then we fall into skepticism.

### **Context, Actuality, and Infallibility**

From this analysis it seems that Lewis cannot defend both of his ideals at once. However, the truth of the matter is even worse: he may not be able to save either of them, for once one is lost, the other is fatally compromised. At first it appears that Lewis may be able to salvage the infallibility of his knowledge, even if any investigation or assertion of the implications of that knowledge results in a ruptured context and skepticism. Indeed, why would such implications need to be explored or asserted? Lewis's theory is externalist after all, and so it matters little whether at time *t* I know that I know or know that my knowledge is closed. It should be enough that I do in fact know and that my knowledge is in fact closed, correct?

Once again, Lewis is tripped up by his own rules—in this case, the Rule of Actuality. Two crucial precepts were given as part of the explication of this rule: (1) "The possibility that actually obtains is never properly ignored" (Lewis 554); and (2) "It is the subject's actuality, not the

ascriber's, that can never be properly ignored" (Lewis 555). The obvious questions to ask, then, are whether such skeptical possibilities actually obtain and whether they obtain for the subject. If so, then clearly they cannot be properly ignored.

In response to (2), the subject's actuality is a moot point here, for such possibilities—those which posit scenarios of massive error—are all-encompassing by design and therefore necessarily encompass the subject if they do obtain. The problem with any attempt to answer (1) is that *neither* subject nor ascriber know, or can know, the reality or unreality of such skeptical possibilities. If the Evil Genius is in fact lurking behind every memory and belief, then we are all equally lost. This is a deadly state of affairs for Lewis. In order for his knowledge to guarantee truth it must not ignore any actuality in which *not-P*. Here, though, we have a *not-P* possibility that either may or may not obtain and cannot be discerned either way.

Now again, Lewis would likely appeal to his externalism on this point. His theory is not one of assertability or rationality but of knowledge. It would seem to matter little whether or not we can determine knowledge or lack of knowledge: either it exists or it does not. Perhaps Lewis is right on this count. Let us at least be willing to grant him the point. If we do so, however, we must realize that the only valid standpoint from which knowledge could be ascribed is that of an ideal observer, someone immune from all skeptical possibilities—the mind of God, perhaps. For us mere mortals, for all those who fall within the reach of skeptical hypotheses, knowledge would not be something of which we could speak. We could never be sure if our ignorance were proper or improper, and so our knowledge, if we should be found to have any, would be something of a matter of luck.

Perhaps this is in fact the story Lewis wishes to tell. Knowledge is elusive: look at it and it vanishes (and so therefore do not look at it). But if this is the case, then why tell the story at all? If knowledge is a thing of which we cannot speak, we would do well to heed Wittgenstein's advice and "pass over in silence" (Wittgenstein 87). Only a tacit agreement to keep quiet would preserve our knowledgeable ignorance. All these conclusions, though, are spoken in the subjunctive: they are conditional and contingent. I will add to them one more: if we find these conclusions unsatisfactory, then we must resolve to offer a different account.

## Correctness and Satisfaction

What would a more satisfactory account look like? To answer this, we must first consider our allowance that Lewis might be correct in his definition of knowledge. Correctness in a definition requires two elements: first, that the definition be specific enough to pick out its object and *only* its object; and second, that it be non-circular. It cannot presume the very concept it defines. These two properties are what we grant when we say that Lewis's definition might be correct. Correctness, however, is not synonymous with sufficiency, nor does it guarantee satisfaction.

There is a history of such correct definitions within the analytic philosophical tradition. G. E. Moore famously gave a proof of the existence of the external world by holding up his hands and stating, "Here is one hand . . . and here is another" (Moore 24). From this he concluded that at least two hands exist. Such a demonstration, he argued, meets all the conditions of a rigorous proof: (1) the premises are distinct from the conclusion, (2) the premises are known to be true, and (3) the conclusion follows from the premises. Any dissatisfaction we may have about this proof can only be the result of confusion on our part. What we wanted was not proof of an external world but certainty that "here is one hand . . . and here is another." In another case, Alfred Tarski gave a semantic definition of truth in terms of material adequacy and accuracy. These terms correspond roughly to the two elements of correctness stated above. A proposition is true, Tarski argued, iff it is fulfilled by facts in the world. In simplest form, a sentence's truth condition can be expressed through disquotation—the removal of the sentence's quotation marks. Thus, "It is raining outside" is true iff it is in fact raining outside. Needless to say, this definition is not very satisfying. In all these examples—those of Moore, Tarski, Lewis, and others—we cannot fault their definitions for correctness, only for their failure to satisfy.

A theory or definition can be satisfactory in two ways. First, it can satisfy the subject matter by exhausting the matter's depths. This is what we might call sufficiency or adequacy in definition. Only if a definition is not merely correct but complete—i.e. comprehensive of every aspect—can it satisfy its object. Heidegger speaks of satisfaction in this sense when he distinguishes between the correct and the true:

The correct always fixes upon something pertinent in whatever is under consideration. However, in order to be correct, this fixing by no means needs to uncover the thing in question in its essence. Only at the point where such uncovering happens does the true come to pass. (Heidegger 289)

In the case of Lewis's theory of knowledge, we cannot say whether or not it exhausts the subject matter. We cannot say this for the same reason that we cannot ascribe knowledge to any person: we are susceptible to skeptical scenarios and so lack internal access to our knowledge. This is true of any externalist account, and so to judge of the first form of satisfaction we would need the second: satisfaction of the inquirer. In the case of a theory of knowledge, this would be an internalist account, coherent with and complementary to the externalist one. In short, to satisfy ourselves we would need second order knowledge—a way to know that we know.

An internalist contextual theory is difficult to imagine. We might start by considering what Lewis's externalist version would look like if it were internalized. According to such an account, second order knowledge would require knowledge of the context in which it is claimed or ascribed. To achieve closure and infallibility, this knowledge would need to include every possibility, skeptical scenarios and all. But as noted above, this is impossible.

We are left, then, with two options for a more satisfying account. If we find ourselves unconvinced by Lewis, or if the prospect of an unknowable knowledge is too dreadful, then we must construct a non-contextual internalist theory. Perhaps some other internalist account—coherent with Lewis's definition but different in kind—might be feasible; but this route seems no less steep or doubtful. Instead, I suggest that whether we find Lewis compelling or internalism untenable, we would do better to abandon knowledge itself in favor of rationality, assertability, or some other epistemic virtue. This route seems far more promising. If knowledge is elusive and threatens to remain so, then perhaps it is not knowledge that we seek.

## NOTES

- <sup>1</sup> "Iff" means "if and only if."
- <sup>2</sup> Possibilities must be considered from the subject's perspective and from the moment in time at which knowledge is ascribed. To say that "S knows it will rain tomorrow" is a different proposition on Monday than it is on Sunday.
- <sup>3</sup> The question of what counts as evidence is avoided by referring to the subject's entire cognitive state. Whatever evidence the subject possesses is present as phenomenological data, which can be compared to other sets of data—namely, a possible state of affairs.
- <sup>4</sup> Lewis's is a modal account as it deals with knowledge in terms of possibility.
- <sup>5</sup> My thanks to Dr. Jonathan Kvanvig on this point. See his "Epistemic Closure Principles."
- <sup>6</sup> Again, my thanks to Dr. Kvanvig.
- <sup>7</sup> See also Steven Hales's "Epistemic Closure Principles."
- <sup>8</sup> G. E. Moore often appealed to intuitive "facts" of our knowledge and experience: things known, or at least held, far more certainly than any philosophical arguments for their truth or falsity. We will consider an example from Moore in Section 6.
- <sup>9</sup> Infallibility itself is another such epistemic "desirable." Both closure and infallibility have largely been presumed in this paper, not interrogated, because the sense of "knowledge" with which we are presently concerned is the intuitive, ordinary sense. Fallibilist accounts of knowledge, where a subject may know that *P* and yet also be wrong about the truth of *P*, strike most of us as highly unusual or incorrect on an intuitive level.

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*Frederic Chopin's music is well-known as popular parlor music; however, when examined more carefully, some of his pieces are shown to be more serious works of art than they may first appear. Using the nineteenth-century philosophical definition of the sublime, this paper argues that Chopin's Sonata in B-flat minor, Op. 35, is itself a work of sublimity.*

## **Chopin and the Sublime: The Sonata in B-flat minor, Op. 35**

Ariana Phillips

Today, the music of Frederic Chopin is among the most beloved music from the nineteenth century; however, although his music is loved, it is usually considered “pretty,” “charming,” or occasionally “beautiful.” His music has not been considered “sublime” as have some of the great works of Handel, Haydn, Mozart, and Beethoven. Part of the reason for this is undoubtedly the fact that sublime works by the earlier composers mentioned were exclusively large-scale choral or orchestral pieces that generated an overwhelming volume of sound. Much of Chopin’s music, when played on a single fortepiano, barely fills a concert hall and is better suited for more intimate spaces. The perception of Chopin as simply a delicate salon composer has faded in recent years, but little research has attempted to characterize his works that clearly are not salon pieces. This paper argues that some of Chopin’s works, particularly the Sonata in B-flat minor, Op. 35, are sublime.

First, we will trace the development of the sublime in philosophy and music through the early nineteenth century. Then we will examine in detail one particular work by Chopin, the Sonata in B-flat minor, Op. 35, to determine if and how it exhibits the characteristics of the musical sublime. A thorough analysis suggests that although this sonata has not been called sublime previously, it deserves to be approached as a sublime work of art.

### **The Sublime**

The philosophical term “sublime” is no longer a part of everyday vocabulary, but the topic of the sublime was hotly debated during the eighteenth and nineteenth centuries, particularly among German

philosophers. The German *das Erhabene*, often translated “sublime,” means “elevated,” with the additional implication of lofty or noble. The sublime is “so far surpassing that awe and wonder are awakened; a variety of this, that which is grand and high.”<sup>21</sup> Alternatively, it is “the term for that which fills us with wonder and high esteem when we regard grandeur and consummate perfection.”<sup>22</sup> The English word “sublime” also contains these implications, reaching back to the Latin word *sublimis*, meaning “high” or “raised up.”<sup>23</sup> The earliest explanations of the sublime refer to a style of writing and of oration, of which the Roman-era writer Pseudo-Longinus writes, “The *first* and most excellent [characteristic] . . . is a boldness and grandeur in the *Thoughts* . . . . The *second* is call’d the *Pathetic*, or the power of raising the passions to a violent and even enthusiastic degree; and these two being genuine constituents of the *Sublime*, are the gifts of nature.”<sup>24</sup>

In the eighteenth century, Edmund Burke saw the sublime in sheer precipices, rugged surfaces, and “the infinite divisibility of nature of matter” that inspire “a delightful horror.”<sup>25</sup> When one encounters the sublime, “the mind is so entirely filled with its object that it cannot entertain any other, nor by consequence reason on that object which employs it.”<sup>26</sup> In Burke’s view, intense light and sound can be sublime, as can “general privations . . . Vacuity, Darkness, Solitude, and Silence.”<sup>27</sup>

Burke’s ideas about the sublime were modified by the single most important eighteenth-century philosopher of aesthetics: Immanuel Kant. Kant describes the sublime experience in its most general form as anything that makes one experience awe, or, as Douglas Burnham puts it, “the feeling of, or associated with, the *overwhelmingness* of an object.”<sup>28</sup> In nature, the sublime is characterized by a mixture of the familiar and the unfamiliar in such a way as to cause initial discomfort followed by the acceptance of an inability to comprehend.<sup>9</sup> Henrik Næsted refers to this as “cognitive frustration.”<sup>10</sup> Kant includes in his argument a type of the sublime that he labels “mathematical,” which overwhelms the mind’s ability to create a conceptual framework for the object.<sup>11</sup> Of particular interest is the idea that a sublime object may be so complex that human powers of cognition are insufficient to present the object in both “its *haecceity* (as this particular, or ‘thisness’) and its *quiddity* (as the kind of thing it is, or ‘whatness’).”<sup>12</sup> In other words, one cannot simultaneously observe both the forest and the trees.

In an article published in 1801 and again in 1805, the music theorist and critic Christian Friedrich Michaelis borrows the Kantian

vocabulary of overwhelming size and strangeness to describe the effect of the musical sublime:

In music, only that can be sublime which exceeds the conceptual powers of the imagination: which appears too large and significant, too foreign and strange, for the imagination to grasp it easily. . . . The feeling of sublimity in music is aroused when the imagination is elevated to the plane of the limitless, the immeasurable, the unconquerable. This happens when such emotions are aroused as . . . prevent the integration of one's impressions into a coherent whole.<sup>13</sup>

Michaelis also discusses two ways that the sublime may be produced in music. These initially seem paradoxical, but an examination of sublime music reveals that both appear frequently at moments of heightened tension:

Firstly, by uniformity so great that it almost excludes variety: by the constant repetition of the same note or chord . . . by long, majestic, or weighty, or solemn notes, and hence by very slow movement; by long pauses holding up the progress of the melodic line, or which impede the shaping of a melody, thus underlining the lack of variety.<sup>14</sup>

This is a description of the stillness of the temporal sublime, in which the listener must attempt to find coherence over an extended period of time. Certain passages in the first movement of Beethoven's Third Symphony exhibit this type of harmonic stasis, while "The Representation of Chaos" from Haydn's *The Creation* is a slow and mysterious overture in which fragments of melody rise from the texture only to be swallowed by the texture again.

Michaelis then sets forth the second, more complex, way by which the sublime may be produced:

Secondly by too much diversity, as when innumerable impressions succeed one another too rapidly and

the mind is too abruptly hurled into the thundering torrent of sounds, or when (as in many polyphonic compositions involving many voices) the themes are developed together.<sup>15</sup>

Perhaps the greatest eighteenth century example of this type of the sublime is the fugal finale of Mozart's "Jupiter" Symphony, which features a double fugue on the first and second themes and a canon on every important motif of the work. The movement involves dense polyphonic textures that develop previously heard themes at a relatively quick tempo. Elaine Sisman describes it as a "mass of simultaneously writhing fragments at all rhythmic levels and in all instruments" that simply cannot be simultaneously absorbed.<sup>16</sup> It is the musical embodiment of Kant's overwhelming complexity.

As mentioned in the introduction, the sublime was closely associated with an elevated style of writing. When the elevated literary style was translated into music, it acquired characteristic gestures, some of which Michaelis's contemporary Heinrich Cristoph Koch describes in his encyclopedia *Musikalisches Lexicon*: "The expression of the elevated requires a relatively slow movement, a very noticeable and strongly marked rhythm, and more dotted than slurred notes . . . a full and strong harmony, and extremely strong accentuation of notes."<sup>17</sup>

The parallels to Michaelis's first method of producing the sublime in music are obvious; however, equally noticeable are the parallels found between this description of the elevated style and Koch's description of *das Erhabene*:

In expressing this character [i.e., the sublime] the composer employs grave, slow movement, full and forceful harmony, and melodic phrases without much ornament; he proceeds in firm, bold strides and often moves forth in wide intervallic leaps and skips. In performance, sublimity requires clearly defined and strongly sustained emphasis and rather striking grammatical accents, especially in figuration, particular to the grave manner.<sup>18</sup>

A final quotation from Koch's *Musikalisches Lexicon* reveals incongruous elements as another aspect of the sublime:

The themes are developed together in so complex a manner that the imagination cannot easily and calmly integrate the diverse ideas into a coherent whole without strain. Thus in music, the sublime can only be that which seems too vast and significant, too strange and wonderful, to be easily assimilated by [the imagination].<sup>19</sup>

Implicit in this explanation is the idea that the listener attempts to understand the music as a unified whole. Music that presents jarringly different characters in quick succession may overcome the listener's ability to comprehend their relationship. This is possibly the closest that music comes to Kant's declaration that the mathematical sublime may involve complexity that refuses to be reconciled into a conceptual framework.

A combination of the various features of the sublime reveals that the sublime in music is that which elevates the soul through the apprehension of overwhelming power or complexity. Large-scale choral and symphonic works by Handel, Haydn, Mozart, and Beethoven have historically been associated with the former aspect of the sublime. However, compositions on a massive scale are not the only type of sublime music. Frédéric Chopin's Piano Sonata in B-flat minor is sublime despite its relative lack of overwhelming sonic power. Evidence for the sonata's sublimity is found in both the use of musical features associated with the sublime and the reactions of audiences to its complexity and profundity of subject.

### The Sonata

E. T. A. Hoffmann's review of Beethoven's Fifth Symphony is widely considered an important description of the musical sublime even though Hoffmann never actually uses the word *erhaben*. He notes that Shakespeare, though acclaimed as a sublime poet, was often criticized for his apparent lack of "true unity" and "inner coherence."<sup>20</sup> The unity of Shakespeare—and of Hoffmann's subject, Beethoven—lies so far under the surface that understanding it requires "unceasing study of art."<sup>21</sup> Chopin has faced some of the same accusations as Shakespeare; therefore, we will follow Hoffmann's advice and turn to a deeper

examination of the B-flat minor Sonata, Op. 35.

One of the earliest charges laid against this work is that it is not, in fact, a sonata. As evidenced by his innovations in the nocturne, ballade, and scherzo, Chopin had an idiosyncratic understanding of how the form of a work relates to its expressive properties. Notwithstanding the title, Huneker believes “this Sonata in B-flat minor is not [sic] more a sonata than it is a sequence of ballades and scherzi.”<sup>22</sup> Nevertheless, Chopin titled this work “Sonata,” and it is to our benefit to understand more clearly how he went about creating his distinctive sonata form. Although Chopin made many innovations in the development of the sonata form, this paper will mention only a few that are the most germane.

Published in 1839, when Chopin was twenty-nine years old, this work follows the conventional format for a sonata in some respects. It consists of four movements: a weighty opening movement followed by a scherzo and a slow movement, and ending with a fast finale. However, once one examines the music beneath these general types and tempi, one discovers a sonata quite dissimilar to those of Beethoven or Mozart. Schumann, the German composer and critic, exclaimed, “[T]he idea of calling this work a sonata was a caprice if not a jest, for Chopin has simply bound together four of his wildest children, to smuggle them under this name into a place where they could not else have penetrated.”<sup>23</sup> This comment has come to epitomize the reaction to Chopin’s work throughout the nineteenth century. Various other critics have since argued that either the slow movement or the last two movements have little if any relation to the first two movements.<sup>24</sup>

The famous *Marche funèbre* that forms the slow movement does appear to predate the rest of the sonata. Most scholars date its genesis to 1837 or possibly even 1835, while the other three movements apparently were written at Nohant during the summer of 1839.<sup>25</sup> However, the compositional chronology has less to do with the piece’s overall unity than some critics have claimed. Alan Walker demonstrates quite convincingly that there are thematic connections between all four movements, and even points out that the theme of the much-maligned *Marche funèbre* utilizes the exact retrograde of the pitches (B-flat, C, D-flat, B-flat) from the theme of the first movement, *Grave-Doppio movimento* (example 1).<sup>26</sup>

The minor third that forms the basis of the march’s theme also appears in the principal theme of the first movement as shown above. This same interval appears, filled in by surrounding notes, in the scherzo,

both in the ascending figure in the bass and in the turn figure of the treble (example 2).

Example 1. (a) Sonata in B-flat minor, Op. 35, principal theme of Grave-Doppio movimento m. 9-10

Musical score for Example 1(a), showing the principal theme of the Grave-Doppio movimento from the Sonata in B-flat minor, Op. 35, measures 9-10. The score is in B-flat minor and 3/4 time. The treble clef part is marked *agitato* and *p*. The bass clef part is marked *And.* and *p*. The treble clef part features a descending eighth-note figure with a trill-like turn, while the bass clef part features an ascending eighth-note figure.

(b) Sonata in the B-flat minor, Op. 35, principal motive of Marche funèbre m. 3-4

Musical score for Example 1(b), showing the principal motive of the Marche funèbre from the Sonata in the B-flat minor, Op. 35, measures 3-4. The score is in B-flat minor and 3/4 time. The treble clef part is marked *p* and features a descending eighth-note figure with a trill-like turn. The bass clef part is marked *p* and features an ascending eighth-note figure.

Example 2. Sonata in B-flat minor, Op. 35, Scherzo m. 1-4

Musical score for Example 2, showing the Scherzo from the Sonata in B-flat minor, Op. 35, measures 1-4. The score is in B-flat minor and 3/4 time. The treble clef part is marked *Scherzo.* and *f*. The bass clef part is marked *f*. The treble clef part features a descending eighth-note figure with a trill-like turn, while the bass clef part features an ascending eighth-note figure.

Because of these things, Peter Gould suggests that the Marche funèbre “provided the germ for the whole of this magnificent

composition.<sup>227</sup> Therefore, thematic analysis cannot account for the nineteenth-century perception of the sonata as a haphazard collection of different materials, and, in fact, it argues for the organic unity of all four movements. If the component parts were truly unrelated, the sonata would fail to be an appropriate vehicle for the sublime on the basis of its lack of inner coherence. It is not that the sonata lacks unity, but that its unity is extremely difficult to understand. The fact that earlier critics were unable to discover the unity underlying the sonata's complex diversity supports the view that the sonata is sublime. In this sonata, the primary difficulties of comprehension lie in Chopin's treatment of the sonata form and the musical material itself.

### *The Grave-Doppio Movimento*

The first movement of Op. 35 is the most traditional in form, although it opens with four bars of introduction without a tempo marking and skips the first subject at the recapitulation.<sup>28</sup> Alan Walker claims that this alteration of the recapitulation, which also occurs in the B minor Sonata, Op. 58, and the Sonata for Cello and Piano, Op. 65, is "one of Chopin's chief contributions to the history of sonata form."<sup>29</sup> Although this first movement may function in a similar manner to a Classical sonata-allegro form, Jim Samson argues that this movement serves a different purpose based on Chopin's rejection of the Classical emphasis on equilibrium and synthesis in favor of an essentially Romantic conception of tension and release.<sup>30</sup> By using various strange keys in the development to deconstruct the first theme and by not recapitulating the entire first theme in the home key, Chopin increases the sense of tension in the work. Anatole Leiken, in an essay on Chopin's Sonatas, links this mounting tension to the literary analogy of "the hero and heroine [who] cannot be united because the hero dies."<sup>31</sup> Samson also suggests that Chopin alternates motivic and developmental material with lyrical material in such a way as to create the sense of a nocturne embedded within the developmental material (example 3).<sup>32</sup>

### *The Scherzo*

Samson also claims to find another mixing of genres in the scherzo. Beethoven's scherzi, generally considered the models for the keyboard scherzo, typically consist of a simple ABA or ternary form in which the A and B sections present contrasting aspects within a similar mood. The scherzo grew out of the minuet and retains some of the dance-like



qualities within a generally more rhythmic and dynamic character. While this movement in Chopin preserves the energetic character established by Beethoven's sonatas, the trio in this scherzo "seems to belong to another world."<sup>33</sup> Samson characterizes the outer sections of the scherzo as "an aggressive dance" or a transformed mazurka, while the inner section is "a gentle song," perhaps related to the lullaby (berceuse) or nocturne (examples 4, 5).<sup>34</sup> From a structural viewpoint, Leiken claims that the apparently simple ternary scheme of the scherzo actually blends elements of three different formal structures: a compound ternary form, a sonata form, and a Baroque-era binary form.<sup>35</sup>

Example 3. Sonata in B-flat minor, op. 35, Grave-Doppio movimento m. 1-11

F. Chopin Op. 35.

The musical score for Example 3 consists of two systems of piano music. The first system is labeled 'Grave.' and 'Doppio movimento.' and includes the composer's name 'F. Chopin Op. 35.' in the upper right. The 'Grave' section is in 3/4 time, marked 'p' and 'tasto'. The 'Doppio movimento' section is in 3/8 time, marked 'f' and 'p'. The second system continues the 'Doppio movimento' section, marked 'p' and 'agitato'. The score is written for piano and includes dynamic markings like 'p', 'f', and 'p'.

Example 4. Sonata in B-flat minor, Op. 35, Scherzo m. 1-5

The musical score for Example 4 is a Scherzo in 3/4 time, marked 'Scherzo.' It is in B-flat minor and includes dynamic markings like 'p' and 'f'. The score is written for piano and includes dynamic markings like 'p' and 'f'.

## Example 5. Sonata in B-flat minor, Op. 35, Scherzo m. 80-90

The image shows a musical score for the Scherzo movement of Chopin's Sonata in B-flat minor, Op. 35, measures 80-90. The score is written for piano and consists of two staves: a treble clef staff for the right hand and a bass clef staff for the left hand. The key signature is B-flat minor (three flats) and the time signature is 3/4. The tempo marking is 'Più lento.' and the mood is 'dolce'. The right hand features a melodic line with slurs and accents, while the left hand provides a steady accompaniment with chords and single notes. Dynamic markings include 'p' (piano) and 'f' (forte). There are also articulation markings like 'acc.' (accents) and 'tr.' (trills). The score ends with a double bar line and repeat signs.

*The Marche Funèbre*

The slow movement that follows the scherzo, the *Marche funèbre*, is easily the most famous and most discussed movement in the sonata. It is also a primary vehicle for the sublime; as we discuss the structure, we will also examine the sublimity that arises from the use of musical gestures derived from the older style of sublime rhetoric, from a jarring mixture of genres that leads to difficulty in perceiving unity, and finally, from the transcendent subject matter of death.

*Sublime Gestures.* When considering Chopin's work in light of the characteristics of the musical sublime discussed at the beginning of this paper, the *Marche funèbre* emerges as a likely candidate for the sublime. The movement has a clear ABA structure, with the A sections forming the funeral march proper. The musical material in these outer sections reinforces a close relationship with the sublime through characteristic musical gestures. The melody itself is surprisingly bare for Chopin, lacking both the wide vocal skips and intense fioriture characteristic of much of his work. Steady chords in the left hand provide a rich backdrop for the slow, dotted melody. These bass chords persist throughout each statement of the theme, never deviating from the root position tonic B-flat minor chord (lacking the third scale degree), alternating with the submediant G-flat major chord in second inversion (example 6). Lawrence Kramer suggests that this harmonically open structure gives the march an "inexorable" feel as it repeats the theme "relentlessly."<sup>36</sup> The overall impression is certainly one of firm and steady movement, with clear accents propelling the music forward. Yet, perhaps paradoxically, the music never seems to go anywhere. It is as though the listener is held captive by the steady footfalls of the march. Victor Bennett suggests that this sort of stillness augments the sense of sublimity by concentrating the energy of the piece.<sup>37</sup> This description

corresponds to Michaelis's explanation of the sublime as a suspension of time through "the constant repetition of the same note or chord."<sup>38</sup>

Example 6. Marche funèbre m. 1-10

The image shows a musical score for the first ten measures of Chopin's Marche funèbre. The score is written for piano and is in B-flat major and 3/4 time. It begins with a piano introduction marked 'Morceau Funèbre'. The music is characterized by a slow, somber mood with a steady bass line and a melodic line in the right hand. The score includes dynamic markings such as 'p' and 'f', and articulation like slurs and accents. The tempo is marked 'Bisou-Jour'.

*Sublime Contrast.* Like the scherzo, the slow movement also presents an interesting challenge for the performer and listener by the inclusion of a "trio-like" section between statements of the march theme (example 7). Jeffrey Kallberg also takes up the question of genre in this section, declaring that the presence of "a real melody—not just any melody, of course, but one of Chopin's most achingly beautiful melodies—alters the sense of genre."<sup>39</sup> He suggests that the most likely precursor to Chopin comes from the conventions of Italian opera, specifically an 1817 opera by Rossini, *La gazza ladra*, in which the heroine's march to the scaffold is interrupted by a prayerful song, or *preghiera*.<sup>40</sup> The juxtaposition of such dramatically different elements within an ostensibly absolute instrumental composition is quite jarring, even though it seems natural in an opera.

Though the ABA structure of this piece is not unusual for a slow movement, the extreme contrasts of mood between the doleful march in B-flat minor and the lyrical middle section in D-flat major have baffled many. Numerous writers have quoted Louis Ehlert, who says, "Why could it not at least have worn second mourning? After so much black crêpe drapery one should not at least at once display white lingerie."<sup>41</sup> Frederick Niecks calls this section "a rapturous gaze into the beatific regions of a beyond."<sup>42</sup> When compared to the "pitiable wailing" and "sinking helplessness" of the march proper, the difficulties involved seem to mount for a listener seeking unity within the movement.<sup>43</sup>

Indeed, Samson argues that “the effect of this middle section is not one of natural growth from, or even complementary to, the funeral march.

Example 7. Sonata in B-flat Minor, Op. 35, Marche funèbre m. 31-40

The distance is as great in a way as that between the scherzo and its ‘trio’, and the remoteness is underlined by Chopin’s denial of any but the most fragile tonal or thematic bridge between the two sections.<sup>244</sup>

Wilhelm von Lenz, a student of Chopin, best sums up the nature of this movement:

What Chopin made [of this Trio] is indescribable. Only Rubini sang like that, and even then only exceptionally (“il mio sasso” in [Bellini’s] *Il Pirata*; “fra poco” in [Donizetti’s] *Lucia*). It is very easy to make the Trio the most vulgar thing in the world [*den vulgarsten Dinge(n) von der Welt*], very hard to raise its cajolery of the ear [*Ohrschmeichelei*] to the level of sorrow in the poetry of the Funeral March. But [the Trio] depends on that, and never in Chopin’s interpretation did the euphemism of the Trio appear to me as a dualism to the main portion, however people want to reproach the Trio [*wie man dem Trio vorwerfen will*]. This is where you learn whether the pianist performing is also a poet or merely a pianist;

whether he can tell a story [*fabulieren*] or merely play the piano.<sup>45</sup>

Clearly, without a competent performer and well-informed and receptive listener, this movement remains a striking contrast of irreconcilable emotions. Understanding this movement requires an active engagement with the music in order to bring out the sublimity of the underlying relationships that seems to lie just beyond reach. The sublimity of this movement requires both performer and listener to become poets, expressing a sublime unity in spite of the way the music seems to “prevent the integration of one’s impressions into a coherent whole” in Michaelis’s phrase.<sup>46</sup>

*The Sublime and Death.* A further reason to associate this movement with the sublime is its historic relationship with death, mourning, and encounters of a supernatural nature. The theme of death as an aspect of the sublime is perhaps less directly tied to the formal definition of sublimity; therefore, the first task is to examine whether there is a relationship between death and the sublime at all. Kant, with his focus on physical objects, does not mention death as a possible cause of the sublime. However, Burke lists general privations among the causes of the sublime in his explanation. Moreover, the privations that he lists, such as darkness, vacuity, solitude and silence, are also associated with death. This is not to say that the experience of death is necessarily a sublime one. In fact, if the sublime were predicated upon an experience that poses the threat of immediate physical danger (as death certainly does), it would violate Kant’s stipulation that an experience of the sublime involves the apprehension of great power, not the fear of personal injury. Music is not physically dangerous to its listeners; therefore, it offers an acceptable venue for a sublime contemplation of death.

The universal nature of death is further evidence of its potential for sublimity. Victor Bennett, in his article “The Recognition of the Sublime,” claims that the sublime in music has “no room for the reflection of any peculiarity,” which may be understood to mean that sublime music requires a universal nature or applicability.<sup>47</sup> Here he echoes the ideas of earlier philosophers, Kant among them, who have argued that the “overwhelmingness” of the sublime necessitates a vehicle that transcends purely personal judgments.<sup>48</sup> Sublime music, such as Bennett’s example of J. S. Bach’s Brandenburg Concerti, “contains no drama and no passion, save the drama of being alive and the passion

of joy in living.”<sup>49</sup> Surely the drama of death is as universal as that of living.

E. T. A. Hoffmann, in his review of Beethoven’s Fifth Symphony, highlights another feature of the sublime, namely, a close association with the terror engendered by an experience of the supernatural or spiritual world. Hoffmann links the music to the disconcerting nature of the sublime, saying:

It is as if the frightful spirit, which in the Allegro gripped and unsettled the soul, were to step forth and threaten every moment from the storm clouds into which it had disappeared, and the friendly forms that had surrounded us comfortingly were to flee quickly from its sight. . . . The heavy strokes of this dissonance [C in a particular section], sounding like a strange, frightening voice, excite terror of the extraordinary—the fear of spirits.<sup>50</sup>

It is pertinent to note that Hoffmann’s “frightful spirit” never appears in the symphony, but the feelings of unease it excites are quite real. This apprehension of a great external power without immediate danger is appropriate to a manifestation of both Burke’s and Kant’s sublime.

Jeffrey Kallberg notes that Chopin’s “existence brought with it continued reflections of dying, death, and the otherworldly.”<sup>51</sup> This funeral march, while not expressly programmatic, is without question a serious and gloomy contemplation of death, imbued with the oppressive heaviness of grief. Such morbidity led Schumann to label it “repellent,” thereby providing a further linguistic link to the initial discomfort caused by the sublime.<sup>52</sup>

Despite Chopin’s removal of the adjective “funèbre” from the title in one of the many editions of the sonata, this work has been considered evocative of funerals and the specter of death even before it was performed in an orchestral arrangement as the Introit for Chopin’s own funeral in 1849.<sup>53</sup> The Marquis de Custine, a friend of Chopin’s, is known to have associated this march with Chopin’s own death as early as 1838, feeling that the work presaged its composer’s death.<sup>54</sup> In 1846, Élise Fournier described her reaction to a private performance of the music thus: “[Chopin played] a funeral march, so grave, so somber, so painful that our hearts were swollen, that our chest tightened up and that

one heard, in the middle of our silence, only the sound of some sighs barely suppressed by an emotion too profound to be controlled.”<sup>55</sup> Such reactions accord well with Pseudo-Longinus’s claim, quoted above, that the sublime includes “the power of raising the passions to a violent and even enthusiastic degree.”

After its public orchestral debut at the Madeleine in 1849, the fame of the funeral march spread quickly. In his biography of Chopin, Franz Liszt describes it as “a melancholy chant . . . so funereal and charged with devastating woe . . . a wail of human grief attuned by the lyres of countless seraphs!”<sup>56</sup> Thirty years later, Moritz Karasowski commented, “Such a funeral march could only have been written by one in whose soul the pain and mourning of a whole nation found its echo.”<sup>57</sup> In the 160 years since Chopin’s death, this music has become “Western music’s foremost expression of public mourning,” accompanying the funerals of public figures as dissimilar as Josef Stalin and John F. Kennedy.<sup>58</sup>

The composer himself apparently had an unusual sensitivity to the morbid nature of the march. In his article, “Chopin’s March, Chopin’s Death,” Jeffrey Kallberg cites a letter ascribed to Chopin as evidence of the composer’s personal experience with the eerie:

A strange adventure befell me while I played my Sonata in B-flat minor for some British friends. I had played more or less correctly the allegro and the scherzo, I was about to attack the march, when suddenly I saw loom up out of the half-open body of the piano the accursed creatures that appeared to me in a lugubrious night at the Chartreuse. I had to leave a moment to recover, after which I resumed without saying anything.<sup>59</sup>

Kallberg notes that the “accursed creatures . . . at the Chartreuse” are a reference to a hallucination Chopin had during his ill-fated stay in Majorca with George Sand during the winter of 1838-1839. Though Chopin focused on completing the Preludes during his time in Majorca, the B-flat minor Sonata was also in progress; the march was already complete, and the other movements were completed by June of 1839. It is possible that some of the “sublime” or “terrifying and harrowing music” described in George Sand’s memoirs included portions of the sonata.<sup>60</sup> While hallucinations are not necessary components of the

sublime, the ability of this music to evoke such powerful reactions is telling.

### *The Finale*

Despite all of the attention given to the remarkable Funeral March, it is not the only movement in this sonata to be thought of as uncanny. The Finale, described by Chopin as “the left hand and the right hand gossip[ing] in unison after the March,” has remained enigmatic even as a storm of controversy swirls around it.<sup>61</sup> Much of the controversy has centered on the disquieting nature of the movement as a whole. No commentator has been able to ignore it completely, though Felix Mendelssohn’s curt, “Oh, I abhor it,” may be the shortest treatment.<sup>62</sup> Although it rarely runs more than ninety seconds long in performance, it nevertheless serves to conclude a sonata that lasts more than twenty minutes in the first three movements. Opinions on the efficacy of the movement range from Sir Henry Hadow’s estimation of it as “too simple and primitive to justify it as a fitting conclusion for an important work,” to G. C. Ashton Jonson’s belief that this movement’s “weird poetry” is “the only possible end to the work.”<sup>63</sup>

The difficulty in understanding the finale of the sonata is not a problem of diametrically opposed sections, for it has only one texture, nor does it excite controversy over genre, for most commentators agree that it has something of the character of an etude or prelude. Instead, the music itself generates discussion. The harmonic and melodic language of this movement creates a very dense piece that is difficult to understand.

Example 8. Finale from Sonata in B-flat minor, Op. 35 m. 1-3

The image shows a musical score for the first three measures of the Finale from Chopin's Sonata in B-flat minor, Op. 35. The score is written for piano and is in B-flat minor, 4/4 time, with a tempo marking of 'Presto'. The music is characterized by a highly chromatic and dense texture, with a 'coltre vivo e legato' instruction. The notation includes a treble clef, a bass clef, and various musical symbols such as accidentals, slurs, and dynamic markings.

The harmonic language is highly chromatic, even “futuristically athenatic,” according to Alan Walker.<sup>64</sup> The complete lack of melodic line in a work by an acknowledged “poet of the piano” is striking enough, but the structure is bewilderingly simple: an etude-like *moto perpetuo* in



parallel octaves. The eighth-note triplet texture continues unbroken by rests until the final measures where the climactic fortissimo chords form the only significant dynamic contrast throughout the three pages (example 8).

Walker suggests that the movement is “without precedent in all of keyboard literature,” though it finds its twentieth-century descendant in the music of Arnold Schoenberg.<sup>65</sup> Moreover, its unusual nature, a sort of Russian “mystery wrapped in an enigma,” according to Walker, led Robert Schumann to declare: “Yet we must confess that even from this joyless, unmelodious movement, an original, a terrible mind breathes forth, the preponderance of which annihilates resistance, so that we listen, fascinated and uncomplaining to the end—for this is not music.”<sup>66</sup> The listeners are fascinated, but they do not grasp the meaning, and in this inability, the sublime appears fleetingly.

Once again, Samson explains how this movement defies our expectations:

The construction of this snake-like melody is of extraordinary subtlety, both of phrasing and of implied harmonic background. . . . The effect is rather like a film sequence coming in and out of focus with moments of relative diatonic clarity . . . undermined by the shifting, seemingly directionless activity surrounding them. This elusive quality is increased, moreover, by the constantly changing spans of melodic sequence and by the overlaps between them, so that recognizable (i.e. repeated) shapes emerge only fleetingly and tentatively from the continuous stream of sound.<sup>67</sup>

Jeremy Siepmann, in his book *Chopin: Reluctant Romantic*, offers this pregnant description of its effect: “Its weirdness is timeless. Its restlessness eternal. If this is gossip, it is the gossiping of demons.”<sup>68</sup> Theodore Kullak, a contemporary of Chopin, suggests that the movement is reminiscent of “the autumn wind whirling away the withered leaves over the fresh grave.”<sup>69</sup> Similarly, Anton Rubinstein characterizes it as “night winds sweeping over the churchyard graves.”<sup>70</sup> Kallberg calls the octaves “bone-rattling.”<sup>71</sup> Kullak believes that “it must rush by, cold and unfriendly,”<sup>72</sup> while Ashton Jonson chooses a quote from Dante Gabriel

Rossetti's sonnet "Lovesight" to express his view of the work: "The ground whirl of the perishable leaves of Hope, / The wind of Death's imperishable wing."<sup>73</sup> As Siepmann says,

The fate of the soul memorialized in the Funeral March seems hardly to be in doubt. . . . If [Chopin] did not presume to depict the torments of Hell itself, nor [sic] did he flinch from its contemplation. To "pictorialize" it, in the manner of a Liszt or a Berlioz would have struck him as unutterably vulgar and presumptuous. To portray the terrors of the imagination in the face of death was another matter altogether.<sup>74</sup>

The "terrors of imagination" that haunted Chopin are reminiscent of Burke's terror of the sublime.

### **The Sublime Sonata**

From a viewpoint focused on discovering unity within the sonata, the interpolations formed by the trios of the Scherzo and Marche funèbre pose a significant problem even though questions about the genre of specific movements remain to be answered definitively. Samson notes, "If we . . . consider the last three movements as a whole, the impression of a juxtaposition of contrasting, relatively self-contained musical worlds is strengthened—dance and berceuse, funeral march and nocturne; study."<sup>75</sup> These "relatively self-contained" sections make it difficult for listeners to conceive of an over-arching formal plan to give structure to the sonata as a whole. It is as though, as Schumann suggests, "The Sonata commences enigmatically and ends with an ironical smile—a sphinx."<sup>76</sup> If the Sonata were easily grasped, it would not present the sense of "overwhelmingness" crucial to the sublime. Instead, it fulfills the "condition of great music that it should so function of different related, though often non-congruent, structural levels, that its events should be subject to multiple interpretations, that it should imply more than it realizes, that it should as a consequence emerge as somehow larger than oneself."<sup>77</sup> If a listener is unable to construct a paradigm for the four movements of the sonata that appropriately relates the

contrasting sections to the whole, he or she may experience a sense of the overpowering nature of the sublime.

Robert Schumann referred to some of Chopin's overtly Polish pieces as "guns hidden in flowers."<sup>78</sup> The comment was directed at the mazurkas and polonaises, which seemed to be written in defiance of Russia's conquest of Poland in the 1830s, but the image is an arresting depiction of the strange juxtapositions and irreconcilable difficulties of the sublime. The Sonata, Op. 35, is an excellent example of a piece that combines radically different materials into a single work. Discovering how the pieces fit together will task the abilities of any listener; yet, the sonata is a compelling masterpiece that has been puzzled over even as it has been acclaimed. Although the sublime is in some respects a subjective experience, when a piece of music can be shown to be amenable to conditions of the sublime, such as the complexity and profundity of the sonata demonstrated here, we have good reason to suggest that the sublime is among that work's attributes.

## NOTES

<sup>1</sup> Qtd. in Drew 2000, 188, 234.

<sup>2</sup> *Ibid.*, 188, 236.

<sup>3</sup> *The Bantam New College Latin and English Dictionary*, 1995 ed., s.v. "Sublimis."

<sup>4</sup> Qtd. in Monk 1960, 12-13, 21; emphasis in original.

<sup>5</sup> Burke 1967, 100-101.

<sup>6</sup> Qtd. in Rothstein 1997, 513.

<sup>7</sup> *Ibid.*

<sup>8</sup> Burnham 2000, 88; emphasis in original.

<sup>9</sup> *Ibid.*, 88-90.

<sup>10</sup> Næsted, 29.

<sup>11</sup> *Ibid.*, 88.

<sup>12</sup> *Ibid.*, 94; emphasis in original.

<sup>13</sup> LeHuray and Day 1981, 289, 290.

<sup>14</sup> Webster 1997, 62, 63.

<sup>15</sup> *Ibid.*

<sup>16</sup> Sisman, 236.

<sup>17</sup> Koch, "Leidenschaften."

<sup>18</sup> Qtd. in Drew, 236.

- <sup>19</sup> Webster 1997, 62, 63.
- <sup>20</sup> Hoffmann, 111.
- <sup>21</sup> Ibid.
- <sup>22</sup> Huneker 1916, 296.
- <sup>23</sup> Qtd. in Huneker 1916, 122.
- <sup>24</sup> Walker 1966, 248.
- <sup>25</sup> Kallberg 2001, 4, 8.
- <sup>26</sup> Walker 1966, 246.
- <sup>27</sup> Ibid., 158.
- <sup>28</sup> Qtd. in Walker 1966, 158.
- <sup>29</sup> Ibid., footnote 25.
- <sup>30</sup> Samson 1985, 132, 133.
- <sup>31</sup> Samson 1992, 170.
- <sup>32</sup> Samson 1985, 133.
- <sup>33</sup> Ibid., 130.
- <sup>34</sup> Ibid.
- <sup>35</sup> Qtd. in Samson 1992, 172.
- <sup>36</sup> Kramer 2001, 106.
- <sup>37</sup> Bennett 1955, 263.
- <sup>38</sup> Webster 62.
- <sup>39</sup> Kallberg 2001, 16.
- <sup>40</sup> Ibid., 16, 17.
- <sup>41</sup> Qtd. in Huneker 1916, 298.
- <sup>42</sup> Niecks 1973, 227.
- <sup>43</sup> Ibid.
- <sup>44</sup> Samson 1985, 131.
- <sup>45</sup> Qtd. in Kramer 2001, 105; emphasis and insertions in original.
- <sup>46</sup> Webster 63.
- <sup>47</sup> Bennett, 262.
- <sup>48</sup> See Kant's argument on objective judgment, as discussed in *Critique of Judgment* §9, 22, 23, and 38.
- <sup>49</sup> Bennett, 262.
- <sup>50</sup> Hoffmann, 112.
- <sup>51</sup> Qtd. in Kallberg 2001, 22.
- <sup>52</sup> Ibid., 23.
- <sup>53</sup> Ibid., 3, 22.
- <sup>54</sup> Ibid., 14.
- <sup>55</sup> Qtd. in Ibid., 23.
- <sup>56</sup> Liszt, 17.

- <sup>57</sup> Karasowski 1938, 395-396.  
<sup>58</sup> Kramer, 97.  
<sup>59</sup> Qtd. in Kallberg 2001, 22.  
<sup>60</sup> *Ibid.*, 22.  
<sup>61</sup> *Ibid.*  
<sup>62</sup> Qtd. in Jonson, 202.  
<sup>63</sup> Qtd. in Walker 1966, 248; Jonson, 200.  
<sup>64</sup> Walker 1966, 247.  
<sup>65</sup> *Ibid.*  
<sup>66</sup> Qtd. in Huneker 1916, 122.  
<sup>67</sup> Samson 1985, 130.  
<sup>68</sup> Siepmann, 153.  
<sup>69</sup> Qtd. in Jonson, 200  
<sup>70</sup> Qtd. in Huneker 1916, 299.  
<sup>71</sup> Kallberg, 22.  
<sup>72</sup> Qtd. in Jonson, 200.  
<sup>73</sup> *Ibid.*  
<sup>74</sup> Siepmann, 153.  
<sup>75</sup> Samson, 131.  
<sup>76</sup> Qtd. in Huneker 1916, 122.  
<sup>77</sup> Samson, 212.  
<sup>78</sup> Siepmann, 82.

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## ABOUT THE AUTHORS

RACHEL BEIL will graduate in May with a B.A. in French and Religion. During her four years at Baylor she has participated in Kappa Alpha Theta Greek Fraternity, French conversation club, and *The Pulse*. She is a member of the National Society of Collegiate Scholars, Golden Key, and Theta Alpha Kappa honor societies. Additionally, she enjoys volunteering in the preschool and leading a college small group at her church. After falling in love with French culture during her junior year while studying in Caen, France, Rachel is excited about spending next year teaching English in France through the French Embassy's English Teaching Assistantship program.

SARAH CASEY is a junior University Scholar from Coppell, Texas, with concentrations in English and Spanish literature. She has served as a member of the editorial staff of *The Pulse* for the last two years. In addition to *The Pulse*, she is also active on campus as an officer in Delta Delta Delta, a William Carey Crane Scholar, and a member of Order of Omega and Phi Beta Kappa honor societies.

STEPHANIE FRAZON is a junior neuroscience major from Independence, Missouri. She is a member of Nu Rho Psi, the neuroscience national honors society, Baylor Neuroscience Society, Kappa Chi Alpha, and Silver Wings. In her spare time, Stephanie likes to read and travel.

ERIC HEADSTREAM is a senior Philosophy and Great Texts double major from Katy, Texas. He is president of Baylor Philosophy Club, vice-president of Baylor's Model Arab League team, a member of the William Carey Crane Scholars Program, and a member of Mortar Board. Eric's primary philosophical interests are in epistemology, contemporary continental thought, Kant, and Hegel. His Honors thesis examines the theological implications of the philosophy of Hegel. After Baylor, he plans to pursue graduate study in philosophy.



ARIANA PHILLIPS is a senior Piano Pedagogy major in the Honors Program. Balancing five hours per day in the practice room with the requirements of the Honors Program leaves her with relatively little time for extracurricular activities, but when she has the opportunity, Ariana enjoys ballroom dancing, reading for pleasure, eating ethnic food, and hanging out with friends. She also enjoys playing soccer, and is the captain for the Blue Angels, an intramural soccer team. She is a member of Mu Phi Epsilon, a professional music fraternity, serves as Secretary of Baylor's collegiate chapter of the Music Teacher's National Association, and serves as Treasurer of the Honors Student Advisory Council. In the fall of 2009, Ariana plans to attend graduate school pursuing a dual master's degree in Piano Performance and Musicology. Her long-term plans include pursuing a doctoral degree in either piano or musicology, and teaching in the field of music at a college or university.





The Honors Program, with its consistent emphasis on undergraduate research, has been a close partner of *The Pulse* since *The Pulse's* inception. In this Jubilee anniversary year of the Honors Program, *The Pulse* presents a retrospective look at the people, stories, and milieu of the program's early days, as well as some profiles of notable Honors alumni. On the last pages we present a taste of our Jubilee celebrations, including new awards and recognitions and current thesis work in progress.



## PREFACE

Dr. Andrew Wisely  
Director of the Honors Program

In the collage of pictures and text in the following pages, my favorite picture comes from a special 1964 *Lariat* feature on the occasion of the Honors Program's fifth anniversary. Dr. Rufus Spain and Dr. Ann Miller appear to be debating a point in a Colloquium from their respective disciplines of History and English. Both were on the Honors Program Committee at the time.

Then there is the *Lariat* feature on the Honors Program, just approved two days prior to begin Fall 1959, situated next to the feature on "Girl of the Week," a "Georgia Peach" with seemingly few aspirations for graduate school. It is interesting to note that Judy Jolley Mohraz, the Honors alumna Dr. Wallace Daniel brought in to speak at the third Honors Convocation, was herself a college president three decades after graduating in 1961 from Baylor's first Honors class. Her remarks that day pointed out the ludicrous double standards governing female executives—standards that she wished would have vanished by the nineties. Barbara SoRelle, the sole graduate of the Honors Class of 1965, was only one example of how the HP appealed to both women and men, although the mission statement, contained in brochures and other recruitment materials, drew attention to "man's knowledge" and integration of "his knowledge and techniques."

Students have needed some nudging and encouragement in all phases of the program itself, and their academic path in particular. The "Word of Encouragement" from the sixties notes that endurance will yield the benefit of a better, well-rounded education. As Wallace Daniel noted continuously in his many publications in the nineties, Betty Christian was frequently the person on hand to encourage seniors to finish their thesis. She served the Program for over thirty years, and was followed in the Coordinator role by Elaine Harknett, who contributed a dozen years.

Colloquium, a mainstay over the years, met in the beginning for three hours every week before changing to twice a month. A different faculty member led each time, as is the case now. The difference: a second discussion moderator, the same students from week to week—and exams based on the fifteen readings instead of response essays. Some of the authors on the 1970 Colloquium list—Freud, Goethe, Moliere, Burke (note the prices!)—are likely covered in regular upper-level non-Honors courses today; at the time, though, submitting to an equal distribution

of humanities, lab science, and social science texts forced many students out of their comfort zones. Nevertheless, anecdotal evidence suggests that Colloquium was the aspect of the Program students were most fond of, particularly in contrast to the required two-hour oral exam, which pitted them against four examining scholars, not to mention the three-hour written exam for their discipline.

For years, the Honors Program was administered by a committee of twelve, with subcommittees made up of Admissions, Honors Colloquia, Departmental Honors Courses, and Terminal Examinations. Names such as James Wood, James Shepherd, Anne Miller, Patricia Shepherd, E. Bruce Thompson, Cornelia Smith, William Hunter, Robert Packard, H. Dicken Cherry, Henry Robinson, Rufus Spain, W. J. Kilgore, Robert Miller, E. L. Dwyer, A. C. Pinkus, Phil Martin, Charles Tolbert, Elmer Duncan, and Glenn Hilburn appear on many publications, both for planning and maintaining the program through the sixties.

The first day I visited the Texas Collection to peruse these materials, I noticed a note scribbled on the front page of the 1959 Report to Faculty of the Arts & Sciences: “Dr. Wood: ‘It is not democratic to ignore your intellectual aristocracy.’” I am not exactly sure what to make of this, except that pretending all students have the same needs does justice to none. Even though the founding of Baylor’s Honors Program coincided with the injection of resources into the sciences—to keep pace with the Soviet space program in the same year Sputnik was launched—that is not the entire story. If one looks at the national standards for mature Honors Programs developed by the National Collegiate Honors Council, one finds the statement that “superior students profit from close contact with faculty, small courses, seminars or one-on-one instruction, course work shared with other gifted students, individual research projects, internships, foreign study, and campus or community service.” (<http://www.nchc.org/basic/honorsprogramcharacteristics.html>)

Such a statement applies without a doubt to Baylor’s Honors Program, housed since 2002 in the Honors College at Baylor. We are shaping curriculum according to student needs and faculty strengths, keeping in mind the sort of student we want graduating with a thesis. Did this student assimilate the intellectual curiosity to ask the “why” questions beyond the “what” questions? Did she apprentice herself to the discipline in order to contribute to it? Did he conclude that formation is necessary to enact transformation? Any triumphs we celebrate in this Jubilee year come ultimately from the ways Honors Program graduates look back with gratitude at this or that class or experience, this or that mentor during their time at Baylor.

## Beginnings



**The Honors Program endeavors to provide the distinctly superior student with the opportunity to carry on independent study and research during his last two years; to gain a sense of the interrelatedness of the many strands which make up man's knowledge and experience; and to become more aware of basic values--intellectual, aesthetic, social, ethical, and spiritual. It requires him not merely to acquire factual knowledge and develop scholarly techniques, but also to interpret, evaluate, and integrate his knowledge and techniques.**

Original Honors Program Mission Statement, 1959







**Professors Rufus Spain and Anne Miller, 1961**

**After a strong start, the Honors Program faltered severely in the early 1960s. Barbara SoRelle, below, was the sole Honors Program graduate in 1965.**

1961 Twelve students graduated in Program  
 1962 Nine students graduated in Program  
 1963 One student graduated in Program  
 1964 Two students graduated in Program  
 1965 One student graduated in Program  
 1966 Two students graduated in Program  
 1967 Six students graduated in Program  
 1968 Four students graduated in Program  
 1969 Six students graduated in Program



## Why Early Registration Is Important



The sign reads: "At this point, you are only four hours away from beginning registration."

The next sign reads: "Here John Jones, Houston junior, gave up the ordeal and died."

Encouragement to stay in the Honors Program came not only in form of the valued early registration perk, as seen in the above joke from the *Round Up*. Students were also offered periodic exhortations in the Honors Program newsletter, such as the example below from the 1960s.

**A WORD OF ENCOURAGEMENT.** This is the time of year-- after the grades come in at the close of the fall semester-- when freshmen (upper classmen too occasionally) in the Program often get discouraged and wonder if the effort demanded by the Honors Program is worthwhile. This year, as in the past, a number of students are circulating rumors to the effect that the benefits of the Program do not justify the effort. Before succumbing to these prophets of gloom, please consider the values of the Honors Program.

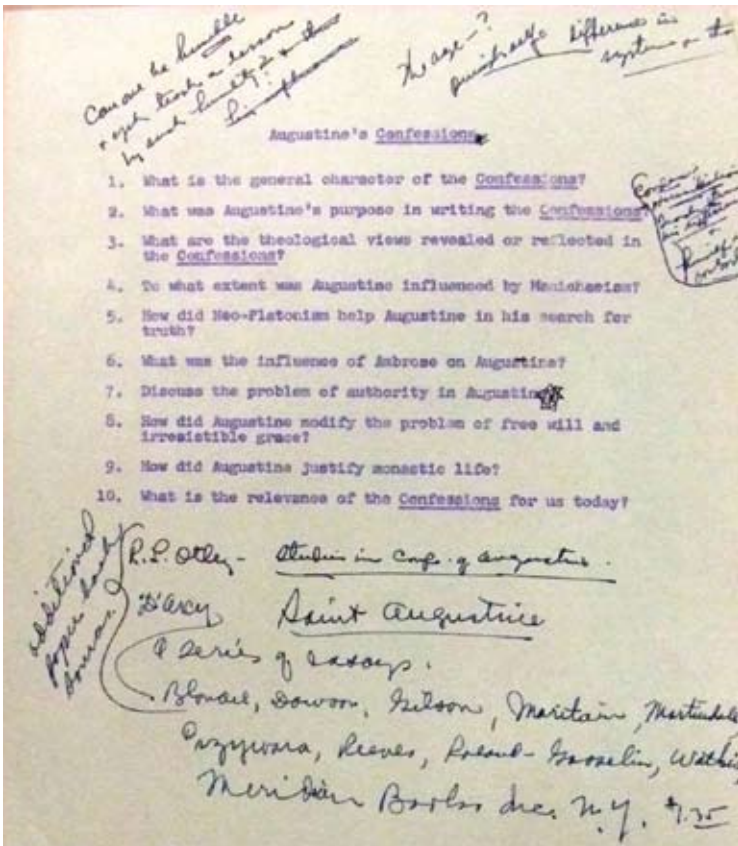
We will grant that the Honors Program is more demanding than the regular Baylor degree program, and, for the sake of argument, we will concede that participation in the Program MAY cost you a few hundredths on your grade-point average. But consider just a couple of the benefits: First, the Honors Program will assure you an education at Baylor superior to that received by non-honors students. In comparison with this reward the other advantages are relatively insignificant although well worth your consideration. Completing the Honors Program and having this fact noted on your transcript will immediately catch the eye of the dean of any graduate or professional school and increase your chances of being accepted at the school of your choice. Participating in the Honors Program will "complete" your education. In this day of specialization, the student who prepares himself adequately in his chosen field will likely have little time left for a well-rounded education. The Honors Program can provide the impetus to start you toward being a well educated person.

## Colloquium

The Honors Colloquium, a feature of the curriculum since 1959, was originally conceived as a great books course:

***“A ‘great books’ plan is envisioned by the Honors Committee. Quantitatively, this means ten to fifteen books per colloquium. Entire books and an organic approach (the genesis and development of an idea) is preferred to the fragmentary approach.”***

In 2002, with the creation of the Great Texts Program, the great books element returned formally to its prominent place in the Honors curriculum.



A professor’s mimeographed discussion/study guide from the 1960s.

## Colloquium reading list from Spring 1970

Date		Leader
February 2	No Book, "Moral Issues in Advancing Medical Technology"	McGee
February 9	Freud, GENERAL INTRODUCTION TO PSYCHOANALYSIS (Washington Square Press) \$.90	Sterling
February 16	Goethe, FAUST, tr. Taylor (Modern Library 77) \$2.45	P.Martin
February 23	.	
March 2	Ayer, LANGUAGE, TRUTH, AND LOGIC (Dover) \$1.35	Baird
March 9	Burke, THE PHILOSOPHY OF LITERARY FORM (Vintage, 1957 edition) \$1.65	Armstrong
March 16	No Book, "Essays from the World of Math"	Mayes
March 23	Meyer, EMOTION AND MEANING IN MUSIC (Phoenix Books) \$1.95	Wienandt
April 6		
April 13	No Book, "The University and Student Dissent"	Carden
April 20	MOLIERE: MISANTHROPE, RACINE: PHAEDRA, SIX PLAYS, Edited by E.Bentley in the Classic Theater (Doubleday Anchor, A155D) \$1.95	J.Shepherd
April 27		
May 4	No Book, "Data Processing"	Rolf

*The Lariat* ran a news article on Honors Colloquium  
December 11, 1964



**By Martha Hughes**  
**Lariat Staff Writer**

Every other Monday night nine students take the long ride up the elevator in the Tidwell Bible Building to a seminar room on the fourth floor.

Seated around two big tables pushed together, they take part in a two and one-half hour long discussion.

The discussions are on books - the "greats" in the fields of English, history, economics, chemistry, physics, geology, psychology, French, etc.

These are the honors students at Baylor. The discussion in which they participate is called the honors colloquium and is a three-hour-per-year course that extends over the junior and senior years.

Colloquium students now choose from a wide selection of texts each semester. The below are some selections from the 42 sessions offered Spring 2009.

Professor	Book	Author
Jerome Foss	<i>All Shook Up: Music, Passion, and Politics</i>	Carson Holloway
Julia Kisacky	<i>The Worth of Women</i>	Moderata Fonte
Nathan Kilpatrick	<i>Christ and Culture</i>	H. Richard Niebuhr
Troy Abell	<i>Women's Ways of Knowing</i>	Belenky, et al.
David White	<i>Lost Horizon</i>	James Hilton
Nathan Carson	<i>A Good Man is Hard to Find</i>	Flannery O'Connor
Keith Francis	<i>The Origin of Species</i>	Charles Darwin
William Weaver	<i>The Praise of Folly and other Writings</i>	Erasmus
Gardner Campbell	<i>The Black Swan</i>	Nassim Taleb
Aaron Baggett	<i>Man's Search for Meaning</i>	Viktor Frankl
Matt Dinan	<i>The Tempest</i>	Shakespeare
Steven Petersheim	<i>The Consolation of Philosophy</i>	Boethius
Myles Wertz	<i>Silence</i>	Shusaku Endo
Nicole McAninch	<i>The Protestant Ethic and the Spirit of Capitalism</i>	Max Weber
Jose Franco	<i>How to Solve It</i>	George Polya
Janet Sheets	<i>Gandy Night</i>	Dorothy Sayers
David Wilmington	<i>Cry, the Beloved Country</i>	Alan Paton
Lynne Hinojosa	<i>Three Guineas</i>	Virginia Woolf
Mike Cantrell	<i>What's So Great About Christianity</i>	Dinesh D'Souza
David Uber	<i>Gigi, Julie de Carneilha, and Chance Acquaintances</i>	Colette
Elizabeth Amato	<i>Lost in the Cosmos</i>	Walker Percy
Craig Clarkson	<i>Moral Man and Immoral Society</i>	Reinhold Niehbur
Lisa Baker	<i>The Elegance of the Hedgehog</i>	Muriel Barbery
Adam Moore	<i>The Fidelity of Betrayal</i>	Peter Rollins
Gerald Cleaver	<i>The Elegant Universe</i>	Brian Greene
Tom Pope	<i>Notes from Underground</i>	Fyodor Dostoevsky

## Notable Honors Alumni

### Carl Vaught

Graduation Year: 1961

Thesis Title: "A Critical Appraisal of Willard Van Orman Quines' Criterion of Ontological Commitment"



Dr. Carroll presents Carl Vaught with the Alpha Chi trophy as top graduate in the Class of 1961

Further Education: Ph.D in Philosophy, Yale University, 1966

#### Achievements:

- Professor of Philosophy at Pennsylvania State University for 31 years
- Distinguished Professor of Philosophy at Baylor 1998-2005
- Author of numerous important books on philosophy, including *Essays in Metaphysics*, *The Quest for Wholeness*, and *The Sermon on the Mount*. He also published a three-volume study of Augustine's *Confessions*: *The Journey toward God in Augustine's Confessions* (2003), *Encounters with God in Augustine's Confessions* (2004), and *Access to God in Augustine's Confessions* (2005)

"I think it would be a terrible thing if the opportunities for seminar discussions and independent writing provided by the Honors Program should ever cease to be a part of the educational opportunities at Baylor, and you have my best wishes and encouragement as you continue your work in this regard."

Vaught's message to students in the 1964 Honors newsletter



# Robert Sloan

Graduation Year: 1970

Thesis Title: "Freud's God is Not Dead"

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Further Education: MDiv, Princeton Theological Seminary, 1973  
 Ph.D, University of Basel, Switzerland, 1978

### Achievements:

- President of Houston Baptist University
- Former President of Baylor University, 1995-2005
- Founding dean of Truett Theological Seminary

As President of Baylor,  
 Dr. Sloan instituted the creation  
 of the Honors College.

*"To challenge students with exceptional academic potential, Baylor will create an Honors College. The College will house an expanded Baylor Honors Program, provide a home for an enhanced University Scholars program, serve as a location for the Baylor Interdisciplinary Core program, and facilitate the administration of other exceptional academic programs and services."*

Excerpt from Vision 2012





## Ray Perryman

Graduation Year: 1974

Thesis Title: "Financing Educational Reform and Reforming Educational Finance"



Further Education: PhD, Rice University

### Achievements:

- Leading international expert in economic modeling and forecasting
- Author of several books, including *The Measurement of Monetary Policy* and *Survive & Conquer*
- Named Outstanding Young Person in the World in the Field of Economics and Business
- Baylor economics professor and economist-in-residence
- Director of the Honors Program, 1981-1984
- President of The Perryman Group, an economic and financial analysis firm and headquartered in Waco, Texas

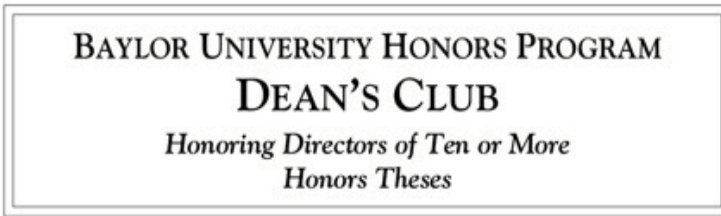


“There is no single thrill in life as exciting as the thrill of discovery. [The Honors thesis introduced me to the act of] seeing a project through, of learning some of the pitfalls and the skills [of such discovery].”

Perryman in a 1994 *Baylor Line* interview

## Jubilee Celebration: New Awards

Two new awards have been created as part of the Jubilee festivities:  
the Dean's Club to honor thesis directors and the Ray Wilson  
Award to honor top theses.



F. Ray Wilson II  
Helen E. Benedict  
Wallace L. Daniel  
Greg Garrett  
James A. Marcum  
Daniel B. McGee  
David E. Pennington  
Kevin G. Pinney  
R. Alden Smith

**Between 1996 and 2009, the following professors led  
record numbers of colloquia sessions:**

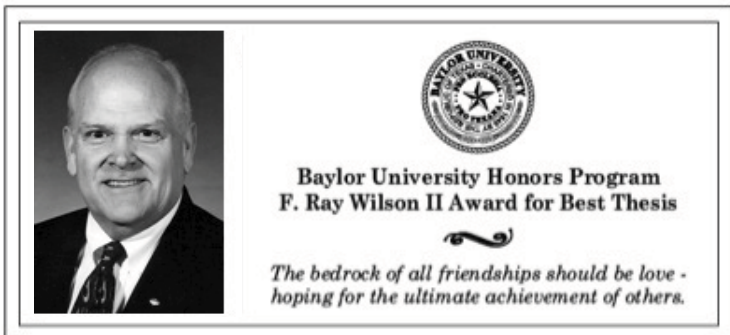
William Baker (16), Gerald Cleaver (15), Manfred Dugas  
(15), Jeffrey Hamilton (12), Thomas Hibbs (10), Lorin  
Matthews (12), Maxey Parrish (14), Eric Rust (20), Janet  
Sheets (11), Richard Skinner (15), Amy Vail (19), Elizabeth  
Vardaman (28), David White (16)

## Ray Wilson Award

In gratitude to F. Ray Wilson II for outstanding service to Baylor University, this award will be announced April 2009 and awarded annually beginning April 2010 for the best thesis. The winner will be chosen from up to three finalists selected yearly from Social Sciences, Physical Sciences, and Humanities (including music, art, theatre, and other fine arts). The winner will be invited to return to Baylor for the annual Honors Week banquet in late April 2010. An honorarium will be provided for remarks the student gives to the Honors graduates. Winners and thesis directors will have their names engraved on a nameplate affixed to a plaque featuring a portrait of Ray Wilson and displayed in a prominent location.

### F. Ray Wilson II (1941-2004)

- 31 years at Baylor as Professor of Biology
- Mentor and friend to countless students
- 1997 Collins Outstanding Professor
- 7 Mortar Board Top Professor Awards
- 2003 Master Teacher
- 2004 Director of the Honors Program
- Phi Delta Theta Sponsor
- Author of A-J Multiple Choice Tests
- Member of Highland Baptist Church



## Recent Growth

The Honors Program has made significant gains recently both in terms of completion and diversity within the program.

In 2001, there were 32 graduates from 15 majors; in 2008 there were 96 graduates from 31 majors.

### A selection from the 76 theses expected to be completed in Spring 2009:

Ariel Alexander Dr. Joan Supplee, director  
 “Democracy re-establishing justice through truth: the Strengthening of Rule of Law in Argentina, Chile and Paraguay as seen through the effectiveness of their truth commissions”

Kirsten Appleyard Dr. David Jeffrey, director  
 “Moi je vis un peu avec les anges”: The Search for Transcendence in the Contemporary Art of Arcabas”

Bart Claus Dr. William Hillis, director  
 “Effects of Atrial Natriuretic Peptide on Aldosterone Production in Rat Adrenal Cells”

Lisa Funkhouser Dr. Sang-Chul Nam, director  
 “Determining the role of AMPK in the establishment of cell polarity in Drosophila photoreceptor cells under energetic stress conditions”

Emily Hinkle Dr. Jon Singletary, director  
 “An Impoverished Theology: Christian Concern for the Poor in Twentieth Century America”

Steven Mart Dr. Stephen McClain, director  
 “Heat Transfer from Ice Accretion: A Study to Better Predict and Prevent Ice Buildup on Aircraft Wings”

Noah Peterson Dr. Tom Hanks, director  
 “No mercy, but mortal warre’: Familial Violence in Sir Thomas Malory’s *Le Morte Darthur*”

Aaron Reynolds Dr. Sinda Vanderpool, director  
 “La Présence de la Religion dans la Littérature Française du XIXème Siècle”

Megan Rizos Dr. Kathy Whipple, director  
 “The Influence of Music on Secondary Language”

“With each passing year  
 the importance of the Honors  
 Program in my formal education  
 becomes more evident; clearly,  
 I enjoy a broader perspective  
 of life and a keener appreciation  
 of the creative products of  
 our culture. Far too often the  
 vigorous, narrow, intense  
 training a physician undergoes  
 produces either by an initial  
 natural selection or later by force  
 of events, a somewhat  
 monotonous, cynical creature  
 whose vision reaches no farther  
 than the arc described by the  
 stethoscope that effectively  
 protects his ears from most of  
 the present rumblings of change.  
 Perhaps the Honors Program  
 alone will deliver me from  
 such a posture.”

Thomas R. Brandon  
 1961 Honors Program graduate



