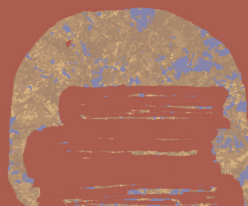


The
JOURNAL
of the
UNION FACULTY
FORUM

2025-26

VOL. 45





Letter from the Faculty Forum President

Janna Chance

As president of the Union Faculty Forum, I am pleased to introduce this, the forty-fifth volume of the *Journal of the Union Faculty Forum (JUFF)*. Much like the monthly in-person Faculty Forum meetings, the *JUFF* gives faculty the opportunity to share a wide range of ideas across disciplines. This year's *JUFF* contributors represent eight different fields—history, mathematics, library science, biology, philosophy, education, pharmacy, and English—and have written pieces ranging from scholarly to creative, pedagogical, and devotional.

As always, this year's *JUFF* would not be possible without the dedication of both the contributors and the people who work behind the scenes to produce the journal. I am grateful to all involved, especially to editor-in-chief, Christine Bailey, who is now in her fourteenth year in this position. During her years of faithful service, Dr. Bailey has transformed the way the *JUFF* is produced. Moving to a more collaborative editorial and design model, Dr. Bailey and Professor Angela Lee utilize English and art students as assistant editors and designers. Opening up opportunities for students to hone their professional skills and improving the quality of the *JUFF*, Dr. Bailey has made the *JUFF* even more fully embody Union Universities core values—of being “Christ-centered,” “excellence-driven,” “people-focused,” and “future-directed.”

Thank you to all the people who have contributed to this year's *JUFF*. Happy reading to all of the faculty and other Union community members who now get to enjoy the fruits of many faculty members' and students' hard work.

Sincerely yours,

Janna Chance
Faculty Forum President, 2025-2026



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General Submission Guidelines

A new volume of the *Journal of the Union Faculty Forum* is published during each fall semester. The editors invite submissions of poetry, fiction, creative nonfiction, artwork, and scholarly articles in various academic disciplines. Submissions should be in a MS Word format with a 12-point font. Acceptance is determined by the quality of the work. We are now accepting submissions for the Fall 2026 issue. Please email submissions to cbailey@uu.edu.



Remembering Dr. Jimmy Davis: A Tribute

A Special Note from Dr. Dub Oliver:

On Sunday, November 2, 2025, Chemistry Professor Jimmy Davis passed from this life to eternity. It is very rare when one of our colleagues dies unexpectedly while still serving with us. Additionally, in this case, Jimmy was the longest serving faculty member (47 years) who was still teaching on a full-time contract. The loss is significant.

Jimmy (Union University Class of 1970) was hired by the University in 1978 (see the page from the 1978-79 *Lest We Forget* annual below). He earned tenure in 1985. Jimmy was instrumental to our work in Memphis, institutional effectiveness, the Provost's office, and, of course, the Chemistry Department. Jimmy was the holder of the O. P. Hammons Chair and University Professor of Chemistry. He had a love for students and teaching, as well as a deep and abiding love and care for his alma mater.

During the November 4th Greater Faculty meeting, Dr. Michael Salazar, Chair and Professor of Chemistry offered the following reflections. With appreciation to Mike, they are reprinted here.

From Dr. Michael Salazar:

Jacob asked me to open faculty meeting this morning as one who knew and worked with our colleague Jimmy Davis, who died yesterday morning at the age of 77. Jimmy was a graduate of Union in Chemistry and served in teaching and administrative roles here for 47 years as a University Professor and the Hammons Chair in Chemistry. From the mid-80s to 2017, Jimmy served in various administrative roles as the Executive Director of Institutional Research, Associate Provost, Vice Provost of Institutional Research, and Vice President for Regional Campuses. More recently, Jimmy taught introductory courses in chemistry and team-taught courses in faith and science with his friend, Hal Poe. He and Hal won a Templeton award and wrote four books together on faith and science. He was a valued colleague; one who wasn't afraid to be a bit quirky at times, for which those in chemistry are thankful and will miss.

I've solicited remembrances of others who also worked closely with him and knew him best:

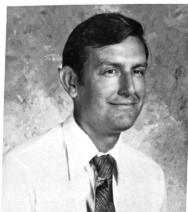
From his wife Christine: "Today my best friend and true love passed away from this earth."

From Hal Poe: "Jimmy Davis was the first friend I made when I moved to Union in 1996. We discovered that we had complimentary interests in the relationship between science and our Christian faith. Jimmy cared about students, but he also cared about the whole university and the need for a strong liberal arts education to fit our students to grapple with the big questions they will face in the future. Jimmy had a keen mind and a quick wit. His death leaves a vast hole in my life that will never be filled this side of heaven."

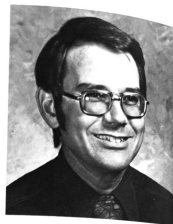
Chemistry and Physics



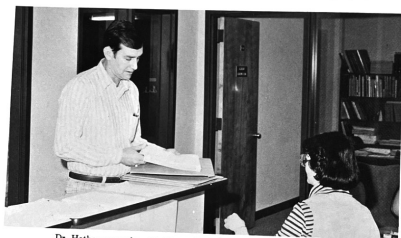
Dr. June White
Department Chairman



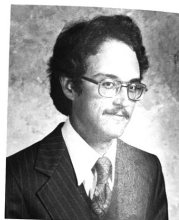
Dr. Kyle Hathcox
Associate Professor, Physics



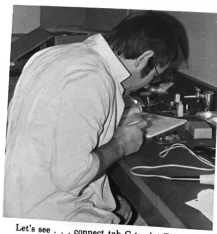
Dr. Charles Baldwin
Assistant Professor, Chemistry



Dr. Hathcox consults with Teresa Trull concerning faculty evaluations.



Dr. Jimmy Davis
Assistant Professor



Let's see . . . connect tab C to slot E



Dr. Davis grades the countless lab reports which he receives.

From David Dockery: "While we are saddened by this news, we certainly give thanks for Jimmy's life, his friendship and collegueship, as well as his important contribution to the overall work related to the Union project. May God have mercy and bring comfort to family and friends."

Carla Sanderson found the words of Wendell Berry a description of Jimmy's contribution to the Union community: "A community is the mental and spiritual condition of knowing that the place is shared, and that the people who share the place define and limit the possibilities of each other's lives. It is the knowledge that people have of each other, their concern for each other, their trust in each other, the freedom with which they come and go among themselves."

As we mourn the loss of our colleague, we do so with the backdrop of the church having just celebrated All Saints Day. The Gospel reading for All Saints Day comes from Matthew 5:

- 1 Seeing the crowds, he went up on the mountain, and when he sat down, his disciples came to him.
- 2 And he opened his mouth and taught them, saying:
- 3 "Blessed are the poor in spirit, for theirs is the kingdom of heaven.
- 4 "Blessed are those who mourn, for they shall be comforted.
- 5 "Blessed are the meek, for they shall inherit the earth.
- 6 "Blessed are those who hunger and thirst for righteousness, for they shall be satisfied.
- 7 "Blessed are the merciful, for they shall receive mercy.
- 8 "Blessed are the pure in heart, for they shall see God.
- 9 "Blessed are the peacemakers, for they shall be called sons of God.
- 10 "Blessed are those who are persecuted for righteousness' sake, for theirs is the kingdom of heaven.
- 11 "Blessed are you when others revile you and persecute you and utter all kinds of evil against you falsely on my account.
- 12 "Rejoice and be glad, for your reward is great in heaven, for so they persecuted the prophets who were before you."

While we mourn the loss of our colleague, I would use this occasion to remind us that ours is this narrow road spoken of here by our Lord. What Paul in Romans describes as union with the death of our Lord so that we shall certainly be united to his resurrection. Let us, then, continue being poured out as living sacrifices for the kingdom of our Lord, not looking to the things that are seen, but seeing through the temporary and fleeting to that vision of the coming eternal kingdom into which we may now be storing up everlasting treasures. I'll close with this beautiful prayer of Calvin that says it so well. Let us pray.

Almighty God and Father, grant unto us, because we have to go through much strife on this earth, the strength of thy Holy Spirit, in order that we may courageously go through the fire, and through the water, and that we may put ourselves so under thy rule that we may go to meet death in full confidence of thy assistance and without fear. Grant us also that we may bear all hatred and enmity of mankind, until we have

gained the last victory, and that we may at last come to that blessed rest which thy only begotten Son has acquired for us through his blood.
Amen.

Following Dr. Salazar's reflections and prayer, Dr. Shatzer offered a motion that the Greater Faculty formally express its gratitude for Dr. Davis's many years of faithful, sacrificial service to the Lord, to us, to this place, and to our students. The motion was seconded by Professor Bobby Rogers and unanimously approved.

Let's be in prayer for Christine, Jimmy's wife of 51 years. Please also pray for their son Patrick and his wife Eva as they mourn this loss.

In moments like these we are most grateful to Christ who assures us that those who are in Him will be together forever. As we press on, we take comfort in knowing the Jimmy has crossed the river and heard the words we hope to hear as well—"Well done, good and faithful servant. Enter into the joy of your master."

With abiding hope,

Dub

1 Timothy 1:17

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Word from the Editors

We, the students of the Professional Editing, Proofreading, and Publishing class, are proud to present the 45th volume of the *Journal of the Union Faculty Forum*. This journal captures the diverse areas of study within the Union faculty, with articles expressing our writers' interests in topics from cancer research to Taylor Swift's engagement—and just about everything in between. We thank our dedicated professor, Dr. Bailey, for her support and guidance in bringing our vision to life as we learn the craft of editing. We have certainly enjoyed working with the faculty and their academic and creative works, and we hope these articles are as moving, enlightening, and thought-provoking to you as they have been to us.

Your student editors,

JUFF Vol. 45, 2025-26





Against Eloquence

Fred Johnson

In a *Saturday Night Live* sketch from 2018, the chitchat of three fashionable couples at dinner skids to a halt when one diner brings up a recent, highly ambiguous Hollywood sex scandal.¹ The sketch's pretty good joke is built around the fact that they are all uncomfortable with the implications of the scandal but unwilling to risk unpacking those implications, lest they defy the tangled and contradictory conventional wisdoms of their social set. Every person at the table begins a sentence boldly but trails off in shame at shushing signals from one or another of their gathered friends. It's funny, and it's painful, and it distills for comedy what it feels like to live and think in a community where speaking with absolute carefulness and propriety—speaking with the squeaky clean manners of the moment—is given greater importance than speaking in ways that challenge, illuminate, enrich, embolden, or otherwise complicate reigning moods and mentalities.

I'm interested in the inciting moment of that sketch, where one friend violates a taboo by innocently broaching an uncomfortable topic at an inopportune moment in a way that makes jaws drop. In the comic world of the sketch, she eventually uses sorcery to make herself disappear, a metaphor for the kind of immense pressure the taboo topic puts on her unprepared friends and their friendships; in our real lives, the ineloquent misspeakers and the inelegant blurters—my people, I want to say—often face less magical forms of disappearance. They're blamed or condemned or given the cold shoulder or seen as obnoxious nuisances. Sometimes, to be sure, they *are* obnoxious or unhelpful. But I want to pursue the notion that we need them—absolutely must have them—to help us see behind the carefully

1. This essay, lightly revised for *The Journal of the Union Faculty Forum*, first appeared in print as "Response: Against Eloquence," in *President's Colloquy on Civil Discourse: Whitworth University 2017-18*, edited by Beck A. Taylor and Nathan L. King, Whitworth University, 2018, pp. 59-65. The colloquy itself took place across three evenings in 2017 and 2018, and each evening featured a main speaker and three respondents. "Against Eloquence" was delivered as a response to Nathan King's evening two keynote, "Building Better Discourse." The question of the night was "Can we disagree without being disagreeable?"

curated facades of fashionable right thinking. If we habitually greet awkward and inopportune speech with anger or punishment, we are working together against that which might otherwise challenge, attune, and deepen our views.

The novelist E.L. Doctorow drew what I think is a relevant distinction between what he called the language of regime and the language of freedom.² Regime language, Doctorow says, “draws its strength from what we are supposed to be” when we’re playing by the rules—when we are awed to silence or moved to careful speech by our loyalties to the attitudes and habits of those whose power and ways of thinking we admire, fear, or simply accept. To be sure, nothing is necessarily wrong with speaking up and acting out from within one’s polite and well-defined cultural space. Good manners get good results. Sometimes, though, we ought to be irritated out of our self-assurance.

Toward that end, Doctorow’s language of freedom nettles and inspires. The language of freedom arrives on the scene askew from polite expectations, and, Doctorow says, “will always trigger fashionable angers.” He also says, though, that this language “is where we become,” which means, I think, that this is the speech that gets us to new thoughts and exposes submerged possibilities. It is speech that illuminates, enriches, emboldens, or otherwise complicates our lives. And it is not simply the language of contrarian opinion or the rhetoric of protest marches, which can turn out to be very much part of the standard world of polite speech and action. Doctorow connects the language of freedom to art and particularly to his own work as a novelist who arranges facts and history and human activity into eccentric but telling new shapes.

Successful art, for Doctorow as for me, is often a source of challenge to conventional thinking and received habits of mind, heart, and action. An elegant act of art may turn out to be, in a given context, a piece of rude and disruptive ineloquence—a rock thrown through the windows of common complacency. Or maybe that metaphor is too aggressive; I’m not really talking about revolutionary action here. Maybe successful art turns out to be the look of gentle disapproval or the stunning counterexample that leads us to rethink our ways. And I want us to consider the possibility that rude, awkward, unpolished, inopportune, and unexpected speech can work like art, if we let it. Offense and irritation can lay the foundation for sincere head-scratching and conjecture, creating new impetus for the rigorous, imaginative inquiries into truth and knowledge that we champion in universities.

2. In Doctorow, E. L. “False Documents,” *E. L. Doctorow: Essays and Conversations*, edited by Richard Trenner, Ontario Review Press, 1983, pp. 16-27. Originally published in slightly different form in *American Review*, no. 26, Nov. 1977, pp. 215-32.

Of course, impolite and rude speech can also just be impolite and rude. That makes it difficult to cope with, at times, but I want to offer four questions we can ask ourselves when we encounter ineloquences of all kinds. These questions, I hope, will help us to be more agreeable in our disagreements, and perhaps to benefit mightily from speech and actions that could otherwise lead to the explosion of personal relationships or the fracturing of community.

Question 1: Am I picking at specks?

Matthew 7:1-5 gives us Jesus's famous lines about specks and planks, and they are central to my defense of rude and ineloquent speech. "Why do you look at the speck of sawdust in your brother's eye," Jesus asks, "and pay no attention to the plank in your own eye? How can you say to your brother, 'Let me take the speck out of your eye,' when all the time there is a plank in your own eye?" Jesus calls the speck-pickers hypocrites and warns them to get their own eyes clear of debris before poking their fingers into anyone else's. That's a metaphor about judging others, of course, and without unpacking the subtleties of Christian doctrine on judgment and forgiveness, I think I can say that we of the social media era run the daily risk of becoming a ghoulish army of speck-pickers, hovering over the speech of the world, fingers at the ready. What this looks like to me, most often, is a high tech variation on bullying—making the targeted person suffer helplessly for any exploitable move or infelicitous word, treating casual gestures and spontaneous speech with the kind of opportunistic, self-interested parsing and nitpicking that gives unscrupulous lawyers a bad name.³

If your pursuit of justice has you treating the people around you as if their speech is court testimony to be relentlessly prodded and critiqued; if your idea of conflict resolution is that everyone else should have their houses forcibly put in order; if your mind is bent more on the correction of others than on mastery of yourself, then you may be falling on the wrong side of this metaphor. You should at least consider that possibility, with a bit of fear and trembling. It is obnoxious when our news media fill their 24-hour drip feed with petty over-analysis of speech, eviscerating the spirit and intention of the speakers they target. But it is deadly to our own communities when we do that to one another. For our trouble, we end up with a gutted and suffering community of prudes and hypocrites, incapable of asking or hearing important questions about itself, or of listening to its important

3. *JUFF's* editors wondered here if I was going a very long way around to describe what in 2025 we tend to call cyberbullying and cancel culture. I think there's something to that reading, but I also think there's something more in what I was trying to say in 2018 (when the notion of cancel culture was just beginning to be talked about by that name in mainstream places). In the spirit of the essay, I've left my long description here, with the idea that if it's a bit about cancel culture, it's also about more than that—and less than that.

learn to hear and respond to the moderate and mild dissenters, or else we are building a world for the bold extremists.

Question 3: Have we made space for neurodiversity?

Our improving public conversation about individuals on the autism spectrum has included sympathetic and helpful talk about how to help those individuals live well, and it has led to the telling of surprising and inspiring stories about people with autism whose unusual minds have been indispensable assets to their lives and their work. One side effect of increased awareness has been a bit of speculation about autism-spectrum symptoms in famously difficult or eccentric geniuses of the past, such as Einstein, Mozart, and Newton. That kind of guessing is always inconclusive. Sir Isaac Newton's taciturnity, bad temper, and obsessive work practices may or may not indicate that he was living somewhere on the autism spectrum. But that kind of thinking—alongside a persistent string of real contemporary stories—is making a good case that the very qualities that have made some of our most brilliant minds so remarkable have also caused their remarkable interpersonal difficulties. They have often spoken rudely, at inopportune moments, in unwelcome ways.

In his book *NeuroTribes*, Steve Silberman says that neurodiversity refers to “the notion that conditions like autism, dyslexia, and attention-deficit/hyperactivity disorder (ADHD)” should be understood not simply as cognitive deficits or dysfunctions but as “naturally occurring cognitive variations,” each one “with distinctive strengths that have contributed to the evolution of technology and culture.”⁴ The neurodiverse see and say things differently than most people do. That can be a great hardship; it can also be a source of amazing insight or accomplishment. However, the neurodiverse are clearly at a serious disadvantage in any environment where speaking out of turn, failing to use the right words at the right time, or just being eccentric and a bit ill-mannered are reasons for severe censure. I want us to think not only of the individual with autism but also about, for example, the first-generation college student with ADD and no clear idea about how to follow social rules her peers were acculturated into from childhood. Such individuals are very likely to tell us something new about ourselves or recast old questions in new and unexpected ways; they are strangers who can shed new light on our daily lives and practices. But we will never learn from them if we reject them outright for speaking out of turn or breaking the rules of prudence as they try to put what they have in mind into words and actions.

4. Silberman, Steve. *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity*. Avery, 2015.

misspeakers and taboo breakers, who have been pummeled into miserable silence.

Question 2: Am I silencing the moderates?

I want to think next about moments when only pretty extreme voices can find the courage to speak into a conversation, using the example of underground comix of the 1960s. To avoid higher-level censorship, our country's major comics publishers chose in the middle decades of the 20th century to self-censor, submitting their work to an approval process that kept their publications safe for kids. The development of visual storytelling was held back for a number of decades, as a result, but not in every way, and not in every place and time. The '60s counterculture folks, in particular, developed an underground "comix" subculture, taking advantage of affordable printing and an emerging network of "head" shops to distribute their work. It's an interesting story about art finding a way even when mainstream culture tries to hold it back. But the work of these artists and writers is often really, truly, very, intentionally, absolutely offensive. Even half a century later, much of it looks and is extreme, though some of those artists have gained respectable mainstream attention over time.

So notice what happened and what we lost. Hordes of right-thinking people looked at comics and said, "Well, they have to be tamed and contained," but art and profound rudeness found a way to get out from under that forced regime, as it often does. The underground comix artists inspired many readers and followers, and they can be credited with moving forward their art form. But it is a shame, still, all that we missed out on during those decades of suppression, as we demanded that visual storytelling on paper should exist primarily for children. And what I wonder is what we might have had, from those decades, if the form had been able to develop more naturally and openly, taking on subjects and aiming for audiences less interested in costumed heroes and more interested in artful storytelling of all kinds. The extreme voices found a way. The art form found a way. But we lost out on a whole lot of possible creative work—not the bold countercultural stuff and not the acceptable kid stuff, but untold volumes of potential excellence from the vast space between and around and above and beneath those little islands of totally tame and extremely wild cultural production.

Likewise, what do we lose when we silence or intimidate all but the most acceptable speakers? What damage do we do to ourselves and our own self-knowledge when we cultivate communities where only those who are intentionally, excessively, or cluelessly shocking will dare to speak? What disaster are we risking when our moderate voices won't offer us gentle critiques for fear of being eaten by the waiting wolves? We need, I think, to

We ought to give them a break, I think, and we ought to give a similar break to all eccentrics, and we ought to realize that there are eccentricities in everyone. If we can make space for the neurodiverse and the eccentrics, we will hear and learn things that would otherwise be lost to us.

Question 4: Are we offering well-backed claims and allowing our claims to be scrutinized?

In university culture at its best, we make informed claims backed by reasons, we submit our claims and their reasons to scrutiny, and then we scrutinize the scrutiny, all in order to make better claims backed by better reasons, which we'll then submit to scrutiny, and so on. Each academic discipline has its own strategies for gathering evidence and forming claims and questioning claims, so that a well-rounded student ought to leave school with a number of different ideas about how either to form or encounter an unusual claim and then test it. Those disciplinary strategies can guide our responses to eccentric and unusual speech, helping us sometimes to assent to and sometimes to push back on that speech; they can provide us with ways to include all kinds of voices in our debates, even awkward-seeming ones. These tools can give us the means to form communities in which awkward or unexpected speech is met with lively scrutiny and generous response rather than suppression or disgust.

It does take some spine to embrace the rude voices—to allow all voices to speak and become part of that process of making claims and subjecting claims and reasons to scrutiny. It sometimes takes an effort of will to accept impolite voices that speak out of turn. Every era has some hard driving dogmatists who try to shackle art, suppress misspeakers, punish the ineloquent, and pressure others to do the same. History and experience show us that art is not always free, that it can be tethered to regime, and that demands for art to obey, to speak the party line and reinforce authorized lessons, will always be with us. But so, too, will the language of freedom be with us—even if it's sometimes cowed or beat down. We can learn to welcome, forgive, and even benefit from rude, inopportune, or upsetting eruptions from the language of freedom, which has its risks but also has a way of leading us toward epiphanies. We can even forgive the way the language of freedom sometimes speaks rotten foolishness, knowing that we have many adequate means for testing and countering claims, for dividing wisdom from folly, and for welcoming imperfect utterances.

Fred Johnson

*Professor of English; Dean, College of Arts
and Sciences*



Fred Johnson is a Professor of English and serves as Dean of the College of Arts and Sciences at Union. Previously, he taught as a professor in the English department at Whitworth University in Spokane, Washington, and, before that, he taught at Ball State University in Muncie, Indiana, where he earned his doctorate in English. His scholarship has looked at not only traditional storytelling in print but also communication and storytelling through film, comics, transmedia, and other visual and multimodal forms. Sometimes he writes poems and literary essays, too.



Emojis as a School of Virtue: Stock Responses, Moral Formation, and the Abolition of the Natural World¹

Justin D. Barnard

By the late fall of 1954, C.S. Lewis was beginning to feel like a dinosaur. Undoubtedly, that feeling was partly a function of the fact that Lewis was aging. On November 29th of that year, Lewis turned 56. As he would be diagnosed with osteoporosis within a few short years,² it's possible that he was already beginning to feel the effects of his declining health. However, Lewis's sense of being the fossilized remains of an extinct species was more than a feeling; it was a judgment, perhaps even a stance that Lewis self-consciously embraced.³ Quite famously, Lewis declared himself an intellectual dinosaur on his birthday, November 29, 1954, in his inaugural address (*De Descriptione Temporum*) for the Chair of Medieval and Renaissance Literature at Cambridge.⁴

In that lecture, Lewis argued that those who wished to read "Old Western literature aright" must "unlearn most of the habits [they] have acquired in reading modern literature."⁵ It was Lewis's felt status as a dinosaur—a specimen of the pre-modern era—that rendered his judgment on this point as one belonging to "a native." By the time Lewis delivered

1. An earlier version of this paper was delivered at a symposium at Calvin University in March 2023, "Reflections on C.S. Lewis with Special Reference to *The Abolition of Man*."

2. See C.S. Lewis's letter to Mrs. Johnson, July 9, 1957, where Lewis writes: "My back turns out to be not a slipped disc but osteoporosis—a spongy condition of the bones that is common in men of 75 but almost unknown at my age (58)" (*Collected Letters*, vol. 3, 867).

3. In a letter to Dorothy Sayers (dated April 6, 1955), Lewis closed with a rhetorical question: "Shd. we someday form a Dinosaurs' Club (with an annual dinner in the Victoria & Albert)?" (*Collected Letters*, vol. 3, 596). Interestingly, the immediate context for Lewis's mock invitation to Sayers appears to be their shared skepticism about the value of modern poetry.

4. I thank Lucy Meurer for pointing out to me that my interpretation of Lewis's own sense of his status as a "dinosaur" might be out of step with how he intended this image in his inaugural lecture at Cambridge. In that context, Lewis seems to embrace his status as an intellectual dinosaur with a sense of pride. He's a living specimen, and hence, an object of wonder, not a mere fossil destined to be cataloged and shelved. Meurer's point is well-taken. Even so, I cannot help but think that the image is multifaceted. It's possible that Lewis embraced his prehistoric self-designation with a sense of melancholy—a sense expressed in the poem that follows.

5. C.S. Lewis, "De Descriptione Temporum," in *Selected Literary Essays*, ed. Walter Hooper (Cambridge University Press, 2011), 13.

this inaugural lecture, the categories of thought in his head (and even the affections in his chest) had been forged by a world of literature and poetry that was passing away. Thus, he found himself almost pathologically incapable of comprehending what was being expressed in the verse of contemporary poets like T.S. Eliot.

Just days after his inaugural lecture at Cambridge, Lewis published a poem entitled, “Spartan Nactus,” in which he mused about the irony of his relationship to the burgeoning literary world.

I am so coarse, the things the poets see
Are obstinately invisible to me.
For twenty years⁶ I’ve stared my level best
To see if evening—any evening—would suggest
A patient etherized upon a table,
In vain. I simply wasn’t able.
To me each evening looks far more
Like the departure from a crowded yet a silent shore
Of a ship whose freight is everything, leaving behind
Gracefully, finally, without farewells, marooned mankind.⁷

Here, Lewis refers to the opening lines of T.S. Eliot’s “The Love Song of J. Alfred Prufrock” in which the evening “spread out against the sky” is likened to “a patient etherized upon a table.” Despite his apparent efforts, Lewis cannot bring himself to see the natural world in the way that Eliot’s image proposes. As Lewis later explains in the same poem, this is because he is...

...like that odd man Wordsworth knew, to whom
A primrose was a yellow primrose, one whose doom
Retains him always in the class of dunces,
Compelled to offer Stock Responses,
Making the poor best that I can
Of dull things⁸...peacocks, honey, the Great Wall, Aldebaran,

6. Perhaps we shouldn’t press for too much literalism in Lewis’s claim about having wrestled with Eliot’s poetry for “twenty years.” A handful of entries from his diary suggest that Lewis’s general distaste for Eliot’s work goes back at least as far as 1926. See C.S. Lewis, *All My Road Before Me*, ed. Walter Hooper (New York: Harcourt Brace Jovanovich, 1991), 409-11. Lewis’s formal engagement with Eliot’s work appears to begin with his treatment of Eliot’s 1936 essay, “A Note on the Verse of John Milton.” In his *Preface to Paradise Lost*, a series of lectures he originally delivered December 1-3, 1941, Lewis criticizes Eliot for maintaining that only poets are fit to pass critical judgment on the value of poetry. Eliot and Lewis corresponded briefly about Lewis’s argument after the publication of *Preface to Paradise Lost* in 1943. “Twenty years” seems a pretty good approximation.

7. C.S. Lewis, “Spartan Nactus,” in *The Collected Poems of C.S. Lewis*, ed. Don W. King (Kent State University Press, 2015), 388.

8. Lewis’s use of “making the poor best that I can / Of dull things” is a likely key to unpacking the meaning of the poem’s title. The Latin phrase “*Spartan Nactus*” roughly means “You have

Silver streams, cowslip wine, wave on the beach, bright gem,
The shape of trees or women, thunder, Troy, Jerusalem.⁹

Whether the existential angst Lewis expresses in these lines is meant to induce pity is not obvious. Perhaps there's a bit of irony in Lewis's self-deprecating humor, corresponding as it does with his ascendancy to a chair in literature at Cambridge that was created for him. What is striking is that the terms of a 20-year-old debate appear still vivid in his imagination, even in the autumn of his life. And the telltale sign is Lewis's reference to "Stock Responses."

Several years before Lewis delivered the Riddell Memorial Lectures that would be published as *The Abolition of Man*, he launched an attack on I.A. Richards's treatment of stock responses. The target of Lewis's ire was I.A. Richards's *Principles of Literary Criticism* (1925). In that work, Richards claimed that certain "stock conventional attitudes" to poetic imagery can frequently constitute "a clumsy and crude substitute" for "the free direct play of experience."¹⁰ The conventional attitudes that Richards had in view were an inherited collection of normative associations, codified in the poetic imagery of the Western tradition. For example, love was to be regarded as sweet, death as bitter, treachery as disdainful, virtue as beautiful, sex as holy,¹¹ young children as delightful, and waterfalls as sublime. For Lewis, such healthy associations were both a cultural and moral inheritance.

As Richards's use of "conventional" suggests, he maintained that the stock responses that poets were expected to preserve and that readers were supposed to experience in poetic imagery were not rooted in any objective congruity between the normative emotional attitude and that which the poetic imagery signified. Rather, in Richards's view, stock responses were largely the result of "social suggestion."¹² Thus, with a certain measure of disdain, Richards claimed that some poetic imagery only works its magic among those who have made "certain conventional, stereotyped maladjustments"¹³ in their taste (i.e., those who have perhaps unwittingly absorbed the mere social suggestions about what response one ought to have to certain kinds of poetic imagery).

Richards regarded all stock responses to poetry, whether good and healthy or aesthetically cheap, as impediments to a genuinely critical

obtained Sparta" or "Sparta is your lot." It may be a fragment of the larger expression: *Spartam nactus es, hanc exorna*, which roughly translates: "You have obtained Sparta, embellish (or adorn) it."

9. Ibid.

10. I.A. Richards, *Principles of Literary Criticism* (London: Harcourt Brace, 1925), 202.

11. Lewis mentions these as examples of stock responses in his *A Preface to Paradise Lost* (Oxford UP, 1961), 57.

12. Richards, *Principles of Literary Criticism*, 202.

13. Ibid.

apprehension of a poem's meaning and aesthetic value. However, Richards's attack on stock responses was connected to a larger concern that he shared with other intellectuals of his day about the soteriological role that the poetry of high aesthetic culture might play in reshaping Europe's post-Christian culture.¹⁴ One important step in such a program was to dissemble stock responses altogether. In his *Practical Criticism* (1929), Richards explains:

So much that passes for poetry is written, and so much reading of even the most original poetry is governed, by these fixed conventional reactions that their natural history will repay investigation. Their interventions, moreover, in all forms of human activity—in business, in personal relationships, in public affairs, in Courts of Justice—will be recognized, and any light which the study of poetry may throw upon their causes, their services, their disadvantages, and on the ways in which they may be overcome, should be generally welcome.¹⁵

At times, Lewis's reaction to Richards's treatment of stock responses was almost visceral.¹⁶ In his 1941, Ballard Matthews Lectures—later published as *A Preface to Paradise Lost*—Lewis argued that good stock responses were “one of the first necessities of human life, and one of the main functions of art is to assist” in cultivating the appropriate stock responses.

All that we describe as constancy in love or friendship, as loyalty in political life, or, in general, as perseverance—all solid virtue and stable pleasure—depends on organizing chosen attitudes and maintaining them against the eternal flux (or ‘direct free play’) of mere immediate experience.¹⁷

For Lewis, Richards's attack on stock responses amounted to an attack on humanity. Lewis thought that the preservation of healthy stock responses in

14. For a helpful commentary on this point, see Steven L. Reagles, “The Equivocal Tao of ‘Nature’: I.A. Richards, C.S. Lewis, and the Heresy of Coalescence,” in *Communication and the Global Landscape of Faith*, ed. Adrienne E. Hacker Daniels, (Lexington Books, 2016), 27–48.

15. I.A. Richards, *Practical Criticism: A Study of Literary Judgment* (London: Kegan Paul, Trench, Trubner & Co., 1929), 240.

16. Lewis's initial salvos against some of Richards's work, for example, “Bluspels and Flalans-feres: A Semantic Nightmare” (1939) and “High and Low Brows” (1939), were more measured and academic. In “Christianity and Culture” (1940), an essay Lewis published as part of an exchange in the Anglican periodical, *Theology*, Lewis briefly and sharply criticizes Richards's treatment of stock responses. In addition to criticizing Richards's view that high aesthetic culture might replace traditional Christian religion as a means of moral improvement, Lewis asserted that the “whole school of thought which descends from Dr. Richards bears such deep marks of its anti-Christian origins that I question if it can ever be baptized” (in *Christian Reflections*, Eerdmans, 1997, 25). The anti-Christian origins that Lewis has in view were likely Nietzschean.

17. C.S. Lewis, *A Preface to Paradise Lost* (Oxford UP, 1961), 55.

poetry performed not merely a cultural and moral service, but a biological one as well. He thought that the “very survival of our species”¹⁸ depended upon preserving and transmitting what he would later call “just sentiments.”

Lewis’s early criticisms of Richards’s treatment of stock responses helps us to make sense of a rhetorical irony many readers of *The Abolition of Man* have noted. At the outset, Lewis claims to have no desire to “pillory two modest practicing school-masters who were doing the best they knew,”¹⁹ yet this is precisely what he does. Since they acknowledged their explicit debt to Richards in *The Green Book* itself,²⁰ Lewis must have felt free to include Gaius and Titius in the Richardian school—an intellectual jungle against which he wielded his philosophical axe.

While he does not discuss the stock response as such in *Abolition*, Lewis’s critique of *The Green Book* is clearly rooted in his dispute with Richards.²¹ For example, Lewis takes Gaius and Titius to task for undermining the stock association between waterfalls and sublimity. He criticizes Orbilius²² for debunking the stock association between horses and the sentiment that recognizes our brotherhood with the animal kingdom. He considers a hypothetical application of *The Green Book*’s method to the stock association between dying for one’s country as a thing sweet and seemly. As is well-known, Lewis’s concern about debunking healthy stock responses is the prospect that so doing undermines the cultivation of virtue. For Lewis, “every virtue is a *habitus*—i.e., a *good* stock response.”²³ So, regarding a waterfall as sublime cultivates humility, regarding one’s beast as one’s brother cultivates compassion, and regarding death for one’s country as sweet and seemly cultivates patriotism.

The concern that Lewis expresses in *Abolition* about the cultivation of virtue in young people is in itself laudable. However, as his rhetoric suggests,

18. Ibid, 57.

19. C.S. Lewis, *Abolition of Man* (New York: Touchstone, Simon & Schuster, 1986), 17.

20. What Lewis calls *The Green Book* is, of course, a grammar book by Alec King and Martin Ketley, *The Control of Language*, (London: Longmans, Green & Co., 1939). King and Ketley acknowledge their debt to the work of I.A. Richards and C.K. Ogden’s *The Meaning of Meaning* (1923) in their preface (pg. xviii).

21. In a letter to Dorothy Sayers (dated Nov. 7, 1947), Lewis admitted that Richards was “the precursor of my *Green Book* villains.” But Lewis was more forgiving of Richards since he regarded his published work as “all above-board, a theory advanced for adult consideration and argued for, there is no crime in it, only error. *The Green Book* smuggled it in without argument in a book on a slightly different subject, for children, without probably being aware that it was controversial. Richards walks up to our mental front door and rings the bell: you needn’t buy his stuff if you don’t want—‘good morning, no offence.’ The others sneak in, or blunder in, through the scullery” (*Collected Letters*, vol. 2, p. 810-11).

22. “Orbilius” is Lewis’s designation of E.G. Biaggini, whose book, *The Reading and Writing of English* (1936) Lewis also criticizes in *Abolition*.

23. C.S. Lewis, “Christianity and Culture,” in *Christian Reflections*, ed. Walter Hooper, (Grand Rapids, MI: Eerdmans, 1997), 24.

both in *Abolition* and elsewhere, Lewis's concern is larger than the moral education of children. Lewis believed that the destruction of healthy stock responses in poetry might ultimately lead to humanity's demise. And the logic behind this concern requires a bit more unpacking.

One of Lewis's primary interests in *Abolition* was the consequences that the philosophy of *The Green Book* might have for our capacity for moral knowledge. Lewis famously maintained that objective moral truth could be apprehended by human beings. In *Abolition*, he invoked the concept of the *Tao* as a way of gesturing toward a normative order of reality, one that expresses our basic moral obligations. In invoking this idea, Lewis's goal in *Abolition* was not to defend the reality of the *Tao*. Rather, his chief interest was with our epistemic access to the moral truth expressed by the *Tao*.²⁴

Gilbert Meilaender has rightly observed that Lewis's interest in moral knowledge can be parsed in two ways. On the one hand, one can ask *how* we come to know the moral truth expressed by the *Tao* at all. On the other, we can ask how we come *to be able to* know the moral truth that the *Tao* expresses. Meilaender suggests that the first issue is a matter of epistemology, while the second is a matter of moral education.²⁵ For Lewis, knowing what moral truth is expressed by the *Tao* is a matter of intellectual intuition. The person who is properly trained just "sees" the moral truth that the *Tao* expresses. Moral knowledge, then, belongs to the faculty of reason.²⁶

However, in the tradition of Aristotle, Lewis believed that our capacity *to be able to* apprehend the moral truth expressed by the *Tao* depended upon proper moral formation of our affections. In other words, we come *to be able to* know the moral truth that the *Tao* expresses by first becoming the right sort of people—people who possess well-formed " chests." As Lewis explained in *Abolition*, "Only those who are practising the *Tao* will understand it. It is the well-nurtured man, the *cuor gentil*, and he alone, who can recognize Reason when it comes."²⁷ The one who fails to receive the proper formation in the *Tao* ultimately cannot "see" the moral truths that the *Tao* expresses.

It is this symbiotic relationship between knowing and *being able to* know what moral truths are expressed by the *Tao* that helps explain Lewis's deep concern about the preservation of healthy stock responses in poetry.

24. I take it that this is what Lewis means in *Abolition* when he employs the metaphor of a tree in relation to the *Tao*. Lewis speaks of values dying "when [their] roots in the *Tao* are cut" (82). Since the normative order of the *Tao* in itself cannot be destroyed by human agency, to cut oneself off from the *Tao* is effectively a metaphor for epistemic blindness.

25. Gilbert Meilaender, *The Taste for the Other* (Vancouver: Regent College Publishing, 2003), 198.

26. In *Miracles*, Lewis writes: "I believe that the primary moral principles on which all others depend are rationally perceived. We 'just see' that there is no reason why my neighbour's happiness should be sacrificed for my own, as we 'just see' that things which are equal to the same thing are equal to one another... Their intrinsic reasonableness shines by its own light" (53).

27. Lewis, *Abolition*, 60.

Lewis regarded these healthy stock responses in poetry as essential to the formation of our affections, “in which every object is accorded that kind and degree of love which is appropriate to it.” Lewis cites both Plato and Aristotle in defense of a philosophy of moral education aimed at cultivating “right responses”—training in feeling “pleasure, liking, disgust, and hatred at those things which really are pleasant, likeable, disgusting, and hateful”—ideally before a young person reaches an age at which her reason is capable of apprehending the moral truth expressed by the *Tao*.²⁸ And since he followed the Roman poet Horace in maintaining that poetry’s purpose was to teach and to delight, Lewis considered healthy stock responses in poetry to be indispensable tools in training human sentiments.

Granting that the interior logic of Lewis’s position is sound, preserving healthy stock responses in poetry is essential to the possibility of moral knowledge. For, if Lewis is right, our capacity to see the moral truths expressed by the *Tao* depends upon our having well-formed moral affections in the first place. And if the latter depends upon healthy stock responses in poetry, then to undermine stock responses in the ways in which I.A. Richards and the authors of *The Green Book* did, would *ipso facto* undermine the very possibility of moral knowledge. This line of reasoning helps illuminate why Lewis regarded the attack on stock responses as an attack on civilization, if not humanity itself. A society that has cut itself off from the very possibility of knowing what moral truths are expressed by the *Tao* is a society in grave danger, since moral knowledge is essential for shared life within human communities.²⁹

Even if Lewis’s argument for the necessity of good stock responses in poetry in the interest of moral education is sound, it is not clear that the formation of one’s affections through good stock responses in poetic imagery would be sufficient for nurturing one’s rational faculties so as to make them capable of apprehending the moral truths expressed by the *Tao*. At times in *Abolition*, Lewis speaks as though such an education would be sufficient. For example, Lewis cites Plato’s discussion of the education of the guardian class as an illustration of an older form of education, one he likened to teaching young birds how to fly. While Lewis does not explicitly assert that a moral education rooted in healthy stock responses to poetry would inevitably produce a soul capable of apprehending the moral truths expressed by the *Tao*, his appeal to the virtue tradition generally (e.g., Platonist, Aristotelian, Stoic, and Confucian) might understandably leave readers of *Abolition* with the impression that it could, and in most ordinary cases, should.

28. *Ibid.*, 29.

29. Of course, in the third chapter of *Abolition*, Lewis considers the possibility of how a human society might organize itself in the absence of moral knowledge altogether. His answer, in short, is that such a society would be organized on the basis of who possesses the most power.

In any event, Gilbert Meilaender has observed that Lewis's general optimism about the prospects for forming "just sentiments" is open to an important criticism from the Christian tradition. Specifically, Meilaender cites Iris Murdoch's description of the "fat relentless ego" as the greatest obstacle to moral knowledge.³⁰ Murdoch writes, "By opening our eyes we do not necessarily see what confronts us. We are anxiety-ridden animals. Our minds are continually active, fabricating an anxious, usually self-preoccupied, often falsifying *veil* which partially conceals the world."³¹ Thus, our capacity to grasp the moral truths expressed by the *Tao* might remain hidden from us as a result of our souls failing to be "controlled by *caritas* rather than *cupiditas*."³²

The attention that Lewis gives to moral education in *Abolition* seems to signal his awareness of this challenge. In fact, Lewis's awareness of the urgency of this challenge seems consistent with the tenacity with which he defends the importance of healthy stock responses. In his *Preface to Paradise Lost*, Lewis wrote: "That elementary rectitude of human response, at which we are so ready to fling the unkind epithets of 'stock', 'crude', 'bourgeois', and 'conventional', so far from being 'given' is a delicate balance of trained habits, laboriously acquired and easily lost..."³³

Whether Lewis is correct about the relationship between good stock responses and moral knowledge is not a matter for which I will offer a full apology. For the record, I believe that he is. My interest here lies in a subtler, often neglected aspect of *Abolition*. Specifically, it is worth noting that almost all imagery Lewis discusses in *Abolition* in conjunction with stock responses are images of *natural* things (i.e., aspects of the natural world or objects that exist in nature).³⁴ For Lewis, this is not accidental. At the outset of his treatment of moral education in *Abolition*, Lewis remarks:

Until quite modern times all teachers and even all men believed the universe to be such that certain emotional reactions on our part could be either congruous or incongruous to it—believed, in fact, that objects did not merely receive, but could *merit*, our approval or disapproval, our reverence, or our contempt.³⁵

30. Meilaender, *Taste for the Other*, 204.

31. Ibid.

32. Ibid.

33. Lewis, *Preface to Paradise Lost*, 56.

34. The one exception seems to be Lewis's discussion of death for one's country as sweet and seemly. One might contend that one's country is not a *natural* object, but rather an artifact of human convention. This position likely thinks about homelands through the lens of the arbitrary borders of modern nation states. I suspect that Lewis's notion of the homeland for which the Roman son is expected to die is much more deeply rooted in a *natural* relationship to the land (i.e., one given by Nature). Thus, a case can be made that even Lewis's discussion of one's "country" presupposes a notion of homeland that is, in fact, something *natural*.

35. *Abolition*, 27-28.

Lewis's use of the word "objects" here is rhetorically flat, especially for readers in the 21st century. For most contemporary readers of *Abolition*, the objects that surround our day to day lives are artifacts, i.e., they are objects of human invention and craft. We largely inhabit a constructed or even technological environment, rather than a natural one. Moreover, most of the artifacts that constitute our daily environment are consumer goods, i.e., objects that have been produced chiefly for their utility. But when Lewis speaks about "objects" that might *merit* our "approval or disapproval, our reverence, or our contempt," he is not thinking of all the objects generally that surround us on a daily basis. In fact, I suspect he is not thinking about consumer or technological artifacts at all. Rather, as the term "universe" suggests, Lewis has in view those things which constitute the natural world: those things which comprise ecosystems (e.g., waterfalls, oceans, islands, or the soil and landscape of one's homeland) and the living creatures that inhabit them (e.g., horses, deer, dogs, trees, or small children).³⁶ Thus, when Lewis is defending good stock responses in poetry as necessary for healthy moral formation, the primary poetic imagery that he has in mind is imagery that is rooted in Nature.

This distinction between the object that is given by Nature and objects of human artifice that serve no purpose beyond mere utility is part of what underlies Lewis's claim about the *Tao* as a doctrine of objective value. Lewis explains that the *Tao* "is the doctrine of objective value, the belief that certain attitudes are really true, and others are really false, to the kind of things the universe is and the kind of things we are."³⁷ Immediately after making this claim, Lewis offers the example of small children, who are the sorts of creatures that "*demand* a certain [affective] response from us" whether we feel like it or not.³⁸ Failure to respond in the proper way is a failure to recognize the "objective value" in the small child—what we might think of as the child's inherent dignity or creaturely worth as a human being.

Importantly, such worth is intrinsic to these natural things (i.e., small children) in a way that the worth of human artifacts produced for mere utility is not.³⁹ My computer does not "*demand*" (i.e., call forth as a moral requirement) the kind of affective delight that children do. This is because

36. That Lewis has naturally occurring objects in mind is reinforced by the very next sentence in *Abolition* in which he mentions Coleridge's waterfall, referring to it as "inanimate nature" (i.e., an object in the universe).

37. *Abolition*, 31.

38. *Ibid.*

39. By speaking about artifacts produced for mere utility, I intend to leave open the possibility that at least some human artifacts (e.g., works of art) may come to possess forms of intrinsic worth that mirror those possessed by objects in Nature. Works of art possessed of such intrinsic worth may similarly demand (i.e., call forth as a moral requirement) certain responses from human encounters by virtue of being the sorts of works that they are.

the worth of my computer is entirely a function of its utility. By contrast, the “objects” of the universe that are given by Nature (e.g., waterfalls, horses, children, trees) *merit* certain kinds of responses precisely because their worth is not a function of their utility; rather it is intrinsic to the kinds of things that they *are*.⁴⁰ Lewis says that our attitudes toward them are “thus recognitions of objective value or responses to an objective order.”⁴¹

Of course, Lewis’s point here does not entail that human artifacts produced for mere utility are incapable of playing the sort of formative role that Lewis envisions for objects given by Nature. In much of his recent work, political philosopher Matthew Crawford has argued that even the world of human artifacts can play a role in moral formation.⁴² In *Shop Class as Soul Craft*, Crawford offers an apology for the “built, material world.”⁴³ At least part of what motivates Crawford’s project is a vision of human flourishing rooted in a set of virtues that he regards as essential for public life. Chief among these is the virtue of “spiritedness”—a virtue that enables human beings “to live wakefully...to realize whatever excellence we can” in a “world that is not of our own making.”⁴⁴ For Crawford, the cultivation of spiritedness requires “unselfing”—a concept that Crawford borrows from Iris Murdoch. Crawford quotes Murdoch: “[A]nything which alters consciousness in the direction of unselfishness, objectivity and realism is to be connected with virtue. [V]irtue is the attempt to pierce the veil of selfish consciousness and join the world as it really is.”⁴⁵

According to Crawford, it is in working with the built, material world (e.g., repairing cars, motorcycles, or appliances, fixing plumbing, or restoring old furniture) that we receive the schooling that is essential to unselfing. For Crawford, this is literally because the pain of scraping one’s knuckles on an engine block or banging one’s head against a 2x4 redirects our attention. The demands of the built (i.e., physical) object in front of me requires that I attend to it on its own terms precisely because the material

40. The deep rationale for this position on Lewis’s part is beyond the scope of this essay. Though Lewis seems to be assuming that things in nature have a givenness (i.e., an internal integrity as the objects that they are) which is ontologically prior to the uses to which we may put them. For example, trees have their own intrinsic worth *as trees* that is not dependent upon their usefulness for wood. The intrinsic worth that is latent in the objects of nature is discoverable precisely because this givenness as the objects they are is ontologically prior to whatever value might come from their use.

41. Ibid.

42. See Matthew Crawford, *Shop Class as Soul Craft* (New York: Penguin, 2009) and *The World Beyond Your Head* (New York: Farrar, Straus and Giroux, 2015).

43. Crawford, *Shop Class as Soul Craft*, 2.

44. Ibid., 208. Crawford does not offer a full account of what he means by “spiritedness.” At one point, he says that “spiritedness is an assertion of one’s dignity.” He claims that it is “allied with a *spirit of inquiry*, through a desire to be *master of one’s own stuff*. It is the prideful basis of self-reliance” (54-55).

45. Ibid., 100.

of which it is comprised will not always conform to the desires of my will.⁴⁶ Such attentiveness, for Crawford, is what facilitates the piercing of the falsifying veils that Murdoch describes, which are a product of our selfish consciousness. In short, the built, material environment is essential to our moral formation since its very physicality works against our “fat relentless egos,” and it only insofar that we have experienced unselfing that we can “join the world as it really is” (i.e., grasp the moral truths expressed by the *Tao*).

As with Lewis’s argument in *Abolition*, Crawford’s project assumes that moral formation requires us conform our souls to an objective reality that is outside our heads. However, in Crawford, the objective reality that *demand*s a certain kind of response from us is primarily limited to the mere physicality of materials such as steel, concrete, sheet metal, brass, wood, or the strings of an instrument, etc. To be cured of our “idiocy,”⁴⁷ we must encounter the friction that is afforded by materials that push back through their sharp edges and hard surfaces.

Crawford’s philosophical instincts here mirror concerns that Lewis expresses in the final chapter of *Abolition*. Like Lewis, Crawford recognizes that the “little human animal will not at first have the right responses”⁴⁸ to reality. The possession of virtue is an achievement, not a given. Like Lewis, Crawford also recognizes that “man’s conquest of nature” may actually make future generations of human beings “weaker, not stronger.” “For,” as Lewis explains, “though we may have put wonderful machines in their hands we have preordained how they are to use them.”⁴⁹ Along these same lines, Crawford would undoubtedly point out that Betty Crocker Easy Bake Ovens do not cultivate the virtue of spiritedness. This is because the Easy Bake Oven makes its users the “patient” of the “man-moulders” of the “fully planned and conditioned world.” And the portrait of Crawford’s Spirited Man—who is insulted by the presence of automatic sensor faucets in public restrooms—is, in part, a protest against the world “all snug beneath the Conditioners” that Lewis imagines.

However, Crawford’s protest doesn’t go far enough. At best, the response that the built, material environment *demand*s from us, i.e., what

46. For Crawford, the *physicality* of the built environment is essential to unselfing. Crawford contrasts physical artifacts, which do not always readily comply with the will of artisans or users, with the digital world, in which everything is supposed to readily comply with the will of users. The telos of the latter cannot contribute to unselfing precisely because its intrinsic aim is to satisfy the will of the user with as little ‘friction’ as possible.

47. The term is Crawford’s. It is a term that he employs in its etymological sense to describe a person who is “private”—who does not inhabit a world beyond the walls of her head. See *Shop Class as Soul Craft*, 98.

48. Lewis, *Abolition*, 29.

49. *Ibid.*, 68.

it *merits* by virtue of being the kind of thing that it is, is attention. As Crawford has capably argued, the kind of attention that the built, material environment demands is one that might cultivate a range of intellectual virtues, insofar as those who attend are concerned with solving practical problems. Moreover, because the built, material environment requires care to maintain, the attention it demands isn't entirely without moral significance. Nevertheless, the vast majority of our built, material environment is not a rich enough canvas⁵⁰ against which to cultivate a wider range of moral virtues, since most of its worth is rooted in little more than mere utility.

By contrast, while Lewis defends a vision of moral education that employs good stock responses in poetry, these are ultimately grounded in the givenness and intrinsic worth of the natural world itself. This is why, in the final chapter of *Abolition*, Lewis expresses such deep concern over the prospect that “man has Nature whacked.” A world that is bereft of “field and forest, vale and mountain, flowery meadow, flashing sea, chanting bird and flowing fountain,”⁵¹ is a world that no longer provides a canvas that is rich enough in “objective value” to afford a cultural inheritance of good stock responses that are essential for moral formation. This is because a world in which Nature has been whacked by technological power is a world that largely no longer has objects of value—except, of course, for those objects that we build and value for their utility.⁵²

On a broad, cultural level, our society remains committed to denying the logic of Lewis's argument in *Abolition*. That is, we reject the idea that apart from a cultural inheritance of healthy stock responses in art which aims at both teaching and delighting—an inheritance grounded in Nature itself—we cannot achieve the moral education that is essential for our survival. Instead, we imagine that human beings can continue to survive and perhaps even thrive in a world in which stock responses are orchestrated through the frictionless environment of the digital world. Perhaps the most striking example of our efforts to imagine that Lewis is wrong (or of the lengths to which we will go to show that Lewis is wrong) is the emotional support robot, Moxie.

50. It is ironic that this term has recently been coopted by a major purveyor (<https://www.instructure.com/>) of online learning management systems (LMS). Likely, the term “Canvas” is meant to highlight the idea that the LMS is merely (or relatively) a blank space upon or into which users may freely dump whatever content they choose. Thus, Canvas the LMS is being marketed as having as few *given* properties as possible, i.e., givens that might make demands on users to conform to a prior reality. My own use of this term is meant to draw attention to the physicality of a canvas in painting, the prior reality of which always comes with a set of given properties that make demands upon the artist. The physicality of Crawford's built environment is undoubtedly “richer” as a canvas (in terms of “givens”) than an LMS like Canvas itself. However, as I will argue below, it is not nearly as rich as the canvas of the natural world.

51. From the hymn “Joyful, Joyful, We Adore Thee” by Henry Van Dyke, 1907.

Moxie is now being marketed as “the world’s first emotional support robot for kids.”⁵³ According to its creators, Moxie can help children “learn to recognize and name emotions and choose the correct tools to help manage emotions, actions, and behavior.” Moxie does this chiefly by employing artificial intelligence that involves listening, facial recognition technology, and voiced audio responses, together with a screen “face” that is essentially a highly sophisticated animated emoji.⁵⁴ As a mere technological achievement, Moxie is, without question, a wonder. It employs technology that makes it sufficiently interactive to captivate the imaginations and attention of young children.

As an exemplar of the world of “the Conditioners” that Lewis imagines in the final chapter of *Abolition*, Moxie could not be more poignant. Lewis explains:

In the older systems both the kind of man the teachers wanted to produce and their motives for producing him were prescribed by the *Tao*—a norm to which the teachers themselves were subject and from which they claimed no liberty to depart...[in the era of Conditioners] this will be changed. Values are now mere natural phenomena. Judgements of value are to be produced in the pupil as part of the conditioning. Whatever *Tao* there is will be the product, not the motive, of education...[the Conditioners] know how to *produce* conscience and decide what kind of conscience they will produce.⁵⁵

For Lewis, the era of the Conditioners comes into being in conjunction with the rejection of good stock responses in poetry and the destruction of the natural world, which is the canvas upon which stock responses in poetry depends. It is the latter’s absence, in particular, that leaves the Conditioners free “to choose what kind of artificial *Tao* they will, for their own good reasons, produce in the Human race.”⁵⁶ Lewis predicts that for a time, these Conditioners may resort to “the old ‘natural’ *Tao*.” And perhaps it is true that Moxie’s creators are seeking to inculcate stock responses in children that are congruent with “the old ‘natural’ *Tao*.” Nevertheless, Lewis’s deep

52. Even Crawford’s defense of the built environment is not a defense of its *intrinsic* value as such. Rather, Crawford grasps that objects in the physical world that resist conformity to our immediate desires are useful for cultivating the spiritedness that he sees as essential to our civic life.

53. Details about Moxie can be discovered at the website (eerily named): <https://embodied.com/>.

54. Some have noted that Moxie’s design resembles Pixar’s animated character, “Eve,” from the movie *WALL-E*. Others have pointed out that Moxie is eerily similar to a robot named “Ashley Too” that appeared in the Netflix series, *Black Mirror*.

55. Lewis, *Abolition*, 71.

56. *Ibid.*, 72.

philosophical reflex in the final chapter of *Abolition*, one that he doesn't articulate with the precision that it deserves in that talk, is that the presence of Nature itself (as opposed to the artificial world of the built environment) is the last defense against the possibility that the Conditioners will remake the human race however they wish. An entirely digital world (i.e., a world stripped of Nature itself) in which "play has no limits,"⁵⁷ is a world in which there is no protection against the power of some men to fashion their descendants in whatever ways they please.

Near the end of *Abolition*, Lewis famously insisted that his stance was not an "attack on science." However, he recognized the possibility that many would regard his argument as an attack on science since his critique of the mere technologist made him sound like an obscurantist. But the "magician" upon whom Lewis had set his sights was not a scientist like E.O. Wilson, who devoted his life to explaining the nature of ants without explaining them away. Rather, the magician was I.A. Richards, whose applied science for reading poetry Lewis regarded as a "basilisk which kills what it sees and only sees by killing."⁵⁸ For Lewis, avoiding this outcome was a matter of "getting the focus right."⁵⁹ Getting that focus right required the preservation of a deep, symbiotic relationship between good stock responses in art (especially in poetic imagery) and the objects in the natural world whose intrinsic worth merit, and hence, demand, particular affective responses.

Since he saw the poets as abdicating their cultural and moral responsibility, Lewis imagined the possibility that the work of restoring a healthy focus might come from the natural sciences themselves—at least insofar as those sciences attend to the objects of their study as the *wholes* that they are. And Lewis's prediction makes sense in light of the underlying logic behind his argument that I've attempted to make clear in this essay. Good stock responses are essential to moral formation. They make it possible to grasp the moral truths expressed by the Tao and are rooted in the fabric of an

57. This phrase is an advertising tagline for Sony's PlayStation gaming devices. It uncannily echoes I.A. Richards's idea that stock responses inhibit the "free direct play of experience" in reading poetry.

58. Lewis, *Abolition*, 86.

59. The phrase "getting the focus right" comes from a passage in Lewis's *Reflections on the Psalms* (New York: Harcourt, 1986), where Lewis is criticizing reductionist readings of both Nature and Scripture. He explains: "One who contended that a poem was nothing but black marks on white paper would be unanswerable if he addressed an audience who couldn't read. Look at it through microscopes, analyse the printer's ink and the paper, study it (in that way) as long as you like; you will never find something over and above all the products of analysis whereof you can say, 'This is the poem'. Those who can read, however, will continue to say that the poem exists" (116-17). Lewis wrote *Reflections on the Psalms* in the autumn of 1957. Coming as it does just a few short years after Lewis's Cambridge inaugural address and the publication of "*Spartan Nactus*," one cannot help but hear echoes in this passage of his old debate with Richards.

objective natural order.⁶⁰ In this order of created goods within Nature, each good, by means of its intrinsic value, calls forth particular affective responses. When poets like T.S. Eliot can no longer see the evening sky like a ship's departure "from a crowded yet a silent shore," but instead as a "patient etherized upon a table," then perhaps the last hope for seeing the evening sky without seeing through it is the natural scientist who has made the evening sky her life's devotion out of a sense of wonder and love. But if the natural world that the scientist loves is abolished, then the stock responses that are essential to our moral formation will be rooted in the fabric of our artifacts, whether physical or digital. And if our present cultural moment is any indication of the future, it suggests that emojis will become the school of virtue. "Nature will be troubled no more by the restive species that rose in revolt against her so many millions of years ago, will be vexed no longer by its chatter of truth and mercy and beauty and happiness." Instead, our faces will glow all "snug" beneath our screens "till the moon falls or the sun grows cold."⁶¹

60. By "objective," I simply mean, to borrow Crawford's phrase, a world beyond our heads.

61. Lewis, *Abolition*, 77.

Justin D. Barnard

Professor of Philosophy, Honors Community



Justin Barnard has been teaching at Union University for nearly 20 years. While getting degrees from Palm Beach Atlantic (B.A.) and Florida State University (M.A. & Ph.D.), he started thinking so hard about things that he stumbled into becoming a philosopher. Barnard continues to be astonished by the joy of cooking and eating good food, and he secretly harbors an inkling that God might be an Epicurean. Barnard regrets that he had but one life to give for the basketball court. He marvels at the timeless comedic relevance of *Seinfeld*. And against the better judgment of Socratic wisdom, he occasionally puts things in print. Like his intellectual hero, C.S. Lewis, Barnard is delighted to be an “ordinary layman” in the church. Barnard’s love for his wife (Tracie) and sons (Nate and Luke) is surpassed only by his love for Jesus.



Effects of Pharmacological Dose of Vitamin C on MDA-MB-231 Triple-Negative Breast Cancer Cells

Lunawati Lo Bennett

Plain Language Summary

Breast cancer is the most common cancer in women. In 2022, about 2.3 million women around the world were diagnosed, and 670,000 died from it. In the United States, about 1 in 8 women will develop breast cancer in their lifetime. By 2040, more than 3 million new cases and 1 million deaths are expected each year. A difficult type of breast cancer is called **triple-negative breast cancer (TNBC)**. About 20% of breast cancer patients have TNBC, which grows quickly, spreads easily, and often comes back within three years. Unlike other breast cancers, TNBC does not have hormones or protein receptors with targeted treatments; this means the usual medicines don't work and new treatment options are needed.

One potential treatment is **high-dose vitamin C (VC)**. In this study, I tested whether high-dose VC could kill TNBC cells using MDA-MB-231 as a model of TNBC. For comparison, I also tested VC on **non-cancerous cells** from kidney (HEK 293), lung (CCL-205), and rat spleen, to evaluate its effects on different cell types.

Several tests showed that high-dose VC could kill TNBC cells by triggering natural cell death (apoptosis). It did this by increasing proteins that start the cell death process (Apaf-1 and caspases 7, 8, and 9), lowering proteins that help cancer spread (MMP-2 and MMP-9), slowing down cell growth, and boosting tumor-suppressor proteins (p53 and p21). These findings suggest that high-dose VC may have potential as a treatment for TNBC and possibly other breast cancers.

1. Introduction

Breast cancer remains one of the most prevalent and concerning diseases affecting women worldwide. Approximately 2.3 million women were diagnosed with breast cancer worldwide with 670,000 deaths that accounted for 6.9% of all cancer-related deaths. In the United States, 1 in 8 women will be diagnosed with breast cancer during their lifetime. In 2024, it is estimated that 310,720 women and 2,800 men will be diagnosed with invasive breast cancer [1-3]. Due to its complex nature and significant

impact on public health, extensive research efforts are dedicated to understanding, treating, and ultimately eradicating this disease. Breast cancer consists of various subtypes, one of which is triple-negative breast cancer (TNBC). TNBC lacks receptors for the hormone estrogen (ER-negative), progesterone (PR-negative), and human epidermal growth factor receptor 2 (HER2/neu-negative). Consequently, TNBC does not respond to hormonal or targeted therapies. In addition to TNBC, other invasive breast cancers that express estrogen or progesterone receptors are classified as basal-like or luminal-like cancers. Approximately 20% of breast cancer diagnoses are TNBC [1,2].

Several characteristics make TNBC particularly challenging to treat. Firstly, TNBC often grows rapidly and undergoes metastasis, the process by which cancer cells spread from their primary site to distant parts of the body. Metastasis is considered the most life-threatening aspect of cancer, responsible for approximately 90% of cancer-related deaths in humans [3]. Secondly, TNBC can easily become resistant through the activation of mutated pathways, making it difficult to treat. Consequently, oncologists often use high doses of anti-cancer agents from multiple drug classes to prevent and treat metastasis and resistance. Thirdly, TNBC has a high recurrence rate within the first three years of therapy with a five-year survival rate of 65% as compared to 86% for all breast cancers [2,3].

Because TNBC doesn't respond to hormonal or targeted therapies, treatment options are limited to traditional anti-cancer drugs, which often cause unfavorable adverse effects such as nausea, vomiting, bone marrow toxicity, cardiac arrest, renal failure, and infertility [4]. Therefore, several attempts have been made to find different compounds to alleviate this problem.

Vitamin C (ascorbic acid or ascorbate) has been known for treating and preventing scurvy and the common cold since 1928 [5]. In the 1970s, several studies suggested the benefit of high-dose VC in improving advanced cancer survival [6]. However, controversial clinical results between Linus Pauling, a Nobel Prize recipient in Chemistry, and the Mayo Clinic at that time, led to the dismissal of VC as a promising anti-cancer agent. In recent times, new knowledge has emerged, prompting investigations into the mechanism of action of VC as a possible anti-cancer agent [7-10].

A pharmacological dose of VC refers to a high dose of VC that is significantly greater than the recommended daily allowance (RDA) which is typically consumed through diet and standard supplementation. These doses are often administered intravenously (IV) rather than orally to achieve higher plasma concentrations that are thought to have therapeutic effects in cancer treatment. Oral intake of VC is limited by intestinal absorption, which can only achieve plasma concentrations up to about 250 micromolar.

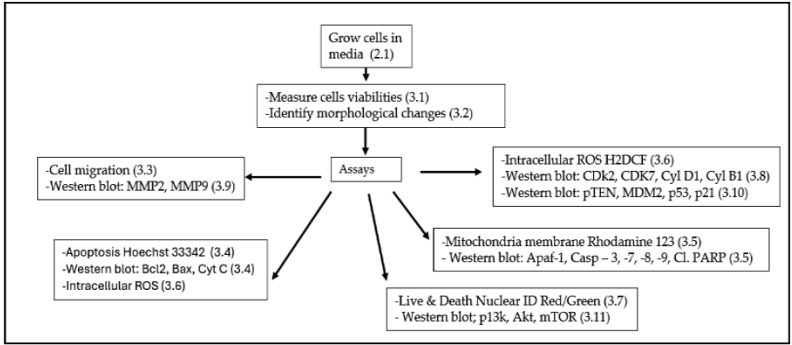
In contrast, IV administration can achieve plasma concentrations in the millimolar range often used in the range from 10 grams to 100 grams per infusion. At high concentrations, VC can act as a pro-oxidant rather than an antioxidant. This effect generates hydrogen peroxide and other reactive oxygen species (ROS) that can damage cancer cells more than normal cells. Pharmacological doses of VC are generally well-tolerated, with potential side effects including gastrointestinal discomfort, kidney stones (particularly in individuals with a history of kidney stones), or rare complications related to IV administration [11].

The MDA-MB-231 cell line, derived from a pleural effusion of a patient with invasive ductal carcinoma, is frequently utilized to investigate advanced stages of breast cancer. The cells are characterized as ER-negative and PR-negative. Microarray profiling indicates that the MDA-MB-231 cell genome aligns with the basal subtype of breast cancer. It also lacks HER2/neu, making it an effective model for TNBC. These cells are commonly used to study metastasis, tumor progression, and drug resistance mechanisms in breast cancer [12-13].

The aim of this study was to determine the pharmacological dose of Vitamin C (VC) required to induce cell death in MDA-MB-231 cells and to elucidate the molecular pathways involved in the process in triple-negative breast cancer (TNBC) cells. The study also examined the impact of VC on non-cancerous lung fibroblasts CCL-205 cells, kidney HEK293 cells, and rat spleen to assess the specificity of its cytotoxic effects on cancerous versus non-cancerous cells.

2. Materials and Methods

To provide a concise overview of the research design, procedures, and results, a simplified scheme is presented below.



For further information, please see the original manuscript: Bennett, L.L. "Effects of Pharmacological Dose of Vitamin C on MDA-MB-231 Cells." *Biomedicines* 2025, 13, 640.

3. Results

3.1 Cell Viability Assay

Cell viability of MDA-MB-231 cells was assessed using the MTT assay with VC concentrations ranging from 0.25 mM to 125 mM. The concentration that resulted in approximately 20% and 50% cell death (IC50) was determined. VC at 8 mM reduced cells viability by 20%, while 16 mM caused 50% cell death in MDA-MB-231 cells. In contrast, an increase in viability was observed in rat spleen cells treated with 2.5 mM and 8 mM VC, indicating that VC did not cause cell death in normal cells such as spleen. (Figure 1)

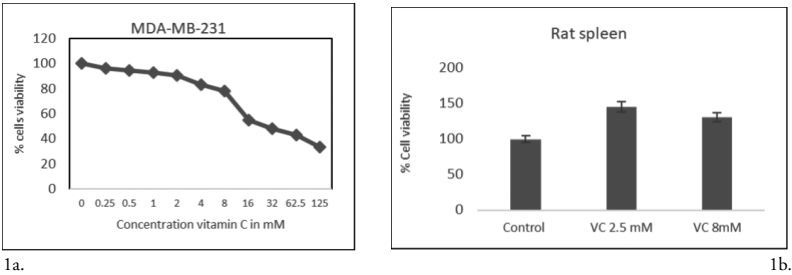


Figure 1. 1a. MTT result of cell viability MDA-MB-231 cells treated with VC from 0-125 mM. Fig.1b showed rat spleen had higher % cell viability with treatment of VC at 2.5 mM and 8 mM showing non-cytotoxic effect of VC on normal cells.

3.2 Changed in Cell Morphologies

VC concentrations at 8 mM and 16 mM significantly altered cell morphology compared to the control MDA-MB-231. Control cells displayed fibroblast-like growth, adhering to the culture dish. In contrast, cells treated with 8 mM VC exhibited some cell death, while those treated with 16 mM showed increased cell death, with most cells floating in the median (Fig 2a). Non-cancerous HEK 293 kidney cells exhibited increased growth when treated with 5 mM and 15 mM of VC, compared to the control, indicating that VC did not induce cell death in these non-cancerous cells.

The author thanks Dr. William Thierfelder of Union University's Biology Department for providing cells from rat spleen.

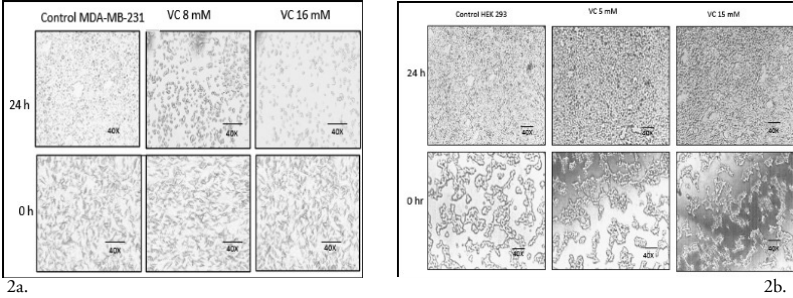
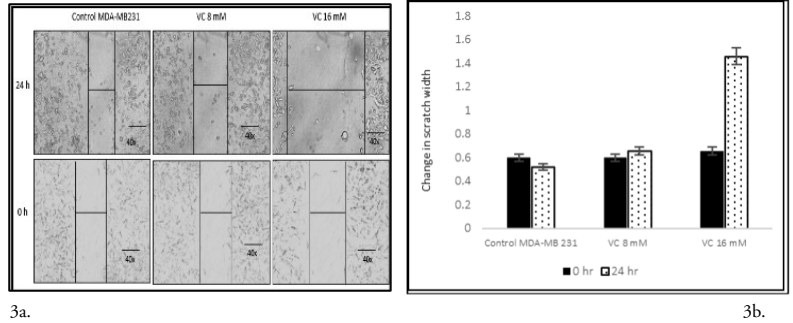


Figure 2. Inverted microscopic images of MDA-MB-231 and HEK-293 after 24 hours of treatment with VC at concentrations of 8 mM and 16 mM for MDA-MB-231, and 5 mM and 15 mM for HEK 293. Higher concentrations of VC at 16mM led to increased cell death in MDA-MB231 compared to their respective controls (2a). In contrast, VC at higher dose of 15 mM promoted cell growth in non-cancerous HEK-293 kidney cells (2b). The scale bar represents 40x.

3.3 Inhibition of Cell Migration

Following a 24-hour treatment with 8 mM VC, significant changes in cell migration were observed in MDA-MB-231 cells, accompanied by a marked increase in cell death at 16 mM VC treatment as compared to the control. In the control group, a slight increase in cell migration suggested early signs of invasion and metastasis (Figures 3a, 3b). Importantly, non-cancerous HEK 293 kidney cells treated with 5 mM or 15 mM VC for 24 hours showed no significant changes in cell growth compared to its control, indicating that VC is non-cytotoxic to non-cancerous cells.



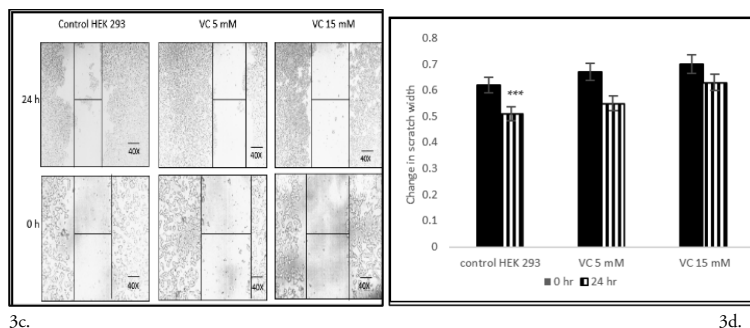


Figure 3. displays inverted microscope images of cell migration following a 24-hour treatment of MDA-MB-231 cells with VC 8 mM or 16 mM VC. In the control groups, a narrow scratch area indicated maximal cancer cell migration, whereas VC-treated cells exhibited a wider scratch area, reflecting reduced migration (3a). Conversely, VC at 5 mM and 15 mM enhanced cell growth in non-cancerous HEK 293 kidney cells, as evidenced by a decreased scratch width (3c). The corresponding histograms (b, d), with $**p < 0.01$ and $***p < 0.001$ (post hoc Newman-Keuls test) compared to 0-hour measurements of the corresponding control cells. The scale bar represents 40x.

3.4 Induction of Apoptosis

VC induced apoptosis in treated cells of MDA-MB-231, as observed using Hoechst 33342 staining. A higher concentration of VC at 16 mM resulted in increased apoptosis, indicated by a bright blue fluorescence due to condensed and fragmented nuclei, whereas control cells exhibited lower fluorescence, signifying healthy cells (Figure 4a). The histogram in Figure 4b illustrates the difference in cell expression following VC treatment, as analyzed using ImageJ software. Additionally, Western blot analysis revealed changes in the expression of pro-apoptotic Bax and anti-apoptotic Bcl-2 proteins, suggesting intracellular ROS generation. Figure 4c showed a significant increase in Bax expression alongside a slight decrease in Bcl-2 expression with VC 8 mM and a more pronounced decrease with VC 16 mM. ROS generation also led to a reduction in mitochondrial membrane potential, causing cytochrome C release into the cytosol, which further triggered apoptosis. Figure 4d presents a histogram of data from Figure 4c. VC effect on non-cancerous CCL 205 was also analyzed (Figure 4e) with its histogram (Figure 4f).

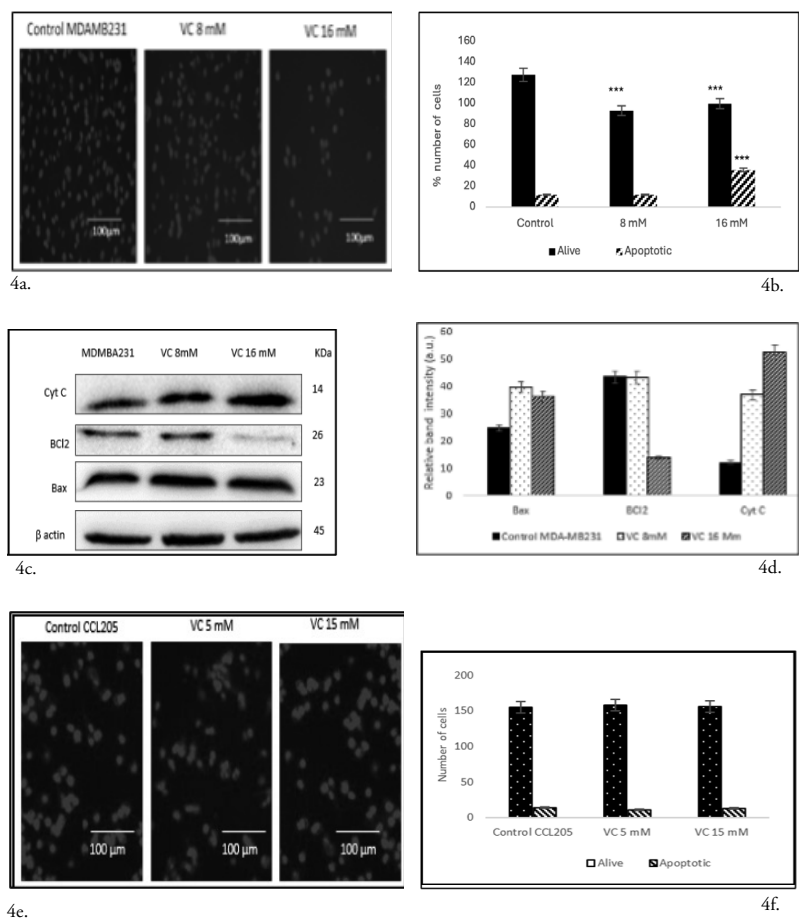


Figure 4. displays fluorescence microscopy images of MDA-MB-231 control cells alongside cells treated with 8 mM and 16 mM VC for 24 hours, followed by Hoechst 33342 staining (a). (b) illustrates a histogram comparing the percentage of apoptotic and alive cells relative to control. (c) presents Western blot analysis showing the expression levels of Bax, Bcl-2, and cytochrome C, with histogram (d). VC treatment at 5 mM and 15 mM in non-cancerous CCL-205 lung did not significantly affect the ratio of alive versus apoptotic cells, indicating no cytotoxic effect on non-cancerous cells (e) with histogram (f). The scale bar represents 100 μ m. Statistical significance was determined using the post hoc Newman-Keuls test (***) $p < 0.001$ compared to the respective controls.

3.5 Depletion of Mitochondrial Membrane Potential (ψ_m)

The depletion of mitochondrial membrane potential due to cell death was evident through the generation of reactive oxygen species (ROS) in MDA-MB-231 cells treated with VC, as detected by Rhodamine 123 staining. Control cells displayed higher fluorescence intensity, indicating a

healthier membrane potential compared to treated cells. This depletion was most pronounced in cells treated with 16 mM VC.

Western blot analysis further revealed an increased expression of apoptotic protease activating factor (Apaf-1), a cytoplasmic protein involved in the induction of apoptosis. Additionally, apoptosis within the mitochondria was marked by the activation of key proteins, including caspases -7, -8, and -9. The activation of these caspases represents a critical step in cancer cell apoptosis, with VC directly triggering both initiator caspases (caspases -8 and -9) and executioner caspase -7 (Figures 5b). Moreover, the effect of VC was tested on non-cancerous CCL 205 lung cells (Figures 5c, 5d).

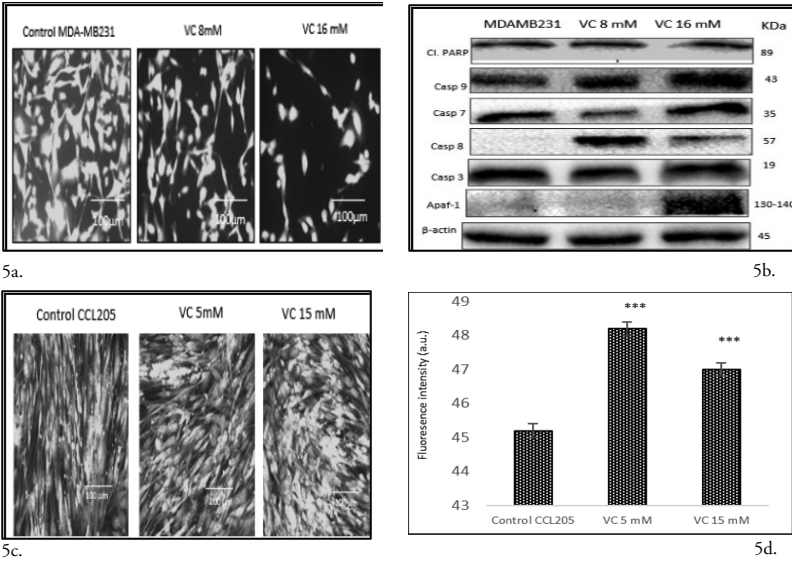


Figure 5. Fluorescence microscopic images of MDA-MB-231 cells after 24 hours treatment with VC 8 mM or VC 16 mM, stained with Rhodamine 123. (a) shows Western blot analysis from different signaling activity proteins involved in caspase cascade and Apaf-1. In contrast, VC treatment at 5 mM and 15 mM in non-cancerous and CCL-205 cells showed significant increase in membrane potential showing VC a favorable effect (c), with its histogram (d). The scale bar represents 100 µm. Significant change of mitochondrial membrane potential for treatment vs. control group, *** $p < 0.001$, post hoc Newman-Keuls test (Figure 5d).

3.6 Induction of Intracellular ROS

Intracellular ROS generation was assessed using the H2DCFDA staining method. Control MDA-MB-231 cells exhibited lower ROS levels, as indicated by a darker green fluorescence, compared to cells treated with 8 mM or 16 mM VC. The higher the concentration of VC, the greater the

intracellular ROS generation, characterized by a brighter green fluorescence (Figure 6a). To further evaluate the effects of VC on different cell lines, non-cancerous HEK 293 kidney cells were also tested (Figures 6b).

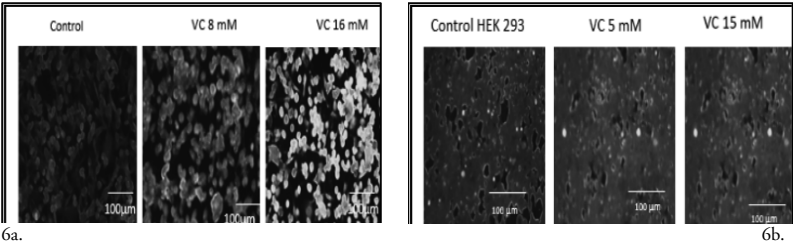


Figure 6. shows the results of intracellular ROS generation in MDA-MB-231 cells using the H2DCFDA staining method. Control cells displayed minimal ROS formation, as indicated by a darker green fluorescence. In contrast, cells treated with VC at 8 mM and 16 mM exhibited increased ROS levels, as characterized by progressively brighter green fluorescence (a). Non-cancerous HEK 293 cells exhibited significantly lower levels of ROS in response to VC treatment, suggesting a minimal or non-cytotoxic effect of VC on non-cancerous cells (b). Scale bar indicated 100 μm.

3.7 Induction of Cell Death

The viability of cells treated with two different concentrations of VC was assessed using the Nuclear-ID Red/Green cell staining method. Live cells were stained green, as the dye penetrated the cytoplasm of intact cell membranes, while dying or dead cells, with compromised membranes, were stained red. In the control group of MDA-MB-231, cells displayed a red or orange color when the red and green dye images were merged, indicating viable cells. Treatment of MD-MBA-231 with 16 mM VC led to the highest number of cell deaths, as evidenced by the yellow/orange color observed after merging the red and green dyes (Figure 7a). To further evaluate VC's effects on non-cancerous cells, CCL-205 lung cells were also tested showing more greenish/yellow color (Figure 7b).

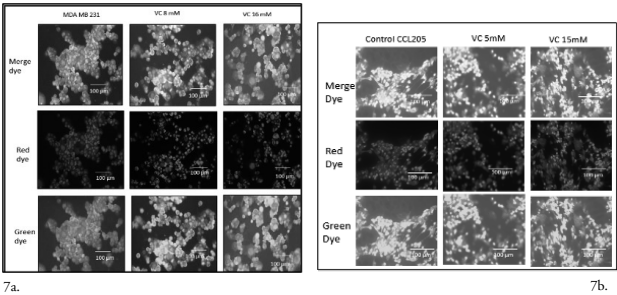


Figure 7. Fluorescence microscopic images from alive and dead nucleic acid staining using nuclear-ID red/green cell viability in MDA-MB-231 (a), while (b) depicted the effects of VC on non-cancerous CCL-205 lung cells. Scale bar indicated 100 μm.

3.8 Modulation of Cell Cycle Proteins

Inhibition of cell cycle regulatory proteins is considered an important strategy in the treatment of TNBC. Western blot analysis revealed a decrease in the band intensity of CDK2, cyclin B1, and cyclin D1 in MDA-MB-231, which play important roles in cell cycle regulation (Figure 8a). Figure 8b displays a comparison of the changes in cell cycle proteins depicted as a histogram.

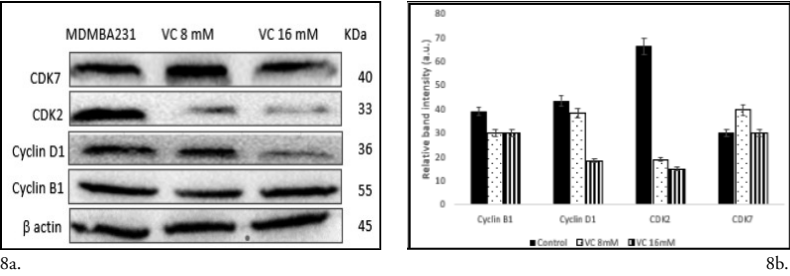


Figure 8. Western blot analysis of proteins involved in cell cycle regulation. The expression of CDK2, cyclin D1, cyclin B1 significantly decreased in cells treated with VC (a), while (b) showed histogram down regulation of these proteins comparing to its control, ** $p < 0.01$, *** $p < 0.001$, post hoc Newman-Keuls test.

3.9 Inhibition of Matrix Metalloproteinases

To determine if VC caused the inhibition of cell migration and invasion associated with matrix metalloproteinases (MMP)-2 and -9, proteins that are involved in angiogenesis, Western blot analysis was performed in MDA-MB-231 (Figure 9a). The band intensity histogram in Figure 9b shows the expression of MMP2 and MMP9 compared to the control.

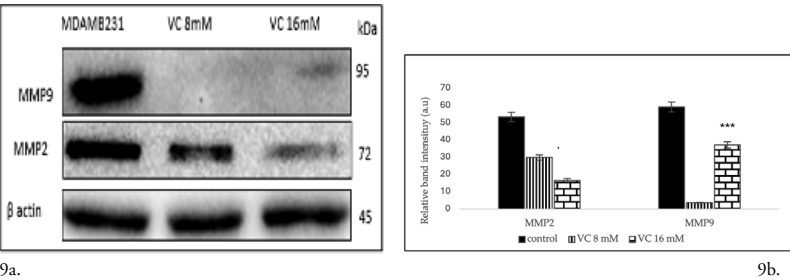


Figure 9. (a) Western blot analysis of MMP2 and MMP9 proteins. (b) Histogram represents downregulation of these proteins vs. control group. Significant decrease in protein expressions *** $p < 0.001$, post hoc Newman-Keuls test.

3.10 Modulation of MDM2, -p53, and p21 pathway

To determine if VC regulated cellular pathways involved in DNA repair, cell cycle, apoptosis and angiogenesis, the interaction between p53 tumor suppressor protein was studied in its interaction with oncogene mouse double minute 2 homolog (MDM2) using Western blot analysis. p21 gene codes for cyclin-dependent kinase inhibitors were upregulated along with p53. Band intensity histogram Fig 10b showed expressions of p53, p21, MDM2, and phosphatase and tensin homolog deleted on chromosome ten (pTEN).

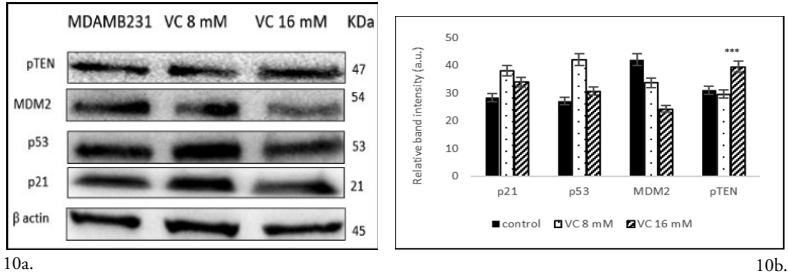


Figure 10a. Western blot analysis of p21, p53, pTEN, and MDM2 proteins.
Figure 10b. Histogram represented the up regulation of p21, p53 and pTEN proteins while down regulation of MDM2 as compared to control. Significant change in protein expressions vs. control, ** $p < 0.01$, *** $p < 0.001$, post hoc Newman-Keuls test.

3.11 Inhibition of p13k/Akt/mTOR pathway

To determine if VC is involved in the regulation of phosphoinositide 3 kinase (p13k)/Akt/mammalian target of rapamycin (mTOR), an intracellular pathway that leads to cell growth and cancer proliferation, the interaction was studied using Western blot assay. Band intensity histogram Figure 11b showed expressions of p13k, Akt and mTOR as compared to control.

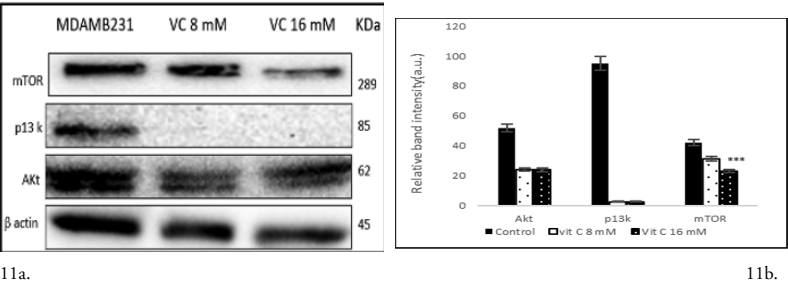


Figure 11a. Western blot analysis of p13k, Akt and mTOR proteins. **Figure 11b** Histogram represented the down regulation of p13k, Akt and mTOR proteins from treated cells with VC as compared to control. Significant change in protein expressions *** $p < 0.001$, post hoc Newman-Keuls test.

4. Discussion

In the present study, a pharmacological dose of VC showed convincing evidence of killing MDA-MB-231, a TNBC model. At concentrations of 8 mM and 16 mM, VC killed approximately 20% and 50% (IC₅₀) of the cancer cells, respectively. Decreased cell viability, increased ROS formation, elevated levels of pro-apoptotic caspases -7, -8, and -9, decreased expression of cell cycle regulatory proteins CDK2, CDK7, cyclin B1, and cyclin D1, reduced expression of MMP2 and MMP9, increased expression of tumor suppressor genes such as p21, p53, and PTEN, and decreased the expressions of MDM2, p13k, Akt and mTOR were observed to confirm the effect of pharmacological dose of VC on TNBC as presented in Figure 12.

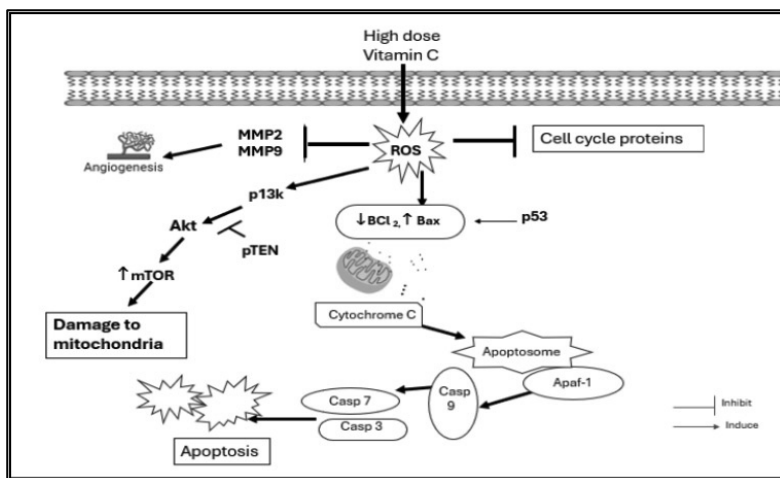


Figure 12. Propose mechanism of action of high dose VC on MDA-MB 231 cells.

To determine if a pharmacological dose of VC affects non-cancerous cell lines, kidney HEK 293 and lung CCL-205 were also tested. Increased nuclear condensation of apoptotic cells was confirmed with Hoechst 33342 staining, showing fewer apoptotic cells at 8 mM compared to the higher 16 mM dose. Additionally, nuclear-ID red/green cell staining reaffirmed that VC at 8 mM and 16 mM induced cell death in MDA-MB-231. MCF7 showed also similar trends like MDA-MB-231 while non-cancerous HEK293 and CCL-205 showed no change with VC treatment of 5 mM or 15 mM.

Evidence suggests that cancer cells generate more intracellular ROS, leading to higher apoptosis rates compared to normal cells [15-16]. This study demonstrated that VC increased ROS levels, indicating the crucial role of ROS in TNBC cell apoptosis, as confirmed by H2DCF staining. Increased ROS in cancer cells is associated with modulation of key signaling

proteins involved in cell cycle regulation, differentiation, tumor suppression, apoptosis, DNA damage, and the balance between pro-apoptotic and anti-apoptotic genes [17-18]. The upregulation of pro-apoptotic Bax protein and downregulation of anti-apoptotic Bcl2 protein suggest that VC treatment initiates favorable signaling pathways leading to apoptosis in MDA-MB-231 cells, while had no effect on HEK293 nor CCL-205 cells.

Depletion of mitochondrial membrane potential was indicated by Rhodamine 123 staining causing increased expression of Apaf-1. Apoptosis in mitochondria also involves several key proteins, such as caspases -7, -8, and -9, highlighting their critical role in cancer cell apoptosis. The collapse of mitochondrial membrane potential results in the release of cytochrome C and other apoptosis-inducing factors into the cytosol, further inducing apoptosis [19-20]. The observed increase in caspases-7, -8, and -9, along with Apaf-1 and cytochrome c, suggests the activation of both intrinsic and extrinsic apoptotic pathways. Cytochrome c release and Apaf-1 upregulation trigger apoptosome formation, leading to caspase-9 activation, while caspase-8, typically linked to death receptor signaling, amplifies the intrinsic pathway by cleaving Bid. Caspase-7, as a downstream effector, executes apoptosis by degrading essential cellular components, demonstrating crosstalk between the pathways.

Preventing angiogenesis is vital to hindering cancer invasion into surrounding tissues. Matrix-degrading enzymes like matrix metalloproteinases (MMPs)-2 and -9 play crucial roles in cancer invasion, metastasis, and tumorigenesis [21]. A significant decrease in MMP-2 and -9 expression suggests that VC effectively inhibits invasion and metastasis of TNBC cells. This inhibition likely stems from VC's ability to modulate signaling pathways such as MAPK and NF- κ B, which regulate MMP expression. By suppressing these pathways, VC reduces extracellular matrix degradation, thereby impairing cancer cell motility and invasiveness. Additionally, the antioxidant properties of VC may help counteract reactive oxygen species (ROS) that contribute to tumor progression, further reinforcing its anti-metastatic effects.

Cancer proliferation is often associated with altered cell cycle regulation; hence, targeting cell cycle proteins offers promising cancer chemotherapy strategies [22]. Distinct cell cycle phases (G0/G1, S, G2, and M) are regulated by specific cyclin-dependent kinases (CDKs) [23]. This study showed that significant downregulation of cyclin B1, cyclin D1, CDK2, and CDK7 expression strongly suggests that VC effectively inhibits MDA-MB-231 cells at different cell cycle phases. Additionally, increased p21 expression, a CDK inhibitor, confirmed that VC inhibits cell cycle proteins. p21 mediates p53-induced cell cycle arrest, and its induction by p53 and inhibition of CDKs are crucial for the p21's tumor-suppressive role [24-25].

Furthermore, the enhancement of p21 expression by VC indicates a potential p53-independent mechanism, as p21 can also be regulated by other tumor suppressors and stress-related signaling pathways. The combination of VC-induced downregulation of cyclins and CDKs, along with the upregulation of p21, underscores VC's capacity to induce cell cycle arrest and provide a strong anti-proliferative effect. These findings highlight the therapeutic potential of Vitamin C as an adjunct to traditional chemotherapeutic agents, particularly for targeting the dysregulated cell cycle in aggressive cancers like triple-negative breast cancer [24-25].

In this study, VC was shown to decrease the expression of the p13k/Akt/mTOR pathway, which is often associated with resistance of cancer cells to the treatment using endocrine, HER2-directed, or cytotoxic therapies [26]. Moreover, VC increased pTEN expression, which counteracts p13k activity. The loss of pTEN and mutations in p13k are among the most common aberrations seen in cancers, including breast cancer [26-27]. These alterations contribute to the activation of pro-survival signals, promoting tumor growth and treatment resistance. By re-establishing pTEN expression and inhibiting the PI3K/Akt/mTOR pathway, VC may sensitize breast cancer cells to conventional therapies, potentially overcoming resistance mechanisms. Furthermore, this modulation of the PI3K pathway highlights VC's role as a promising adjunct in cancer treatment, as it could enhance the efficacy of targeted therapies and reduce the need for higher doses of cytotoxic agents, thereby minimizing adverse effects. The combination of VC with other targeted therapies could offer a strategic approach to overcoming therapeutic resistance and improving patient outcomes in cancers characterized by PI3K pathway dysregulation.

The results of this study suggest that high-dose pharmacological VC induces cell death and inhibits proliferation of cancerous cells by increasing intracellular ROS, modulating mitochondrial signaling pathways, inhibiting cell cycle progression proteins, preventing angiogenesis, and inhibiting the p13k/Akt/mTOR pathway. The higher dose of VC (16 mM) had a more profound effect than the lower dose (8 mM). This study may have significant implications for the potential application of pharmacological dose of VC in treating TNBC, by achieving higher efficacy and potency to kill the cancerous cells while have minimal side effects on normal cells. High dose VC exerts significant effects on cell cycle proteins, caspase-related proteins, inhibition of angiogenesis, and induction of apoptosis.

5. Conclusions and Future Directions

This study provides the first evidence that pharmacological concentrations of VC induce pro-apoptotic proteins such as Apaf-1 and caspases -7 and -9 expressions, while inhibiting cancer cell survival proteins

like Bcl-2, cyclins D and B1, CDK2, CDK7, Akt, PI3K, and mTOR. Additionally, VC increases the expression of tumor suppressor genes, including p53, p21, and pTEN. These results offer compelling support for further exploration of VC as a therapeutic agent for TNBC.

The study also demonstrated that high-dose VC effectively reduces cell viability, inhibits invasion and migration, induces apoptosis, and disrupts mitochondrial membrane potential in MDA-MB-231 cells. Importantly, VC displayed selective cytotoxicity, showing no harmful effects on non-cancerous cells such as HEK 293 and CCL-205, highlighting its potential as a safe and effective anticancer agent.

Several limitations of this study must be acknowledged. Since the experiments were conducted *in vitro* using isolated cancer and normal cell lines, the results may not fully capture the complexity of interactions within a living organism, such as the tumor microenvironment, immune responses, and tissue-specific factors. Furthermore, the absence of *in vivo* validation limits the ability to predict the pharmacokinetics, bioavailability, and systemic effects of high-dose VC. Testing was also limited to specific breast cancer subtypes and non-cancerous cell lines, making it unclear whether the observed effects are consistent across other cancer types or normal tissues. Additionally, while the study highlights VC's therapeutic potential, achieving pharmacological concentrations in clinical settings will likely require intravenous administration, which poses logistical and compliance challenges.

Future research should prioritize addressing these limitations to enhance the clinical relevance of the findings. *In vivo* studies using animal models are essential to evaluate the therapeutic efficacy and safety of VC under physiological conditions and to explore potential long-term effects. Investigations into the molecular mechanisms underlying VC's interaction with apoptotic and survival pathways, such as PI3K/Akt/mTOR signaling, will provide deeper insights into its mode of action. Moreover, exploring the synergistic potential of VC in combination with standard chemotherapeutic agents or targeted therapies could pave the way for more effective treatment regimens. Efforts should also focus on understanding whether prolonged exposure to VC may induce resistance mechanisms in cancer cells, helping to optimize treatment protocols. Finally, translating these findings into clinical settings will require well-designed trials to assess dosing regimens, safety, and efficacy in patients with TNBC.

In conclusion, this study lays the groundwork for understanding the anticancer potential of pharmacological VC. By addressing these limitations through comprehensive preclinical and clinical studies, VC could emerge as a transformative therapy in the fight against aggressive cancers like TNBC.

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Faith in the Wilderness¹

Beth Madison

Wilderness

I will give you the wealth that is stored in secret places. I will give you those hidden treasures. Then you will know that I am the Lord, the God of Israel, who calls you by name. (*English Revised Version*, Isaiah 45:3)

[E]ven the darkness is not dark to you; the night is bright as the day, for darkness is as light with you. (*English Standard Version*, Psalm 139:12)

God led the Israelites through the wilderness in every step, every second, every struggle. He led them all the way into the land He'd promised to them. There was no doubt or indirection in His leading. There was always His providing, as with the water from the rock and clothes and sandals that never wore out. There were new mercies and manna every morning with His promises and pillar of fire every night.

The Israelites didn't choose the wilderness. They didn't like the wilderness. They knew God was with them in the wilderness, but their doubts and disobedience cost many of them their lives. Yet those who remained faithful to God in the wilderness didn't just *see* the Promised Land. They saw God put victory and vineyards and forbearance and farmlands before them in the Promised Land.

They received hidden treasures from God's Hand. They were wealthy in secret places because of God's Hand. And they were appointed caretakers of new lands in the new light found in God's Hand.

As I'm beginning my journey into a new wilderness, I am thinking about those Israelites who persevered and proclaimed God in faith and hope as they moved towards His promised land. One of my daddy's heroes is Caleb, who declared at 80 years old that with God's help, he could defeat the giants in the Promised Land. And he did exactly that. He stood on faith in

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his God. He knew his God Who'd brought him out of Egypt's vise grip would bring him all the way into victory.

I don't know how my God will bring me through this wilderness of breast cancer. But I know this truth: there is nothing or no one stronger than my God. And I know this truth: my God will stop at nothing for His glory to be made known and good brought to His people. My God has been faithful to bring me through multiple wildernesses in the past. There's never been a step, second, or struggle where He left me alone. He's been faithful in all His ways and to all His promises.

I can rely on His care and His love, no matter what might come. There's no wilderness that can separate me from my God's lavish, long-suffering, and load-bearing love. There's no darkness that can stop the light of truth He gives in Scripture and the secret places of prayer.

And the very best part of all of this is that my God wants to show Himself faithful and kind to you, too. He will part waters and lead you through whatever wilderness you are in today. He is waiting to welcome you into His strong and tender arms where you will find rest (Matthew 11:28-30). He will give you a peace that surpasses understanding and guards your heart and mind.

With all that in mind, would you please pray that I will rely on my God's love and rest in His peace here in this wilderness? And while you're praying for me, please stop and let our Good God bring others to your mind and heart who are walking their wildernesses today, too. Prayer is our powerful weapon that welcomes faith and quiets fear, no matter how long or hard or dark the road through the wilderness.

Thank you. I am grateful for each and every one of you.

Feasting

You set a table for me right in front of my enemies. You bathe my head in oil; my cup is so full it spills over! (*Common English Bible*, Psalm 23:5)

This wilderness of cancer has brought brand new meaning to me with this verse. Isn't our Good God so gracious in how He takes the familiar and makes it (and me in it) altogether new?

In the idea of being made new, one of my very favorite verses is 2 Corinthians 5:17 (*EasyEnglish Bible*): "When anyone belongs to Christ, they become a new person. Their old way of life has gone. Their new life has begun!" My new life in Christ began 40 years ago. My new life for Christ begins again every day. A new life with Christ every day isn't limited to wildernesses or wide-open green pastures beside still waters. And the same is true with faith being able to grow anywhere my Good God makes a straight path for me to walk, be it wide-open green pastures next to still waters, or these unexpected wildernesses stretched out before me.

There's no map for this wilderness.

There is faith. And faith can grow with each encounter of my enemies of doubt, pride, and selfishness.

There's no time-length for this wilderness.

There is endurance. And endurance can grow with each encounter with my enemies of impatience, isolation, and giving in.

I chose the word "can" specifically for those sentences because I know it's my choice for having faith and endurance (or not). The choice of relying on God for strength or being bowled over by stress and self-confidence isn't a one-time event. It's an every morning commitment.

A commitment that isn't easy, much less logical, at times. A commitment that demands all my heart, soul, mind, and strength. A commitment that can make others ask "why" and "how."

A conversation with questions like these can be an unforgettable opportunity to glorify either my God or myself. Trust me, the choice of my own glory will grow nothing more than dismay, decay, and defeat. And all of those are a sharp contrast to the always good answer of "only Jesus saves." For that answer can open doors to a new life for those face-down in the dust of today with heavy loads of shame, loss, regret, despair, and pain.

The answer of "only Jesus saves" can be the final nail in fear's coffin in my life and the lives of others. I'm learning as I trust my Good God in the details and direction in this wilderness; He buries my fears in His incomparable power and might. And He does this while graciously reminding me of the truth to "fear not," as expressed over 365 times in Scripture.

“Fear not” is my God’s loving invitation to come and feast at the table He has prepared in this wilderness full of my enemies. Only God can turn fears into feasting and wildernesses into “welcome to My table prepared for you.” Only God can turn the unknown into the unimaginable and pain into promises fulfilled.

Here at my Good God’s table, I am strengthened to be sent to others who need hope. I am filled up with joy by the opportunity my experiences have given me to minister to those who journey their wildernesses without Jesus. I am given courage to keep standing firm for and in Christ. For these true soul-foods of hope, joy, and courage can satisfy even the deepest hunger known in the darkest wilderness.

Here at His table, I taste and see that He is indeed good, just as He promised years ago.

Here at His table, He removes the old and replaces with new.

Better still, there’s room right next to me at the table for you to pull up a chair and join this feast with heaping helpings of hope, joy, and courage. For this kind of feast happens only in the Presence of our Jesus where fears are left behind and faith is served on big plates.

Here’s your personal invitation to come and stay and be renewed and restored for walking today’s wilderness while looking ahead to the wondrous not-yet-come of heaven—“Oh, taste and see that the Lord is good; Blessed is the man who trusts in Him!” (*New King James Version*, Psalm 34:8)

Beth Madison

Associate Professor of Science, Adult and Professional Studies



Beth Madison teaches science courses in the School of Adult and Professional Studies and the College of Arts and Sciences. Her focus is on integrating environmental science with faith in the classroom, laboratory, and writing. Currently, she’s looking forward to the summer 2026 release of “The Nevertheless Project,” which is a book and video series on finding hope in suffering. All three of her books, *Good Ground Volumes 1 & 2* and *Well Grounded: Cultivating Intimacy with God* are available on Amazon. Her blog, soulscientistblog.com, features excerpts from these books along with topics she finds interesting in science and faith.



Human and Animal Biotechnology

Mark Bolyard

In a previous article (published in *JUFF* issue 44) we looked at how plants can be genetically engineered and why someone would want to engineer a plant. Humans have been working on this since we were told, “Cursed is the ground for your sake; In toil you shall eat of it; All the days of your life. Both thorns and thistles it shall bring forth for you, and you shall eat the herb of the field” (Genesis 3:17b-18). In spite of this, God has provided us with the tools to increase the amount of food that we can produce. Not only have we been working to improve the productivity of plants, but the productivity and domestication of animals as well.

One question regularly arises when the subject of genetic engineering is approached: are we playing God? I really like this question, because another question follows: can we play God? God is omnipotent, omniscient, and eternal; can we emulate that? I think the question that is being asked is getting at the idea of “overmanipulating” the world, asking “what is the line that should not be crossed?” God has provided us with the attribute of creativity, but it is interesting to consider what is going “too far.” I think the following actions constitute going “too far”:

1. Taking another human life, independent of the authority of the State. This includes abortion and assisted euthanasia.
2. Manipulating another human without his or her permission for non-essential reasons. This is addressed in C.S. Lewis’ work *The Abolition of Man*, mentioned later. This would rule out the genetic engineering of pre-born humans, but could permit in utero surgeries to repair heart defects or spina bifida.
3. Creating an altered state of reality for other humans without their permission. This would involve providing mind-altering drugs without an individual’s knowledge.
4. What about manipulating animals? We have been breeding and selecting animals with desirable traits for millennia, as we see in Esther 8:10, “And he wrote in the name of King Ahasuerus, sealed it with

the king's signet ring, and sent letters by couriers on horseback, riding on royal horses bred from swift steeds." Animal genetic engineering is an accelerated form of breeding, introducing traits that may not be introduced by traditional methods. Is that going "too far"?

We can ask the same question about plant genetic engineering, with the same rationale.

In this section, we'll look at how animals can be engineered and discuss the objective of animal engineering. Toward the end of the chapter, we'll also look at how these concepts apply to humans. But first, we need to look at cloning, as this development has opened up new avenues for introducing DNA into different animals. "Cloning" is a term used to describe the production of genetically identical organisms, and it does not involve sexual reproduction.

While the cloning and engineering of mice [Figure 1] is a huge area of research, providing many opportunities to develop mouse models of human diseases, in this section I'm going to focus on the more agriculturally important animals, which are more complex.

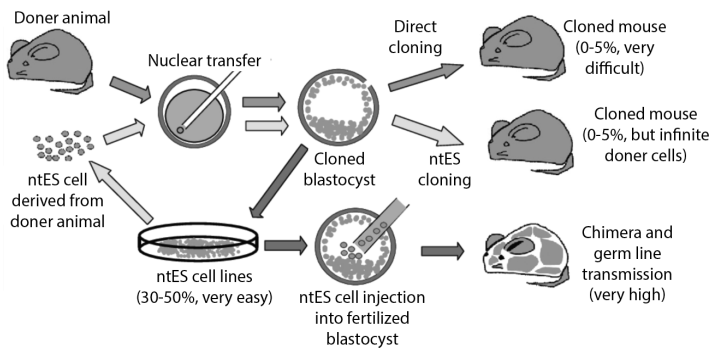


Figure 1: Methods of mouse cloning¹; "ntES" = "nuclear transfer embryonic stem cells." A blastocyst is a very early stage embryo.

So, let's think about the cloning of large mammals. This all starts with Dolly² the sheep, in 1996. The basic principles for the cloning of large mammals were put in place by a group of scientists in Scotland. These scientists started with an egg cell collected from a female Blackface sheep. With a very small syringe, they removed the nucleus containing 27 chromosomes, leaving an egg cell without a nucleus (an enucleated cell). Next, they collected skin cells from a female Finn Dorset (white) and grew them in a petri dish. They were able to remove the nucleus from the skin cells, which contained the full set of 54 sheep chromosomes, and insert that nucleus into the enucleated egg. One thing you might notice at this point is that there aren't any male sheep involved in this process (although the original skin cell could have come from a male sheep). This presented

a challenge to the researchers because the trigger that causes fertilized egg cells to divide is the process of fertilization, the fusion of the sperm cell with the egg cell, which is the process that God designed for many forms of life to reproduce. Because there is no sperm, the scientists had to investigate a number of methods to get the cells to divide. What they found was that when they applied an electric shock to the egg cell (with a full set of sheep chromosomes) the cells began to divide. Once the cell had divided sufficiently, it was implanted into a Blackface “surrogate mother” sheep, which had been treated with hormones to simulate pregnancy. Blackface sheep were used as both the egg donors and surrogate mothers to demonstrate that if the sheep were born completely white, then it would have to have been a clone of the white sheep that provided the skin cells. After the appropriate amount of time, this surrogate mother sheep gave birth to Dolly, the first cloned large mammal. Sounds pretty straightforward, doesn't it? Well, it turns out that the successful birth of Dolly was attempt number 277.

Although this first attempt was not very efficient, this was the blueprint for the cloning of cows, horses, goats, and donkeys, and has led researchers to even think about using similar techniques to bring back extinct animals, such as the Pyrenean Ibex³, Thylacine⁴, and the Woolly Mammoth.⁵ While animal cloning is still not particularly efficient, the technology has improved.

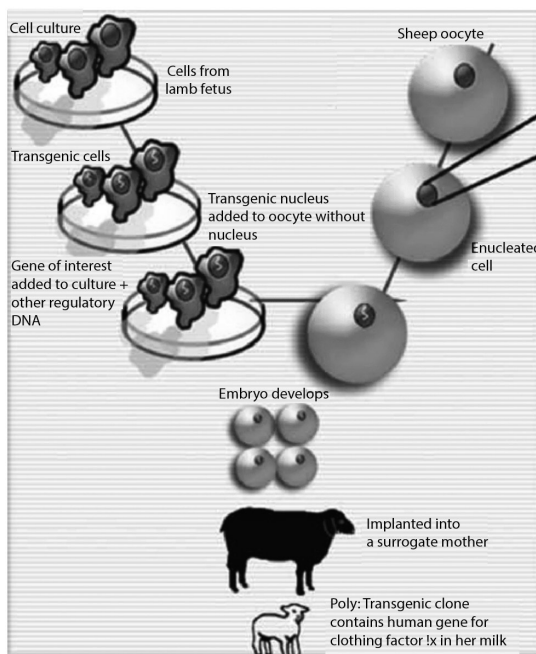


Figure 2: Cloning combined with genetic engineering²



Figure 3: Pyrenean Ibex



Figure 4: Thylacine

Why would one want to clone a cow, horse, goat, or donkey? Well, there are several reasons. First, humans have been breeding agricultural animals (and plants) for thousands of years. Even the Bible contains references to animal breeding, such as Leviticus 19:19. Cloning is a way to capture a particular desired combination of traits (“phenotypes”) that were previously produced as a result of breeding. In fact, the U.S. Food and Drug Administration approved the sale of meat from cloned animals for public consumption in 2008. However, cloning animals is very expensive, so it is more likely that the offspring and products (like milk and cheese) of cloned animals are being sent to market.

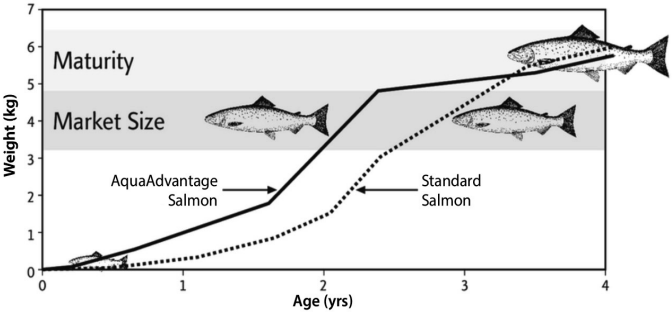
Another reason to clone an animal might be for different types of traits other than those that make an animal good for consuming. For example, cloned donkeys (and probably in the near future, horses) are being used for racing. This technology is also being used for “pet cloning,”⁶ as there is a great deal of money to be made in that industry. However, pet cloning is still rare due to the cost of the technology and the fact that few places offer this service.⁷

Cloning also provides an avenue to manipulate the DNA of an organism for some desired end [Figure 2]. Cloning technologies can be combined with changing the DNA sequence of animals (although cloning is not the only method that can be used here). There are two main strategies. The first is genetic engineering, which has been around since the early 1970s and has been used to introduce new DNA into organisms (including humans). This involves the use of organism-specific “instructions” (a promoter and terminator, which are the beginning and ending of a gene), on each side of a gene, which is frequently from a different organism and which carries the information for the particular protein to be produced. Once this chimeric piece of DNA is constructed (the “engineering” part), it can be delivered into the correct cells to begin doing its job (the “genetic” part).

The second strategy, gene editing, is much newer, and for many people much more exciting. This does not involve introducing new DNA into the genome, but involves changing the DNA that is already there. This utilizes technologies similar to CRISPR-Cas9, which was derived from what is

essentially the “immune system” of bacteria. It allows scientists to make very targeted changes to DNA, down to the individual nucleotide. One recent application of this technology is the FDA approved strategy of changing one nucleotide in the hemoglobin gene to cure humans of sickle cell disease [see Figure 11].⁸

One area where the genetic engineering of animals may increase in popularity is in the engineering of fish. Aquaculture is a huge and growing industry, particularly in Asia, but also in the U.S. Genetically engineered salmon (AquaAdvantage), which reach maturity much faster than non-GM fish, are the closest to market at this point. However, there is still a lot of controversy regarding these fish,⁹ as is true of GMOs in general. In 2016, genetically modified fish were approved for sale in Canada, and in the U.S. in 2018. Part of the concern is the possibility of their escape into the oceans, which could cause unpredictable change in the way ocean ecosystems function. The company that is producing these fish are working hard to make sure this does not happen by making the fish sterile and producing them in Indiana.¹⁰ At this point I would encourage you to watch the first Jurassic Park movie.



Comparison of Growth-GM and non-GM Salmon (Source: adapted from: <http://www.aquabounty.com>).

Figure 5: Fish Engineering⁷

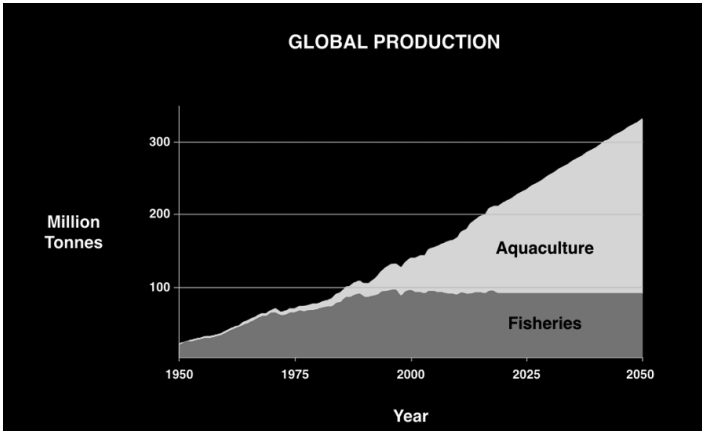


Figure 6: Aquaculture and Fisheries¹¹

Genetically engineered animals can be used to produce a number of medically valuable proteins, such as the use of engineered sheep¹² to produce the human protein that is defective in people who have hemophilia B (Factor IX) in their milk [Figure 2]. There have been a number of amazing technologies to improve human health!

One other beneficial use for genetically engineered animals is to produce organs for transplant into humans. For example, pig organs are about the same size as human organs. If pigs can be engineered to the point where the human immune system won't reject their organs, then engineered pigs could be grown as human organ donors, greatly reducing the waitlists for transplants.

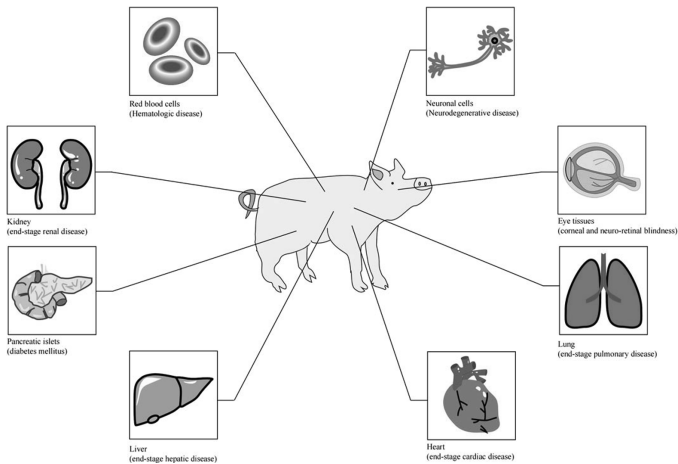


Figure 7: Pig organs that could be used to treat human disease¹³

So, could this technology possibly be applied to humans? Could we clone humans, or genetically engineer them? If so, would we want to? Sexual reproduction is the means that God has provided to many organisms, including humans, to make more of themselves. This is described in the Bible as the husband and wife becoming “one flesh” (Genesis 2:24, NIV). Why do we need additional reproductive technologies? In short, people want to make more of themselves, and cloning would be another in the long list of reproductive options. The process of cloning a human would be similar to the process I outlined before for cloning Dolly the sheep, except that there is much more at stake. Remember, it took 277 tries to make Dolly.

So, why clone a human? Here are two reasons. The first is to create cloned embryonic stem cells¹⁴ [Figure 1]. Embryonic stem cells are cells collected from human embryos produced in petri dishes. Some scientists believe that these stem cells could be used to repair damage to a spinal cord, treat Parkinson's disease, or as a treatment for other diseases or injuries, although there is no evidence that this approach works in humans. Cloning stem cells would, in theory, allow the stem cells to be used as a treatment

without fear of rejection. This is called “therapeutic cloning,” and is very controversial, requiring each of us to answer the question, “When does human personhood begin?” If personhood begins at conception, and an embryo is a person, then dismantling an embryo to generate stem cells is dismantling a person. This is scientifically “necessary” because stem cells have a limited life span. From a scientific perspective, it is clear that human life begins at conception. From a Biblical Christian perspective, it is very clear that human personhood begins at the same time. Psalm 139:13 says, “For you created my inmost being; you knit me together in my mother’s womb,” and Jeremiah 1:5 says, “Before I formed you in the womb I knew you, and before you were born I consecrated you; I appointed you a prophet to the nations.”

Fortunately, there is an alternative process that has surpassed the use of embryonic stem cells for therapeutic cloning, and this is the use of “induced pluripotent stem cells” (iPS cells;¹⁴ see figure 9). With this process, cells from the patient’s own body can be genetically engineered to become “embryo-like” cells and do many of the things that embryonic stem cells can do, without dismantling an embryo. As shown in the image below, these cells can then be used for gene therapy, repairing the damaged gene from an individual, then returning the repaired cells to the patient’s own body, or to make models of disease to understand how the patient’s cells might respond to different drug treatments. In a strange ethical twist, what moved us away from embryonic stem cells has opened the door for another troubling advancement, which is the advent of “in vitro gametogenesis.” In this case, a patient’s cells can be used to form gametes (sperm or egg cells). What this means is that both males and females can produce cells that will go through

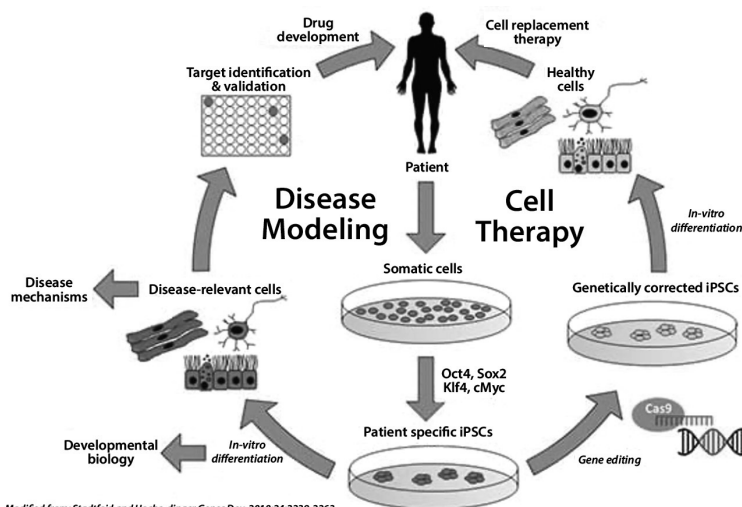
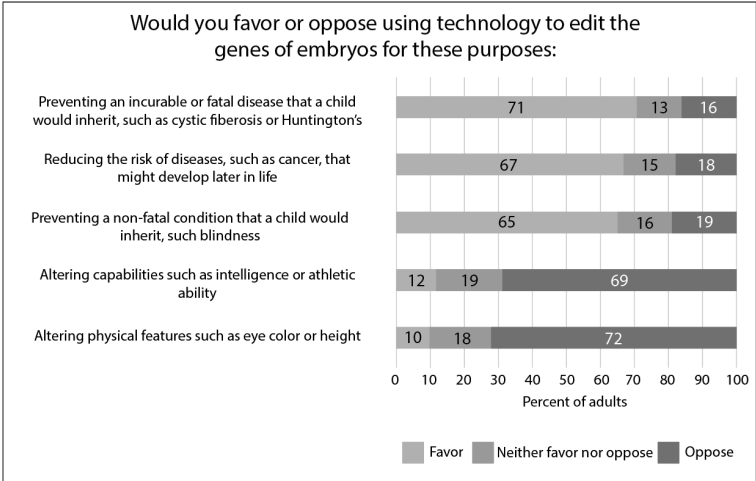


Figure 9: How can iPSCs be used? ¹⁵

meiosis to generate sperm and egg cells! In principle, one person could produce both sets of gametes, have the eggs fertilized with the sperm, and create a one-parent child. Would this child be a clone? I'll let you give that some thought.

The other application for human cloning would be to actually have a baby. This is “reproductive cloning.” There are a whole variety of reasons why someone would want to clone themselves, but I want to get to the heart of what this section is about, and that is the potential for human genetic engineering. It's one thing to produce a child in your own image, but another thing to have the opportunity to improve on your image. This is a form of positive eugenics (see below). The technology is coming, and in fact, some elements are already here, that may make it possible to change the DNA of future generations. C. S. Lewis had a lot to say about this idea, and the impact that one generation can have on succeeding generations, in his essay, *The Abolition of Man*.



Question: As you may know, scientists are working to develop technology that could be used to edit the genes of embryos in different ways, including to change characteristics of babies before they are born. Would you favor, oppose or neither favor nor oppose using this technology for each of the following purposes?

Source: AP-NORC poll conducted December 13-16, 2018 with 1067 adults nationwide.

Figure 10: Editing Embryos¹⁶

We in the United States have a long history of practicing eugenics (literally *true genes*), which has the goal of “perfecting” humans, and perhaps moving us beyond humanity to something else. Negative eugenics involves preventing people from having children whom a particular society deems unworthy of procreating (forced sterilization) or preventing them from being born in the first place (selective abortion; see Genesis and the story of Moses). Positive eugenics can involve either encouraging those that

eugenicists believe are more worthy to have children, or in a more modern sense, the use of biotechnology to “improve” children. One way to do this, currently in use, is called embryo selection, or pre-implantation genetic diagnosis (PGD). This involves the removal of one cell from a week-old embryo and conducting DNA tests on this cell. It has been used to help parents avoid inherited traits, such as the selection of embryos that did not carry the Tay-Sachs disease gene in 1995, described in a report from the President’s Council on Bioethics (2004).¹⁷ This report also says that “recently PGD has been used to select embryos that would be compatible tissue donors for older siblings in need of transplants.” This report provides information on other uses for embryo selection at the time, including the reduction in babies born with Down Syndrome. At this point, there is not accurate data on the number of pregnancies with a positive test for Down’s Syndrome that result in an abortion, but in the United States the number is somewhere between 60%-70%.¹⁸ More recently, the first baby was born¹⁹ that had a full genetic screen prior to implantation. Researchers acknowledge that, based on our knowledge of the human genome, this kind of screening could be used to select such traits as eye and hair color, as well as screening for particular diseases.

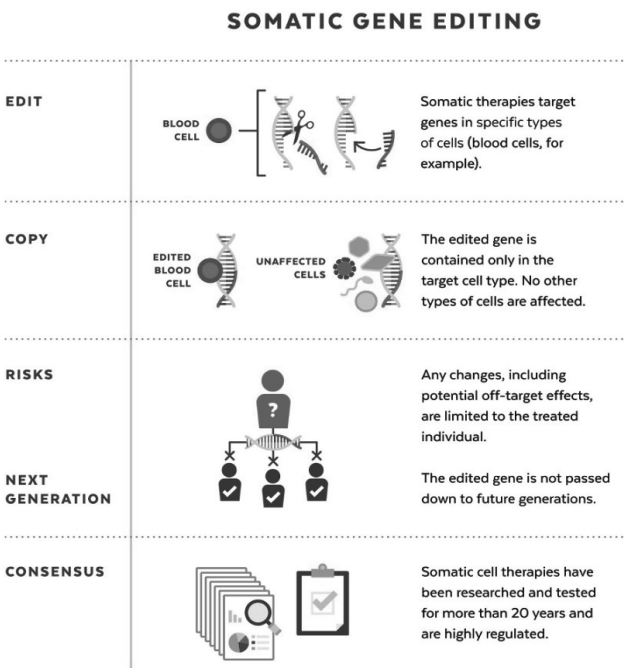


Figure 11: Somatic Cell Gene Editing;²⁰
Changes not passed to the next generation

VS. **GERMLINE GENE EDITING**

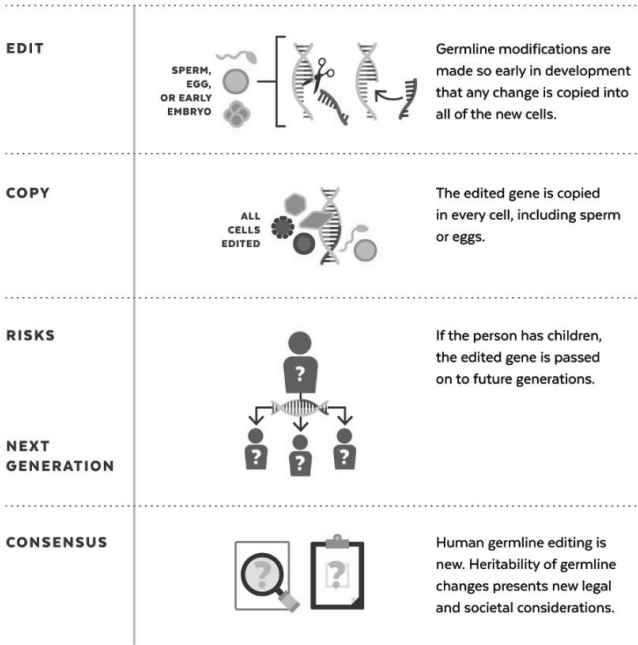


Figure 12: Germline Gene Editing;²⁰ Changes are inherited

These processes involve working with DNA that is already present in the embryos. Can that DNA actually be changed? Researchers and physicians have been changing human DNA sequences since around 1990 through a process called “somatic cell gene therapy,” which is used to change DNA in an individual in a way that is not passed down to the next generation because the changes are not found in the gametes (sperm or egg cells) [Figure 11]. But in the future, these technologies could be used to change the DNA in sperm or egg cells or to change the DNA in cells that will be used for cloning [Figure 12].

Finally, how are these global issues? First, access to these technologies underscores the disparity in resources across the planet. Access to meat developed through biotechnology will likely only be found in developed countries. The engineering of animals for the production of medicine, or organs²¹ for transplant, only benefits the well-off, because they are the only ones that can afford them. Genetic tests and human engineering cost thousands of dollars and are unimaginable for those in developing countries.

Second, if you are considering living or serving in a more developed country, these are issues that may confront people you are interacting with. If they have the opportunity, should they select their embryos? If you are living in a developing country, perhaps you will better understand the vast array of opportunities available in the developed world, and perhaps what motivates people to emigrate.

Third, the idea of “eugenics” to some extent has a foundation in the class systems found all over the world, which is certainly not limited to the application of biotechnology. We can see it as one country seeks to dominate another, or as one country sees some members of its society as inferior²¹, or as marriages between “classes” are prevented. This is an enormous topic; keep your eyes open for examples throughout history, and throughout your lifetime. Christians should strive to not be influenced by the subtle ways that these ideas creep into our lives. Scripture says, “there is neither Jew nor Gentile, neither slave nor free, nor is there male and female, for you are all one in Christ Jesus” (Galatians 3:28). All people are made in God’s image, and Christ is the great equalizer.

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Mark Bolyard

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Mark Bolyard is a University Professor of Biology at Union University, where he has been a faculty member since 2007 and served as Chair of the Biology Department until 2022. He is currently the Associate Dean of the College of Arts of Sciences. He received a B.A. in Biology from Hanover College, and a Ph.D. in Experimental Pathology from the University of North Carolina Chapel Hill. Prior to teaching at Union, he was a Professor of Biology at Southern Illinois University Edwardsville. He is an author on over 30 publications, and his current research interests include plant tissue culture for biotechnology and plant conservation. He and his wife Susan, the secretary for the Union University MBA program, have three grown children with families of their own: Kyle, Chris (UU '15, '17), and Andrea (UU '16).



God's Mercies are New Every Morning: Drawing Encouragement from the Least of These¹

Ted Kluck

It's been a hard week, which you already know the "why" behind if you're a frequenter of this fine publication or are simply a resident in this world with a phone and your eyes open. Darkness abounds. We live in a world where you can pick up your phone and read what was written on the bullet casings used to kill another man in cold blood. And it was a particularly hard morning for me today, as I was mired in some good old-fashioned self-pity as it pertained to a difficult (but ultimately pretty insignificant in the grand scheme of things) family matter.

In the midst of this self-pity, I drove to the university where I am employed and went to chapel which, if we're being completely transparent, I went to more for "work" reasons than for "genuine worship" reasons, which is a tension our students sometimes find themselves in as well. I took my seat behind a young man I see on campus frequently, who is a member of our EDGE program, which is a program that, per the website, "provides a holistic, post-secondary education for individuals with intellectual or developmental disabilities, encouraging increased independent skills that lead to a better quality of life and aligning with Union's mission of providing Christ-centered education that promotes excellence and character development in service to Church and society."

Anyway, as our excellent praise and worship team (all students) led us through a song that was not only beautiful but theologically robust, this guy was really worshiping in a demonstrative way that challenges all of my staid, reformed, midwestern, hands-in-pockets, don't-look-at-me sensibilities.

I cried a little bit, watching him.

I cried a little bit because he worshiped the Master in a way that was un-self-conscious and un-performative because, in the mysterious sovereignty of the Lord, he was knit together in his mother's womb to be *without* the machinery that makes people like me self-conscious and performative. I

1. Note: This was originally submitted for publication in my regular WORLD Media column space, on September 12, 2025—two days after the Charlie Kirk murder.

thanked God for him, because seeing him worship in that way convicted me of my self-pity, caused me to repent of it, and then allowed me to enjoy God's grace in removing it entirely. I thanked God for the EDGE program and for a university that supports it.

Almost every football team I've ever been involved with as a player or coach has had a guy hanging around the periphery with pretty severe intellectual or developmental disabilities. This always struck me as an odd sort of dichotomy—because here are a bunch of guys who are hyper-able, unusually-able, in terms of their physical ability to run faster and jump higher than most people. In college I was obsessed (to a sinful degree) with perfecting my body as a piece of athletic machinery. In this, I was ragingly self-conscious and self-centered in ways that the Lord didn't open my eyes to until later.

College in 2025 does a brisk business in self-consciousness as well, as students are walking around feeling quantifiably more anxious than ever because of a variety of reasons which include (depending on who you ask) social media, constant comparison to others, parental pressure, or a perceived need to wear their political uniform of choice at all times.

But not this guy. He is, by most non-supernatural metrics, the least impressive person in most rooms he enters, certainly on our campus, where he is surrounded by literal "Scholars of Excellence" (which is the name of another program we have)—young people with sharp minds and big dreams who occasionally (like me) need to be reminded that they aren't the center of the universe and who, like most of us, probably won't go on to "change the world" in quite the ways they dream of.

But today, this guy changed my world, brightening it considerably, by singing like nobody was listening and worshipping like nobody was watching. He lived out the last line of the EDGE program's mission, which is to "foster character development in service to Church and society." He served Church and society today by serving me. And he didn't even know it.

I don't know the mind and heart of God, but I imagine it brought Him great joy—even more joy than it brought me.



Notions of Marriage, as Evidenced by a Series of Conversations with My Students, Post-Swift-Kelce-Engagement

Ted Kluck

Pop star Taylor Swift's engagement to NFL tight end and podcaster Travis Kelce was, as you can imagine, a bit of a deal for my Gen Z students. It happened during the first five minutes of my creative nonfiction course and was a) a moment I knew I had to lean into and not try to control, b) a moment where a lazier and more cynical version of me (note: this version exists, often) would have said something like, "I don't think about Swift and Kelce at all," when asked what I think of their engagement, and c) a monocultural moment where we could all consume the same thing at the same time, which is pretty magical, even when the thing we're consuming is relatively stupid (like this).

Also, my students are really smart and fun to talk to, so there's that. As such, a number of angles presented themselves, just as we talked about how we might write about a moment like this. Here they are, with commentary:

What if It's All Performative and Somehow a Gigantic Public Relations Ruse Intended to Promote Her New Record and the Start of His Season?

This is a fair question and certainly what I thought at the beginning (see: cynical). However, asking Swift (and by extension, Kelce) not to perform would be like inviting Michael Jordan down to Hoover Park in my hometown, where pickup basketball was played all the livelong day, handing him a basketball, and asking him not to shoot it or dunk it. Point being, if you're Taylor Swift, the Faustian pact that you've made with certainly yourself (and maybe the devil) is that no aspect of your life really goes "unperformed" and in fact the attention is something needed, in the same way that a smack addict eventually needs the drug just to feel normal. Point being, I think they both need attention like this just to feel normal.

What About the Institution of Marriage, Like from a Spiritual Standpoint?

This is another incredibly fair question. Of course, we live in a fallen world where pagans live as pagans, and then also sometimes enter into an institution created by God that is supposed to mirror Christ's relationship with His bride. There's a part of me that is really encouraged when a couple decides to stop living in sin, and decides to marry, even if that couple shows no evidence of regenerate hearts and not even a modicum of interest in the church. This is still a good thing, but not as good, as joyful, as life-giving as going to a wedding between two of my students who love the Lord. It's even less good when said marriage is less a holy union between two people and more a publicity-fueled marketing move. To be fair, I don't know if it is this, or not.

But Even Though Swift and Kelce are Living their Lives Performatively on a Macro Level, Aren't We All Doing the Same Thing on a Micro Level Via Social Media?

If you're a kid going to college for the first time there are probably a variety of emotions at play. You probably cry a little bit when you hug your parents goodbye, you may not immediately like all of your roommates, and you may feel homesick. But when you produce your five-image Instagram post re: Moving to College, you omit the crying picture, omit the ambivalence vis-à-vis the roommate, and include a beautiful shot of your campus, a shot of the string of lights in your dorm room, a shot of the latte you purchase in the campus coffee shop, and a shot of you looking unspeakably happy while surrounded by people. How is this *qualitatively* different than Swift and Kelce essentially *producing* a reality show that is also, functionally, their wedding?

Is Travis Kelce Even Interesting?

No, not really. But the entire Kelce empire are the proverbial "ships" being elevated by the rising tide that is Taylor Swift and her even more substantial empire.

Isn't it Awkward and Sometimes Disastrous to do Business with Family?

Yeah, that could get dicey.

Why Does This Feel Kind of Gross and Calculated, but Josh Allen's Marriage to Hailee Steinfeld Doesn't?

I'm not sure, but it probably has something to do with the fact that the Allen/Steinfeld nuptials felt like something *for* them and *about* them, but Taylor Swift's wedding feels—like her music—like something that is somehow *for and about us*. Which is the exact nature of the genius of her music, but also the exact thing that makes her personal stuff feel the tiniest bit gross.

What Happens to Her Music When There are No More Breakups to Write About?

I have absolutely no idea.

Kluck, Do You Even Care About This?

No, not really.

Ted Kluck

Associate Professor of Communication Arts



Ted Kluck is the award-winning internationally published author of 30 books, and his journalism has appeared in *ESPN the Magazine*, *USA Today*, and many other outlets. He is screenwriter and co-producer on the upcoming feature film *Silverdome* and co-hosts The Happy Rant Podcast and The Kluck Podcast. Ted won back-to-back *Christianity Today* Book of the Year Awards in 2007 and 2008 and was a 2008 Michigan Notable Book Award winner for his football memoir, *Paper Tiger: One Athlete's Journey to the Underbelly of Pro Football*. He currently serves as an associate professor of journalism at Union University in Jackson, Tenn., and he coaches long snappers at Lane College. He and his wife Kristin have two children.



The Library at Union University: A History

Savannah Patterson

The Logos building is a staple of Union University and sits beautifully on the Great Lawn of Union's campus. It's a favorite of the Union community, but there is a deeper function of the building: it houses the Library at Union University, serving as the heart of academic learning and Christ-centered education. While this academic year marks the tenth anniversary of the Logos building, the library has been around much longer and has looked different throughout the years by growing and changing to keep up with the academic needs of Union. So, what did the library at Union look like before the Logos?

Union's conception and history is not straightforward but derives from three schools: Jackson Male Academy, West Tennessee College (together, both became Southwestern Baptist University) and Union University Murfreesboro. From these early beginnings, there has been a library of some sort to support students' education. From early catalogs, we learn a little about the library. The 1849-1850 UU Murfreesboro catalog mentions the library was in the main building and there was a library of the two Literary Societies (Calliopean and Apollonian) in addition to the university library which "contain[ed] a number of valuable books."¹ No information can be found regarding the library at the time of Jackson Male Academy or West Tennessee College, primarily in the years between 1850 to 1885, but one can assume a library existed at both. There is some information, however, of the library at Southwestern Baptist University in 1885 which contained 3000 volumes.² By this time, Union University Murfreesboro had closed due to multiple hardships after the war, and the Southwestern Baptist University had taken over West Tennessee College.³

1. Union University Murfreesboro, *Catalogue of the Officers and Students of Union University During the term 1849-50*, (Murfreesboro: D.W. Taylor, 1849), 13.

2. Southwestern Baptist University, *Annual Catalogue of the Southwestern Baptist University, Jackson, TN for the Session of 1885-1886*, (Jackson: Southwestern Baptist University, 1886), 22.

3. "History," Union University, accessed September 26, 2025, <https://www.uu.edu/about/history.cfm>.

In 1907, Southwestern Baptist University adopted the name “Union University” in honor of the work in Christian higher education done at Union University Murfreesboro and of those who served there during its operation, specifically former Union President Joseph Eaton and his son Thomas T. Eaton. It was in this same year that Thomas Eaton’s library was given to Union University which added to the number of volumes in the collection.⁴ A few years later, in 1912, a tragic fire occurred that demolished the administration building as well as the Powell Chapel. However, most of the library, located in the administration building, was saved thanks to students who saw the fire break out early and worked to save the books.⁵ Thanks to this, the library lost little materials in the fire.

Throughout the years, there was not a dedicated librarian to oversee the daily operations of a library. Often, it would be either “a senior student or a faculty member assuming the position as an extra duty.”⁶ However, in 1915, Union hired Emma Waters Summar as the librarian for the university library. Though she wasn’t the first full time librarian at Union, she dedicated the next thirty years of her life to Union, the library, and the students. Union lore describes her as a motherly figure who dedicated her life to the students of Union and their needs.⁷

Not much is known about the library or significant changes within the library between 1915 and the 1930s. However, the university, including the library, saw several transformations during the tenure of President Warren F. Jones (1945-1963). During his tenure, the university began seeking accreditation from the Southern Association of Colleges and Schools. It was suggested that a stand-alone building for the library would aid the university in achieving accreditation. Thus, in 1947, the library was relocated to Dorcas Hall. When the library opened for use, students found a reference room and offices on the main floor and the main stacks (collection) were in the basement.⁸

There’s no evidence of the library having a formal name, either at Murfreesboro or in Jackson. Regardless, between 1945-1955, Union’s administration decided to name the library after the one who dedicated so much time to the university and its students: Emma Waters Summar.⁹ It was this name that identified the library at Union University for more than

4. James Alex Baggett, *So Great a Cloud of Witnesses: Union University 1823-2000* (Jackson, TN: Union University Press, 2000), 83.

5. Richard Hiram Ward, *A History of Union University* (Jackson, TN: Union University Press, 1975), 57.

6. James Alex Baggett, *So Great a Cloud of Witnesses: Union University 1823-2000* (Jackson, TN: Union University Press, 2000), 108.

7. *Ibid.*, 109.

8. *Ibid.*, 143.

9. *Ibid.*

sixty years and honored the service of an individual who set the standard for serving at Union.

The 1960s and 1970s were a time of change for most of the country in general, but it was also a time of great change for the university and the library. In 1969, the library collection grew from 16,000 volumes to 40,000 volumes and students had access to the Jackson Free Public Library nearby.¹⁰ However, one of the most significant transformations in Union's history was the move from the downtown campus to its current campus in north Jackson, Tennessee. The downtown campus had no room to grow and consisted of aged buildings beyond repair. Thus, the campus and the library moved to North Jackson in 1975 under leadership of President Robert Craig. By the time of the move, the collection had grown to 53,000 volumes.¹¹ Additionally, by 1975, there were four professional staff that worked in the library.¹² The move to the new campus allowed the entire library collection to be housed in the same area and provided seating for approximately 150 people.¹³ The new academic complex was christened the Penick Academic Complex, and the library kept the name of Emma Waters Summar Library.

Between 1984-1986, the university was preparing to undergo its third SACS self-study. This presented the need for improvements to the library. Enrollment was increasing and it was becoming harder to provide seating for students in the library.¹⁴ The study also highlighted a lack in computer technology needed to keep up with the changing research trends.¹⁵ In the fall of 1986, head librarian Bill Robertson began his tenure as director of the library and helped institute several necessary changes. He converted many periodicals to microfiche to save space, replaced the card catalog with electronic catalogs, and connected the library to databases using computers purchased for the library.¹⁶ These changes, in addition to others around campus, helped the university to not only keep its accreditation but helped propel the library into the new technological age of research.

By the 1990s, the library continued to grow in number of books and patrons, as well as technology used for research. Technology advanced at a rapid pace and the library quickly entered the digital age. The Emma

10. Union University, *Bulletin of Union University Jackson, TN, January 1969* (Jackson, TN: Union University, 1969), 14.

11. Union University, *Union University Jackson, TN, January 1974* (Jackson, TN: Union University, 1974), 13.

12. Union University, *Lest We Forget, 1975* (Jackson, TN: Union University, 1975), 143.

13. James Alex Baggett, *So Great a Cloud of Witnesses: Union University 1823-2000* (Jackson, TN: Union University Press, 2000), 180-181.

14. *Ibid.*, 209-210.

15. Pat Morris, interview by author, Jackson, September 24, 2025.

16. James Alex Baggett, *So Great a Cloud of Witnesses: Union University 1823-2000* (Jackson, TN: Union University Press, 2000), 214-215.

Waters Summar Library was connected to the Online Public Access Catalog (OPAC) which allowed users to search for library materials via computer rather than card catalog.¹⁷ It later joined the Online Computer Library Center (OCLC), a global consortium that provides shared research and technology.¹⁸ The library also grew in library personnel. Throughout the 1990s, there would be anywhere from eight to ten library employees, a mix of faculty and staff librarians, working in reference, cataloging, periodicals, collection development, and other areas.

The first decade of the new millennium was eventful for Union University and the library; some of the events were tragic. Jackson, Tennessee is no stranger to inclement weather, especially tornadoes, as two had hit Jackson within the last ten years. Yet in February of 2008, Union was hit by an EF-4 tornado that ravaged the campus. Many of the older dorms were destroyed and several buildings on the Great Lawn were damaged. The library, housed in the Penick Academic Complex, suffered little damage. However, some library materials were lost. Materials checked out by students who lived in the affected dorms were lost. Plus, parts of an old and rare collection, stored in Jennings Hall, succumbed to water damage as the roof of Jennings was damaged. Over the next few weeks, the library was closed to patrons and library personnel worked with the university community to help with recovery.¹⁹

Despite the damages from the tornado, the early years of the 2000s were dubbed “the building years” where enrollment, programs, majors, schools, and the university grew.²⁰ The library also saw growth in resources, services, and staff. However, that growth highlighted the lack of space within the library for resources and patrons. The space that housed the Emma Waters Summar library was approximately 30,000 square feet²¹ and became increasingly difficult to expand further.

Relief came in the form of a generous donation from the Bill and Carol Latimer Foundation in the early 2010s. This donation was for a new free-standing library building that would meet the needs of the scholarly community at Union. The university began fundraising to complete the building. Ground was broken in 2012 under President David Dockery, but a few months later Dockery announced his retirement and donations stalled. In 2014, Dr. Samuel “Dub” Oliver became president of Union University.

17. Pat Morris, interview by author, Jackson, September 24, 2025.

18. Jeannie Byrd, interview by author, Jackson, September 25, 2025.

19. Ibid.

20. “History,” Union University, accessed September 26, 2025, <https://www.uu.edu/about/history.cfm>.

21. “Why Now?” Open the Doors, Union University, accessed September 23, 2025. <https://www.uu.edu/library/openthedoors/why-now.cfm>.

Soon after his tenure began, construction commenced on the new library and lasted just a little over a year. The building was named The Logos (Latin for “word” and taken from the scripture of John 1:1) and the library was to be called the Library at Union University.

Moving the library and its equipment proved to be a formidable task, one that was handled under the leadership of director Anna Beth Morgan along with a library moving company. However, as classes were ongoing during the move, the library had to continue to meet the research needs of the faculty and students. Consequently, the librarians established “The Bridge,” a condensed version of library services offered during the two-week period of the move. Through “The Bridge,” students could still check out books by request, and research help was still available but limited.²²

Once the books and equipment were moved into their new homes, the Logos opened on November 6, 2015. The Union community and guests could finally walk through its doors after the dedication ceremony. This new building gave the library and the university community over 50,000 square feet of real estate in which to house, and use, materials.²³ Seating increased immensely as students had three floors of open seating, study carrels, and study rooms. Computer labs and computers increased as the library housed over fifty computers within three different labs. Archives and Special Collections had a much bigger space for storage, complete with a climate-controlled system and a workroom dedicated to processing old and rare materials. Dedicated workrooms were designed for processing and preserving library materials. The environment and atmosphere of the new library building lent itself to fostering the academic excellence found at Union.

The Logos building stands proud and prominent on the Great Lawn, its steel dome top visible for miles off campus. The university has relished having a free-standing library building once again and one so distinguished. The Logos provides students, faculty, and staff space to collaborate while marking a new era in research and growth at Union University.

22. “Why Does Union’s Library Have a Bridge,” *Cardinal and Cream*, October 1, 2015, Why Does Union’s Library Have a Bridge?—Cardinal & Cream.

23. “Why Now?” Open the Doors, Union University, accessed September 23, 2025.

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Challenges of Inheriting an Archives

Savannah Patterson

Tucked away in a quiet corner on the third floor of the Logos is the archives—a room that houses the history of Union University. It contains printed administrative materials like presidential papers, accreditation studies, yearbooks, Union publications, and more. There are old and rare books from the libraries of people with strong Union University connections as well as historical information of Madison County/Jackson, Tennessee. It has never taken up a large amount of space of the library but it is an important area as it holds historical university information.

Over the years, there have been several leaders responsible for the archives. However, in 2018, the full-time archivist left and there was not a full-time replacement available. Up until 2021, various groups of teams from the library managed the archives as far as locating materials for requests and placing donations in the archives. Though requests were handled well, the university's bicentennial was fast approaching the next year, and the number of requests would increase and become more complicated. So, the library director approached me in Spring 2021 with the idea of taking charge of the archives.

While I was flattered by the request, I panicked. Managing the archives would be a huge commitment, especially since it sat untouched for a few years. However, the historian in me could not resist. I agreed to do a trial evaluation during the summer of 2021 to explore the archives and determine its needs. After exploring, making mental notes, and considering many factors, I committed to taking over the archives in the fall of 2021. While this was an important move for my career, I knew it was a lot of work and would also come with unique challenges and lessons along the way.

My first challenge was juggling both archival work and teaching. My main responsibility in the library is instruction (teaching students how to research and use the library) which I could not neglect, but the workload ebbs and flows during the semester. I didn't want to relinquish my instructional responsibilities because I enjoy working with faculty and students, and I did not want to lose that interaction. However, I knew that my first year managing the archives would be busier than usual with archives and requests, especially with it being the bicentennial year.

Therefore, I had to find a way to manage my time for both instruction and archives. I scheduled a time once or twice a week to dedicate myself to archival work. I kept track of requests or projects and worked on them during the dedicated archival block of time. This system worked well at the beginning and end of the semester when instruction was not in high demand, and I was able to dedicate time to archival work. However, when instruction was peaking (usually during the middle of the semester), I could not get much accomplished in the archives. During these times, archival work fell by the wayside while instruction demanded my focus.

A good time management system is key to juggling multiple responsibilities. Being disciplined with a time management system helps in completing tasks and producing results. But it is important to be adaptable with time management as it helps with unexpected appointments or projects. I had to learn how to manage my time between archives and instruction especially when instruction was at its peak. I also had to learn that I could not accomplish everything in one day. Though there is a lot of work to be done, I continue to work on what I can and keep in mind the projects to be completed.

The second challenge I encountered was the amount of work that needed to be done in the archives. For the three years prior, materials had been donated and stored in the archives. The previous archivist was in the middle of reorganizing the record system, but they left in the middle of this reorganization. Plus, there were other projects left unfinished, such as unprocessed materials, and the area needed a general clean-up before work could begin. I inherited an enormous amount of work that needed to be accomplished by someone with skills and knowledge of archival procedures.

Normally, when one takes charge of an archives department, they have a lot of formal archival training. All I had, however, was a small amount of experience from being cross trained in the archives a few years back and some experience as a student intern in the archives back in 2011. I was a little intimidated to take on the archives because of my lack of training; I knew I would have to find some professional development opportunities to grow the skills and knowledge necessary to manage the archives.

There were various categories of professional development that I looked at for training at the beginning: readings, webinars, and classes. Many came through professional societies, library/archival organizations or societies, and from readings in Union's library collection. Most of the opportunities were very helpful as they gave information on archival practices and procedures. Attending local archival conferences provided an opportunity for me to talk to other archivists about projects and how to proceed with them. These opportunities helped me learn the basics of archival procedures and practices that I could apply in my own work.

Coming into new responsibilities, a new job, or changing a professional trajectory is often an exciting yet anxious time for anyone. It can also be a difficult time as challenges may exist in those new responsibilities. When I took over the university archives, I experienced challenges such as juggling multiple job responsibilities in different areas and the need for additional professional development. However, I developed a system of time management that kept me on a schedule for archival work, and I sought out and completed several professional development opportunities to strengthen my skills in archival procedures. All in all, I have enjoyed the challenges and lessons that came from adding archives management to my list of duties. Doing so has allowed me to get the best of both worlds: interacting with students and faculty while being the caretaker of the university's history.

Savannah Patterson

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Professor of Library Services*



Savannah Patterson is the Associate Professor of Library Services, serving as the Public Services Librarian. As a graduate of Union University ('12), she received her Master of Library Science from Texas Woman's University ('16). She began her tenure at Union University in 2012 in the library by working in Serials and Electronic Resources, then later in Cataloging. Now she works with students helping them find and use library resources and services for research. Savannah also serves as the Archivist and maintains Union University's archives. Savannah and her husband Michael have one daughter, Michaela, and live in Crockett County.



Technology and the Triptych: Expressionism and the “Death of Progress”

Jason L. Strandquist

In the essay *On Pain*, published in 1934, German nationalist writer Ernst Jünger (1895-1998) observed that graphic triptych paintings by late-medieval German and Flemish masters had become newly *en vogue* following the First World War.¹ For Jünger, as for contemporary visual artists like Otto Dix (1891-1969) and Käthe Kollwitz (1867-1945), the catastrophe of the Great War (1914-1918) could only be viewed properly through a pre-modern and Biblical cultural lens. Today, none of these artists are remembered as “Christian” figures of the interwar era à la Dieterich Bonhoeffer, and the conservative Jünger—whose bestselling memoir *Storm of Steel* (1920) described the war with an unsettling detachment—clashes sharply with the pathos and pacifism of Kollwitz and Dix. Yet one thing binds them all to an under-appreciated trope of Expressionism as a genre: as they confronted the war in their works, each rejected the false promises of technological “progress” in favor of contemplating hard truths of pain, death, and catastrophe in overtly Christian terms.

In keeping with his bold title, Jünger’s *On Pain* describes a Renaissance of public interest in apocalypticism by the early 1930s:

We possess exceptional images of how life is surrounded and engulfed by pain in the impressive paintings of Hieronymus Bosch, Brueghel, and Cranach, whose significance we begin to appreciate again today and which only a short time ago were considered absurd inventions.²

The references are to Bosch’s *Last Judgment* triptych from c. 1485, and a near-copy by Lucas Cranach the Elder also known as the *Great Inferno*. “These paintings are more modern than one believes, and it is not by accident that technical [*i.e. technological*] skill plays such a significant role in

1. *On Pain* offers a “deeply pessimistic critique of the society and culture of the Weimar Republic (1919-1933) and liberal modernity in general.” Russell A. Berman, “Preface to the Telos Press Edition of Ernst Jünger’s ‘On Pain,’” in Ernst Jünger, *On Pain*. Trans. David C. Durst (Candor, NY: Telos Press, 2008), pp.1-21; p.1.

2. Jünger, *On Pain*, p. 44.

them.”³ We can infer that the industrialized character of the war—“sausage machine” was a common soldier’s sobriquet for trench warfare after 1916⁴—had sparked a cultural reappraisal of these works, and indeed of the whole genre. Jünger affirms the point by describing the many fires and chimneys of Bosch’s hellscape, which “resemble industrial landscapes in full operation,” recalling a nighttime scene from the wartime home front. In Cranach’s painting, which the author could view personally in its home museum in Berlin, a “complicated array of technical instruments” includes torture machines festooned with cogs and gears, numerous metal cages, and, most horrifying to Jünger, a “rolling canopy with a large, shining knife jutting out of the opening”—a kind of late-Renaissance armored fighting vehicle.⁵ As a combat veteran wounded an incredible nine times between 1914 and 1918, Jünger spoke with authoritative suspicion about these “symbols of a mechanically disguised assault that is colder and more rapacious than any other.”⁶

Memento Mori, Modernity

Jünger’s quotation of these paintings for their resonance with modern industrial and technological menace points to the profoundly disillusioning impact that “total war” had upon late-Victorian belief in human progress. Two pages into *On Pain*, the author strikes a chord that echoes widely among other literary and artistic treatments of the Great War: he invokes a 14th-century Gregorian Chant as the antithesis of the new, postwar culture of pleasure, a milieu famously documented in Expressionist novels like Hermann Hesse’s *Steppenwolf* (1927) and Alfred Döblin’s *Berlin Alexanderplatz* (1929). Stark scenes from cafés, cabarets, and workers-housing districts became a favorite subject of Otto Dix, George Grosz, and their contemporaries of the “New Objectivity” school. For Jünger, however, it was mostly illusion, needing a pre-modern correction. “We feast and stroll like Sinbad the Sailor,” he wrote in *On Pain*, “on the back of an enormous fish he mistakes for an island. The chant *Media in vita* springs from a sentiment aware of this threat.”⁷ He cites *Media vita in morte sumus*,

3. Jünger, *On Pain*, p. 44.

4. Poet and classicist Robert Graves observed that it was called this because “it was fed with live men, churned out corpses, and remained firmly screwed in place.” Quoted in Michael D. Richards and Paul R. Waibel, *Twentieth Century Europe: A Brief History, 1900 to the Present*. 3rd edition (Malden, MA: Wiley Blackwell, 2014), p. 51.

5. Cranach’s *Great Inferno* is very nearly a direct copy of Bosch’s Last Judgement from c. 1485. Jünger is likely also referring here to Brueghel’s plague-themed *Triumph of Death* from c. 1562, in which the devastation of plague include fires, blackened trees and destroyed buildings, and deep fissures in the earth that strongly recall the trench landscape of the Western Front.

6. Jünger, *On Pain*, p. 44.

7. Jünger, *On Pain*, p. 49: “Since the War’s end, the denial of pain as a necessary facet of life has experienced a late revival. These years display a strange mix of barbarity and humanity...

"In the Midst of Life We Are In Death," a 14th-century Gregorian chant in the *memento mori* genre, a centuries-long artistic tradition that commended Christians to piety and morality by emphasizing the inevitability of death. Here, the conservative Jünger acknowledges that while the mass consumerism and hedonism of the "Roaring '20s" succeed at producing distraction or oblivion, "all of this is thoroughly fairytale-like" compared to the ultimate truths of the *memento mori* tradition.⁸

In 1919, French philosopher Paul Valéry (1871-1945) distilled the bleak *Zeitgeist* that emerged from the Great War as a "Crisis of the Mind." Where belief in progress as the *telos* of history had been near-absolute in bourgeois society before the Great War,⁹ Valéry saw a sea change, and he expressed it in an aphoristic series of essays published in the *New French Review* between 1919 and 1922:

We modern civilizations have learned to recognize that we are mortal like the others...Edam, Ninevah, and Babylon were vague and splendid names...but France, England, Russia, these names too are splendid. And now we see that the abyss of history is deep enough to bury all the world. We feel that a civilization is as fragile as a life.¹⁰

Several years later, he saw little improvement in either practical or spiritual terms:

The storm has died away, and still we are restless, uneasy, as if the storm were about to break. Almost all the affairs of men remain in a terrible uncertainty... "the Mind [*l'esprit*] has indeed been cruelly wounded; its spirit is heard in the hearts of intellectual man; it passes a mournful judgment on itself. It doubts itself profoundly."¹¹

Valéry's "abyss of history" constitutes a *memento mori* to European readers facing a bleak "new normal" born of mass death, economic hardship, and political flux, and his tone is not just psychological, but emotional and

an extreme pacifism side by side with an enormous intensification of war preparations...the abolition of capital punishment by day whilst the Whites and the Reds cut each other's throats by night—all this is thoroughly fairytale-like." *Media in vitae morte sumus* as adapted from *The Book of Common Prayer*: "In the midst of life we are in death / of whom may we seek for succor / but of thee, O Lord / who for our sins / art justly displeased?"

8. Jünger, *On Pain*, p. 49. The American "Roaring '20s" were known in Germany as the "Gold-en '20s," of which Berlin was the epicenter.

9. Paul Fussell, *The Great War and Modern Memory* (New York: Oxford University Press, 1975), p. 8: "The Great War...was a hideous embarrassment to the prevailing Meliorist myth which had dominated public consciousness for a century. It reversed the Idea of Progress."

10. Paul Valéry, *The Crisis of the European Mind*, in *New French Review* 13, 1919, pp. 321-327. Here "On European Civilization and the European Mind, in *The Internet Modern History Sourcebook*, ed. Paul Halsell, accessed online at <https://origin-rh.web.fordham.edu/Halsall/mod/valery.asp>, last accessed 21 August 2025.

11. *Ibid.*

spiritual. Such an affliction, impacting not only the intellect, but “the hearts of intellectual man,” affirms that pervasive anxiety, dread, self-doubt and self-judgment at a civilizational level were primary legacies of Europe’s catastrophe.

No wonder that the artistic movement known as “Expressionism” began as Europe enjoyed its civilizational peak in the early 1900s, but only found its most evocative new directions, like the New Objectivity of Dix and Georg Grosz, as artist-veterans sought to depict the multifaceted crisis Valéry described. The Tate Modern Gallery in London defines “Expressionism” as “the expression of subjective emotions, inner experiences and spiritual themes, as opposed to realistic depictions of people or nature,” but the war’s cultural impact reached far beyond genre.¹² In his 1975 book *The Great War and Modern Memory*, historian Paul Fussell argued that the war was responsible for a complete shift in Anglophone culture, from the naïve Victorian to the sardonic modern. The twentieth-century taste for irony, double-entendre, and “black humor” was literally born in the trenches, having barely existed in the pre-war imagination; meanwhile, the frequency and vigor of verbal obscenity followed a similar cultural trajectory.¹³ So complete was the war’s cultural destruction that even the concept of “battles” lost its traditional meaning by 1916, a year plagued by Verdun and the Somme, two catastrophic battles in France that inflicted millions of casualties on the French, British, German, and colonial troops involved. Fussell quotes the poet Edmund Blunden’s note on the first day of the Somme that “by the end of the day [1 July 1916], both sides had seen, in a sad scrawl of broken earth and murdered men, the answer to the question...Neither [*side*] had won, nor could win, The War. The War had won, and would go on winning.”¹⁴ Ernst Jünger had dubbed this a “storm of steel” in his eponymous memoir from 1920; for Fussell, a wounded veteran of the Second World War, the Great War had utterly “reversed the idea of progress.”¹⁵ As Valéry expressed, with this death of progress came a profound loss of the confidence with which nineteenth-century militarists had promised a short and glorious war, imperialists extolled a “civilizing mission,” and hubristic philosophers like Friedrich Nietzsche had prophesied the “Death of God.”

12. Valéry, “La Crise de l’Esprit,” in *Nouvelle Revue Française*, Tome XIII (1919), pp. 321-327, accessed online at: [https://fr.wikisource.org/wiki/La_Crise_de_l'Esprit_\(NRF_1919\)](https://fr.wikisource.org/wiki/La_Crise_de_l'Esprit_(NRF_1919)), last accessed 21 August 2025. “Art Term: Expressionism” in Tate Modern, <https://www.tate.org.uk>, accessed online at <https://www.tate.org.uk/art/art-terms/e/expressionism#:~:text=Expressionist%20art%20refers%20to%20the,depictions%20of%20people%20or%20nature>, last accessed 21 August 2025.

13. Fussell, *Great War*, p. 19 ff. on “loss of innocence” as a general literary and cultural phenomenon after 1914.

14. Blunden, quoted in Fussell, *Great War*, p. 14.

15. Fussell, *Great War*, p. 7.

Storm Of Steel: Technology And The Triptych

Otto Dix's *War*, often called the *Dresden Triptych*, depicts what these authors described: an industrial maelstrom in which rationality is impossible, battles never seem to end, and humanity loses so War can triumph. Dix served in the German Army on the Western Front from 1915 until 1918, and this masterpiece alone is adequate to explain why a 2017 biopic film about the artist was entitled *The Merciless Painter*. Notes by the painting's home gallery in Dresden, written for the 2014 centenary of the start of the Great War, offer the following overview of this massive work, painted between 1929 and 1931:

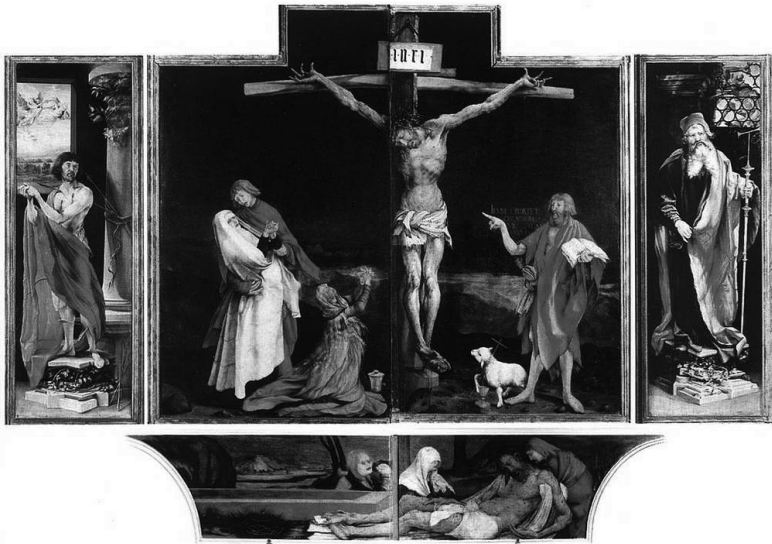
In the style of an Old Master, the four panels...show troops setting off at daybreak (left panel), the battlefield as a place of death (central panel), soldiers returning from the hell of battle (right panel), and fallen soldiers resting in peace in a dugout (predella).¹⁶

For the present purposes, the formatting conventions that Dix employed are of particular interest. The triptych format, here used to illustrate one awful day in the trenches, is a staple format of medieval Old German painting, and the most famous triptychs are altarpieces, such as the famous *Isenheim Altarpiece* by Matthias Grünewald (1512-1516). The retables or wings of these altarpieces are functional, designed to be opened and closed in keeping with the Christian liturgical year, and often painted with distinct images on both sides of the panel. Accordingly, a definitive scene for the original



Otto Dix, *Der Krieg*, 1929-1932. Dresden, Staatliche Kunstsammlungen, Gemäldegalerie Neue Meister, Mixed Technique on Plywood.

16. Staatliche Kunstsammlungen Dresden, "Albertinum," <https://albertinum.skd.museum/en/exhibitions/der-krieg/>, accessed 24 June 2025.



Grünewald, Matthias. *Isenheim Altarpiece*. 1512–1516, oil and tempera on limewood panels, Musée Unterlinden, Colmar, France.

triptychs was the crucifixion, with the passion of Christ occupying the central panel, and his burial shown on the predella beneath. Here, patron saints occupy the closed wings of the altarpiece, but in the opened view, and with the interpolation of other painted panels and sculptures, the key Christian mysteries of the Anunciation (*left*), the Incarnation (*center*) and Heavenly Chorus, and the Resurrection (*right*) take pride of place, with the Lamentation (*below*) remaining to remind the viewer of the passion.

Why did Dix choose this format to depict trench warfare? While the style and content are a clear departure from the conventional triptych, what has been retained? Three progressions are clearly evident. The first is the progression of time, from day to night, moving from left to right. The second is the cause-and-effect of industrial war, in the case of the entry into the line at left, the shocking carnage of trench warfare at center, and the outcomes at right and below. The third is passage: movement through a landscape simultaneously arid and putrefying, and from life into death (in the case of the troops entering battle, the graphically mangled corpses and lone sentry of the trench landscape), and perhaps also from near-death back to life, in the case of the main figure of the right panel, returning from no-man's-land bearing a wounded and bandaged comrade.

Dix's use of the predella is particularly notable. The inclusion of the tarpaulin is a detail entirely typical of Great War trenches, as "tarps" were issued in great quantities and strung this way (by their four corners) to divert at least some of the frequent rain (and flying dirt or mud) from

trench occupants aboveground. Deployed underground, the ubiquitous tarp protected resting men from being pelted with dirt dislodged from earthen ceilings in the frequent bombardments. Dix's inclusion of the tarpaulin suggests the conflation of death and sleep known to us first and foremost from biblical metaphor invoked by Christ in various Gospel passages, including the death of Lazarus in John 11:11, and in the case of the deceased girl in Matthew 9:24 and Luke 8:52. Such a commonplace object of trench life included with entombed dead soldiers (who are depicted as almost lying in state belowground, not haphazardly buried by artillery or in a mass grave) has a highly ironic effect, because it suggests that the men might, as Christ insisted at the time of his miracles, merely be sleeping. It also underscores the broader thematic continuity across the five centuries separating the two triptychs. Both deploy their imagery across the passage from life to death, framing at the center dreadful suffering and human carnage; in the *Dresden Triptych*, Dix infuses all-too-real events with an otherworldly aura through the balance of light and darkness, moving from left-to-right and top-to-bottom in a manner similar to the *Isenheim Altarpiece*. Whether Dix's portrait offers any Christian hope to accompany his thematic reliance on medieval depictions of Christ's life, death, and resurrection is a question for the viewer to decide.

Massacres of the Innocents

The works of Käthe Kollwitz (1867-1945) constitutes one mother's response to a disaster that, at the time, was conceptualized in the New Testament terms of the "Massacre of the Innocents." Scholarly and popular authors apply this term broadly when referring to the twentieth century, and with good reason; in a Great-War context, we find it applied not only to the death of thousands of young volunteers, many fresh from school, in the autumn of 1914, but also to notorious killings of civilians perpetrated by the German Army in occupied Belgium.¹⁷ When discussing Kollwitz, the first meaning of the term, referring to the squandered lives of Germany's "student-soldiers" in the battles of autumn 1914, is the most compelling, though we shall see that the concept remained relevant in German artistic responses to wartime atrocity for decades.

Eighteen-year-old Peter Kollwitz, who was killed at the First Battle of Ypres on 22 October 1914, was the subject of his mother's most famous artworks. Three of these affirm the importance of the *memento mori* genre and triptych format to the artistic gaze of German Expressionism. Consider here Kollwitz's print *The Volunteers*, in which her son Peter Kollwitz appears

17. From here, concept can be traced to the Second World War, where artists and writers applied it to various atrocities perpetrated by Nazi Germany, particularly in the context of the Holocaust.

as the second figure from left, in the half-embrace of Death, who meanwhile beats the drum of war. The Kollwitz Museum of Cologne notes a deliberate similarity with medieval “Dance of Death” paintings—a significant variation of the *memento mori* trope—that enjoyed particular fame in Baltic cities of the Hanseatic League, such as Lübeck, Tallinn (Estonia), and Kollwitz’s home city of Königsberg (today Kaliningrad, Russia). Curator’s notes for *The Volunteers* make the link explicit:

On the second sheet, which stands in the tradition of medieval Dances of Death (*Totentänze*) and depictions of Death as a military commander, five young men follow the drum-beating figure of death. The youths are characterized very differently....a margin note on print in the collection of the Kollwitz Museum notes that the print depicts Peter Kollwitz and his friends who died in the war. Peter follows first after death, who with his left arm holds him tightly to himself. Accordingly, he was the first in the circle of friends to die in the war.¹⁸



Kollwitz, Käthe. *The Volunteers*. 1921-1922. Woodcut on Japan paper.

In terms of genre and format, the resonance that Kollwitz creates with the *memento mori* tradition of the Middle Ages is nearly as clear as Jünger’s explicit textual references to Gregorian chant, and to Old German and Flemish masters.

18. “Die Freiwilligen-Blatt 2,” in Käthe Kollwitz Museum Köln, accessed online at <https://www.kollwitz.de/blatt-2-die-freiwilligen>.

The conventions and symbolism of late-medieval works like the *Isenheim Altarpiece* resonate further in a cycle of sculptures Kollwitz began as early as December 1914, and upon which she continued work through the 1930s. In these, the relative innocence of the generation of August 1914 parallels the ultimate innocence of the sinless figure of Jesus. Kollwitz's *Grieving Parents* (1914-1932), *Lying Dead Soldier* (1915-1916), and *Mother With Dead Son*, or *Pietà* (1937-39) reveal this clearly. The first of these represents the artist and her husband Karl, a medical doctor whose service to the indigent working families of Berlin provided much material for Kollwitz's early works. This sculpture is particularly famous today, in part because it adorns the German War Cemetery in Vladslo, Belgium, where the remains of 25,644 German soldiers are interred, Peter Kollwitz among them. Peter's name is engraved on a standing stone in direct line-of-sight of the father figure seen here. Stylistically, the work is a triumph of Expressionist sculpture—the 1920s-30s character of the pieces is unmistakable—but a strong parallel to mourners and worshippers in Christian iconography can also be detected. Compared with the *Isenheim* crucifixion, Kollwitz's work recalls both the altarpiece's crucifixion scene, as well as the predella showing the burial of Christ. In the triptych tradition, patrons often appear in poses of adoration or grief, whether of Christ, the Virgin Mary, or of miracle-working saints like St. Anthony in the present work, and these figures often appear in a kneeling posture, alongside biblical and historical figures. Despite Kollwitz's modernist execution, and the personal nature of the works, the relative innocence of her son Peter and his generation nonetheless parallels the ultimate innocence of the sinless figure of Jesus—a connection that both Kollwitz and Dix would make explicit in their broader body of work.

Created in 1915 and 1916, Kollwitz's *Lying Dead Soldier* predates by several years Otto Dix's use of the triptych predella as a site for depicting fallen soldiers. This work is a plaster model intended to accompany the *Grieving Parents* as part of a three-sculpture group, and Peter Kollwitz's profile is clearly recognizable from *The Volunteers*. Together, these sculptures represent a clear continuity with Jünger and with Dix, in that all grapple with the war's outrages by relying on the narrative conventions and figurative attitudes of late-medieval sacred art. One key difference is found, however, in the Expressionist depictions of the innocent dead, who bear fewer visible marks of bodily corruption and decay than was often the case in the late Middle Ages. In contrast to Dix's and Kollwitz's relatively serene figures, late-medieval artists emphasized the suffering and disfigurement on the literal body of Christ as plagues and warfare ravaged Europe. The *Isenheim Altarpiece* is a notable example, but Hans Holbein the Younger's macabre depiction in *The Body of the Dead Christ in the Tomb* (1521-22) marks a graphic apex of both the genre and his own career. Unsurprisingly for his

time (he lived from 1497 to 1543), the Swiss-German Holbein was a master of the *memento mori* tradition, as seen in works like *The Ambassadors*, a 1533 double portrait with its famous anamorphic skull. Yet our concern here is with form and influence—art historians affirm that the *Isenheim* burial influenced Holbein directly, and Kollwitz clearly invokes a posture similar to that of entombed Savior to articulate the Great War's concentrated destruction of youthful innocence. As with Dix's *War* triptych, it must be noted here that hope for resurrection is left up to the viewer to imagine—but that the corruption of Christ's human body in Holbein's work also evokes a similar finitude of death.

In October 1937, Käthe Kollwitz noted the anniversary of her son's death in her diary by describing a work in progress based on the familiar medieval theme of Mary cradling the body of dead Jesus:

Working on the small sculpture that has developed out of the attempt to create the elderly couple. It's now become something like a *Pietà*. The mother sits, and has the dead son lying in her lap between her knees. It's not painful anymore, but rather remembrance.¹⁹

The famous *Pietà* sculpted by Michelangelo Buonarroti in 1498-1499 is merely the most famous example of a centuries-long tradition of sculptures broadly fitting into the Lamentation of Christ genre. The Kollwitz Museum in Cologne notes the “almost embryonic posture” in which the sculpted material joins mother and son, and stresses that Kollwitz did not intend a religious meaning, “despite the reference to ecclesiastical art.”²⁰ It is this that makes Kollwitz's *Pietà*, executed two decades after her son's death, a useful summary for this entire discussion. How are we to understand the religious legacy of these Expressionist works, when a conventional religious intent is often, though not always, absent?

The biblical trope of the “Massacre of the Innocents” was readily available to Kollwitz as she grieved her lost son Peter, but after Nazism unleashed a second wave of destruction in Europe between 1939 and 1945, Dix and other artists in the Expressionist tradition made the connection explicit. The postwar years—known as *Stunde Null*, or “zero hour” for the devastation of cities like Berlin, and a Germany divided among the victorious Allies—saw a wave of depictions of Christian themes of suffering and injustice, often blending wartime atrocity with biblical content. The painter and illustrator Max Busyn (1899-1976), a Polish-Jewish artist who spent four years in Berlin (1929-1933) before emigrating to Palestine, aptly

19. Diary of Käthe Kollwitz, 22 October 1937, quoted in Käthe Kollwitz Museum Köln, “*Pietà—Sculpture en bronze*,” accessed online at <https://www.kollwitz.de/en/pieta-sculpture-en-bronze>, last accessed 21 July 2025.

20. *Ibid.*

applied the title *Massacre of the Innocents* to a vivid scene of Nazi Germany's atrocities in the occupied East (1944). Here, German soldiers or SS militia slaughter villagers (including children and the aged) in an open landscape that recalls the statuesque figures of Rubens's work of the same title, and also the notorious photographic evidence of *Einsatzgruppen* massacres in the Baltic countries, Belarus, Ukraine, and western Russia. Other works by the same artists detail the concentration-camp and death-camp scenes that endure as symbols of Germany's "final solution" after the first purpose-built killing centers were constructed in late 1941. In the *Massacre of the Innocents*, the peaked caps and boots characteristic of both German army and SS officer's uniform deserve special note, as Otto Dix himself later employed the same symbols when taking up the theme.

Otto Dix made some forty studies of Christ's passion, alone, between 1948 and 1950. In 1960, Berlin publisher Kaethe Vogt commissioned Dix to create thirty-three lithographs for an illustrated edition of *The Gospel According to Matthew*, which includes exceptional references to Nazi atrocities.²¹ As a rule, Dix's depictions of the Gospel blend his trademark modern style with historically first-century content, as seen in the *Baptism of Christ* (Matt 3:13), *The Calling of Peter* (Matt 4:18), or the highly affecting depiction of sacrificial innocence, *The Sacrificial Lamb* (Matt 26:17). Yet two illustrations in particular capture the enduring relevance of Christian iconography to many artists responding to the new moral depths to which German militarism had sunk in the Nazi years. The first of these is Dix's interpretation of the "Massacre of the Innocents" genre, here entitled *The Murder of the Children of Bethlehem* in a direct reference to Matthew 2:16. This illustration forms a clear parallel to Busyn's 1944 work, and the peaked

cap, shined boots, and ornamental dagger of the murderous officer remain evocative symbols of Nazi barbarism in the present day.

When considering the question, "Was God Dead?," Dix's interpretation of *The Mocking of Christ*, based upon Matthew 27:27-30, offers a powerful "No." Here, Adolf Hitler is depicted at the left, personally securing Christ's crown of thorns, while the female figure at right not only represents the incarnate God's rejection by



Otto Dix, *Massacre of the Innocents in Bethlehem*. 1960. Lithograph. Mary and Leigh Block Museum of Art, Northwestern University.

21. Hanna Kasparick and Jörg Sandau, "Adventskalender 2023: Otto Dix—Das Matthäus-Evangelium, in *Christliche Kunst Wittenberg*, pp. 1-14.

the other half of the human population, but also strongly recalls the shadowy and syphilitic Berlin-cabaret studies that made Dix famous in the 1920s. Not only his artistic studies from the post-war period, but also his early religious education prepared Dix to interpret biblical scenes so powerfully in his long career. “They are such wonderful images” Dix recalled: “in my youth, when we had ‘Bible stories,’ I always imagined quite exactly to myself, where that was happening in my homeland.”²² He clearly did not abandon this practice after the devastation of two world wars. For Dix and Kollwitz, who blended modern iconoclasm and personal skepticism with a deep regard for traditions of Christian art, war and genocide offered nothing more or less than a massacre of modern innocents, and the ultimate mockery of Christ and the Gospel.

The New “Anti-Realism”

All of this is not to suggest that Otto Dix and Ernst Jünger are somehow “Christian” artists in the sense used in contemporary North American culture. As applied to contemporary literature or music, the term “Christian artist” connotes creating for a specific market of consumers identifying themselves on cultural-religious lines. The present analysis offers a useful alternative, one that serves as a kind of bridge or ladder for transcending the broad and traumatic dispute over cultural influence and identity-formation that we shorthand as “culture war.” In the case of the New Objectivity school, one of the most iconoclastic, original, and trauma-infused genres ever created, any attempt to distinguish categorically between “modern, secular” and “pre-modern, Christian” artistic identity is likely to end up anachronistic, ahistorical, and careless of a deeper search for truth. As Dix and Kollwitz mourned the war, they and their fellow artists discovered that the ultimate irony of modern progress—the industrial, technological, political, and social travesties of the Great War and Second World War—required the *gravitas* and cultural foundations of pre-modern Biblical culture. We might speculate that for veterans and civilians alike, the contemporary lens of pre-war progress versus post-war decadence, much like binary concepts of religious versus secular art, was simply too self-referential, superficial, and culpable to bear up under the weight of needed truth.

For Christians today, the skeptical and ironical gaze with which Expressionist artists used the Bible to narrate the death of progress might appear at first glance to be irreverent, and even sacrilegious. Yet this is also a legacy of technology gone wrong, albeit in a far more subtle and persuasive fashion than the machine guns and barbed wire of the industrial age. Expressionism’s profound mistrust of easy narratives of high-tech progress, and the unblinking gaze with which Dix, Kollwitz, and their contemporaries

22. Dix, quoted in Kasparick and Sandau, “Das Matthäus-Evangelium,” p. 9.

employed Biblical narratives to reckon with modern suffering should be a call to question the ways in which we ignore and distort the past to serve present purposes. So-called “culture war” depends, at its root, on refashioning knowledge—especially knowledge of the past—in its own image. In the argot of the news cycle, this is known as “post-factual” and “post-truth” discourse, and historical fact and interpretation are among the most common victims of such epistemological manipulation. In our time, with our technology, Valéry’s “abyss of history” has accelerated its work, and the temptation to distort our gaze (or avert it altogether) from that which would challenge our assumptions affirms what Simone M. Sepe, writing in *First Things* about our present “culture of fragility,” has termed a philosophy of “anti-realism.”

Like the cultural battles that subsist upon it, anti-realism relies upon the fundamental assertion that truth is not an “external, independent reality,” but rather “is dependent on human cognition, language and social practices.” The “rise of antirealism” in the digital decades, Sepe suggests, is facilitated by “the decline in belief in God, which has been supplanted by sentimentalism.”²³ In view of the profound disillusionment and grief evoked by these artworks, post-war attempts to grapple with traditional religious beliefs are particularly challenging for today’s person of faith, who cannot help but hear the siren’s song of continuous, digital affirmation that assures us of our own rectitude by the yardstick of *feeling*, whether positive or negative. As this affirmation becomes the primary goal of life, as seems to be occurring the age of social-media fixation and A.I. companionship, it becomes tempting to reject Expressionist skepticism as offensive, even as mockery. Unless twenty-first-century viewers of these works are intentional in pursuing truth, they will find that they are increasingly formed by technology to either affirm or reject, almost instantly, with little effort to understand. In response, Expressionism offers us a dual corrective, reminding us not only to be wary of the power we ascribe to technology, but also that sacrilege is impossible without a shared and enduring concept of what is sacred.

23. Simone M. Sepe, “Culture of Fragility,” 2 May 2023, in *First Things*, online at <https://first-things.com/culture-of-fragility/>, last accessed 17 August 2025.

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Jason Strandquist received his B.A. in History from the University of Illinois and his M.A. and Ph.D. from Pennsylvania State University. A specialist in the social impact of religious change in German-speaking Europe, his current research explores links between the polemical conflicts of the “confessional age” and the “culture wars” of the twenty-first century. At Union, Dr. Strandquist teaches core courses in World Civilization (His 101 and 102), Human Geography and Social Geography (Geo 215 and 216), and the upper-division history courses Twentieth-Century Europe, The French Revolution and Napoleon, and Renaissance and Reformation. His newest course, a history of technology entitled “Tech and the Modern Person,” debuted in Spring 2025. He lives in Jackson with his wife and dogs.



A New Class of Eggcorns¹

Ben T. Phillips

In January 2017, tennis superstar Venus Williams was playing Stefanie Voegele in the Australian Open. After one of Williams' particularly aggressive moves, ESPN commentator Doug Adler said Williams "put the guerrilla effect on" by charging the net when Voegele was serving. Adler, a former pro tennis player, used the word *guerrilla* as it's been used in the tennis world for years. Based on the Spanish word for "war," guerrilla is a term commentators often use to describe a combative offensive move in tennis. In fact, Nike ran an ad in 1995 featuring Pete Sampras and Andre Agassi playing aggressively on a makeshift court on the bustling streets of San Francisco; it was titled "Guerrilla Tennis."

Some viewers of the Australian Open match were outraged by what they interpreted to be "the gorilla effect," and enough of them complained to ESPN that the network subsequently fired Doug Adler for the seemingly racist comment. Adler later sued ESPN for wrongful termination; that suit was settled in 2019.

The misunderstanding of these two words is not surprising to me. As a youngster in the mid-1980s, I distinctly recall hearing the term *guerrilla warfare* for the first time. It was part of a news broadcast covering Oliver North and the Iran–Contra scandal. Because I heard the word without seeing it in print, I naturally assumed the term was *gorilla warfare*. After all, the news story was about militant rebels fighting in the jungle, so "gorilla warfare" made sense to me. I was shocked years later to see the word in print.

This reasonable mix-up is not unique to these two words. Indeed, I've been documenting these special pairs of words for years. I propose they deserve their very own lexical classification.

This new classification would not consist of pairs of words that are simply homophones, such as *blue* and *blew*. Further, this new classification is not just pairs of words that are commonly confused, such as *affect* and *effect*.

1. Originally published in the *Mensa Bulletin*.

Instead, this new classification would consist of mixed-up word pairs where it actually makes sense to use the wrong word. Allow me to explain.

For background, consider the relatively new term *eggcorn*. Webster's defines an eggcorn as "a word or phrase that is mistakenly used for another word or phrase because it sounds similar and seems logical or plausible." Linguist Geoff Pullum coined the term in a 2003 blog post, where he introduced it as two words: "egg corn."

The name itself is a take on *acorn*. Because the acorn is a roundish seed that sprouts oak trees, it could (somewhat) reasonably be misheard as "eggcorn"—playing on the shape of an egg with the seed-like nature of a kernel of corn. Webster's lists other eggcorns as "all intensive purposes" for all intents and purposes, and a website called The Eggcorn Database archives dozens of examples submitted from its language-obsessed audience (e.g., "cold slaw" for coleslaw).

The new class of eggcorns I am proposing would have a distinctive characteristic. They are not word pairs where a substitute seems plausible, in the sense of "Well, I guess I can see where you misheard that." Take, for example, the words *reckless* and *wreckless*. They are definitely homophones and both associated with driving. However, one word cannot be used in place of the other. They are actually direct opposites: A reckless driver is rarely wreckless.

Instead, the new class of eggcorns I am proposing would include two words that could rationally be substituted for one another. I have even seen some of these words misused by my highly educated colleagues.

Another critical criterion for inclusion is that the two words must be real words. There is no such thing as "cold slaw." Pullum had to invent "egg corn." And I just made up "wreckless." No, these special eggcorns are examples of word pairs consisting of actual words where one could be reasonably interchanged for the other. I have named them logicorns, a shortened version of logical eggcorns. I nominate *gorilla* and *guerilla* as the first pair in the new classification. Other pairs could quickly follow.

For example, if something heightens your interest in a topic, wouldn't it make sense to say it "peaked" your interest? Instead, the word is *piqued*, derived from the French word *piquer*, which means "to prick" or "to stimulate."

When you feel the discomfort of an empty stomach, wouldn't it seem right to call those hunger "pains"? Of course, the word is *pangs* instead.

Shouldn't a group of countries collectively acting be called a "block"? Likewise, shouldn't a contingent of voters casting ballots as one be a "block"? Instead, the correct term is *bloc*, another word given to us by the French.

When a skilled magician imperceptibly uses his hands to switch an item in a trick, doesn't it make sense to call that "slight of hand"? Instead, we are

supposed to use a word with roots in the 14th century Old Norse language that meant “sly, clever, cunning.” That ancient word eventually became our word *sleight*. The magician employs sleight of hand, even if the movements themselves are slight!

When miners draw smaller, offspring loads of ore or minerals from one primary source, doesn’t it make sense to call that main source the “motherload”? The proper term is *motherlode*. *Lode* is defined by Webster’s as “a vein of metal ore in the earth,” and the full word *motherlode* is based on mineralogist A. S. Cooper’s original description of the gold belt region in California during the Gold Rush era.

Doesn’t it make sense to describe a person who is eager, and perhaps even anxious, to begin a task as one who is “chomping at the bit”? The phrase conjures up an image of a racehorse at the starting gate chomping the metal bit in its mouth. However, the horse actually champs, or grinds, the bit instead of chomping it. Some linguists insist that the word *chomp* requires a direct object. You must chomp something, which disqualifies the possibility of chomping at something. The correct phrase, though rarely used, is *champing at the bit*.

A curvy road is accurately described as winding. However, when smoke is curving and curling from the top of the chimney, it is wending, not winding. It’s certainly understandable, though, for a person to describe the smoke lazily drifting upward as “winding” its way through the air.

When you begin to salivate at the thought of a tasty meal, shouldn’t that be “wetting” your appetite? The right word is *whet*.

If a disappointing setback doesn’t alter your mood, wouldn’t it seem right to say, “That didn’t phase me”? Here, the right word is *faze*.

If someone dies of a sudden heart attack, it certainly seems accurate to say that person “killed over” instead of the correct phrase *keeled over*.

Why wouldn’t messy hair on a toddler be “messed up”? Instead, it gets mussed up.

When an overly chatty salesperson gushes on and on about their product or service, doesn’t it make sense to say you just heard that person’s “spill”? Instead, you just heard that person’s spiel, from the German- and Yiddish-rooted word.

The image of a worker leaning over a stack of papers, emptying himself of all his energy and attention to study them intently, certainly seems like he is “pouring” over the documents. The correct *poring* is a verb of unknown origins that means “to be absorbed in the reading of something.”

My proposal for this new class of eggcorns is mostly a tongue-in-cheek look at particularly quirky word pairs. However, they occasionally pose genuine issues. Donald Trump was lambasted on social media a few years ago when he tweeted, “It should be noted that the Fake News constantly

likes to pour over my tweets looking for a mistake.” Critics didn’t have to look too far for that one.

And then there’s the example of Doug Adler, whose broadcasting career was derailed because of an unfortunate word choice involving a logicorn.

Poor Adler. If those angry viewers had only heard my spill about these oft-confused words, they wouldn’t have been phased by the comment and thus not chomping at the bit to have the commentator fired.

Ben T. Phillips

*Professor of Educational Leadership,
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Dr. Ben Phillips teaches educational leadership courses in the School of Education. He’s a self-professed “mathlete” who graduated with an undergraduate degree in mathematics and now teaches doctoral-level statistics. Despite his math nerdiness, he has always held a mild fascination with language—particularly words. His contributions to this edition of the *JUFF* do not reflect his math background at all but instead his financially unrewarding yet personally gratifying pastime of thinking about words.



An Ode to Grievance¹

Ben T. Phillips

Since few words rhyme with grievance,
I invite you to this world of make-believance.
For official details, please give your allegiance
To the Faculty Manual, which you should have receivance.

You may find it hard to believance
That there are four types of academic grievance.
I'll summarize them for your convenience,
And save the hassle of future retrievance.

First is when a student suspects faculty malfeasance,
And reports a general academic grievance,
It starts a process where no one leavance
A stone unturned to resolve the aggrievance.

Second is when a student says he receivance
Poor instruction that led to underachievance.
Perhaps it's reality; perhaps it's naivance
That he files a review of instruction grievance.

Third is when a student seeks some relievance,
And reports a final grade grievance,
Because he simply cannot conceivance
That he failed for lack of sufficient achievance.

Fourth is when the professor perceivance
That the student's work includes deceivance.
Maybe fake references led to disbeliefvance?—
Certainly a professor's main pet peeivance.

1. Written in response to Dr. Michele Atkins' request for a poem about Union's grievance policy.



Integrating Faith and Discipline: A Personal Reflection

Matt Lunsford

Thirty years ago, when I was first introduced to the idea of integrating the Christian faith with my academic discipline, I was flummoxed. Of course, I understood the mindset of living a God-honoring life which included my vocation. But I had no clue how the intellectual work I had pursued in my discipline of mathematics connected to the Christian faith. If there was not an obvious connection, I wondered, how could there be significant integration? My purpose here is to reflect on how I have processed this concept over my academic career.

Often, the conversation of integrating one's faith with one's academic discipline commences with a search for connections between the discipline and the Bible. A mathematician might start by searching Holy Scripture for instances of number and shape. What follows, typically, is the work of integrating one's discipline with Christian theology. This integration endeavor is primarily an academic task, similar in ways to the creation of an interdisciplinary course of disparate disciplines, such as mathematics and music, and thus seems entirely appropriate for the academician to pursue. In fact, much knowledge has been gained by exploring the crossroads of Christian theology and an academic discipline. Frequently, the process includes a review of standard works from the Christian intellectual tradition (e.g. Augustine, Aquinas, Luther, Edwards, Wesley, Lewis, etc.) followed by the construction of an intellectual bridge between these theological ideas and the content of the discipline. As I have argued elsewhere, the traffic on this bridge should flow in both directions [1].

In my opinion, the integration of Christian faith and an academic discipline should not end there. This endeavor should incorporate not only facets of Scripture and Christian theology but also aspects of one's personal spiritual journey. The synergy of personal faith and academic discipline is likely harder to articulate and more difficult to measure than the intertwining of theology and discipline, yet it creates a unique and authentic result. This manner of integration flows naturally from the faithful scholar who has placed all of life, including intellectual life, under the Lordship of

Christ. Moreover, this latter type of integration, like the former, yields fruit, both in pedagogy and scholarship.

Is there truly a major difference between these two types of integration? Is it not the case that the study of Holy Scripture and Christian theology, and personal spiritual formation are part of the same whole? Yes, to an extent, I believe they are. However, there is a significant distinction that bears attention. The first kind of integration focuses principally on form. A template or rubric for the integration of theology and discipline could potentially stymie creativity and imagination. In contrast, the second kind of integration centers largely on flow. Flow occurs naturally from personal experiences and has ample potential to inspire creativity and imagination. Moreover, by weaving spiritual journey with academic discipline, the scholar may even contemplate thoughts that are reverberating echoes of voices from the Christian intellectual tradition. The integrative path to these thoughts, however, is most assuredly “the road less traveled” and thus the resulting integration is rather personalized to the scholar.

In moments of creativity and imagination, C. S. Lewis remarked that his faith found a way to engage with his thoughts. He referred to this faith encroachment as “part of the bubbling”:

Let me now apply this to my own fairy tales. Some people think that I began by asking myself how I could say something about Christianity to children; then fixed on the fairy tale as an instrument; then collected information about child-psychology and decided what age-group I'd write for; then drew up a list of basic Christian truths and hammered out “allegories” to embody them. This is all pure moonshine. I couldn't write in that way at all. Everything began with images; a faun carrying an umbrella, a queen on a sledge, a magnificent lion. At first there wasn't anything Christian about them; that element pushed itself in of its own accord. It was part of the bubbling. ~ C. S. Lewis, *Sometimes Fairy Stories May Say Best What's to Be Said*. [2]

How might we posture our academic lives to facilitate this type of integration in our teaching and scholarship? As faculty, we are continually pondering the presentation of discipline-specific content to our students and the dissemination of scholarly ideas to our colleagues. Invariably, we, like Lewis, must decide how best to tell the story we are communicating. In this state of preparation, we should remain sensitive to the prompting of the Holy Spirit, the influence of fellow believers, and the overall impact of living a faithful life. As our identity in Christ is integral to every story we share, we should order our lives to include moments of solitude, prayer, and intentional reflection on both pedagogy and scholarship. When our faith

in Jesus infiltrates an academic story we compose, the result is authentic integration.

A few habits I have found beneficial for facilitating this kind of integration include reflecting on the language, nature, and contribution of the academic discipline [1]; entering times of solitude and contemplation concerning academic life; and sharing integration ideas, successes, and challenges with academic colleagues.

Integrating my Christian faith and my academic discipline has been a career-long journey, and the journey is far from complete. I have been fortunate to serve at an academic institution that both encourages and recognizes the importance of this integrative task. While I would not advocate for attaining integration primarily through a prescribed process of readings, writings, and lectures, I do see how these activities can facilitate development. However, this sort of integration should not be viewed as the final product. The result that faculty should seek is authentic integration that springs from a faithful, committed life to the Lordship of Christ. The path to this outcome will be unique for each faculty member, but hopefully the goal is the same: honoring our Lord with our academic work.

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Radiation Summer

David Howard Malone

By the time you drive in to the parking garage for your daily 10:00 a.m. appointment at the Cancer Center, the first floor of the parking garage is usually full, and so you have to head up the ramp to the second floor or find an empty spot along the ramp itself that's not too much of a walk from the entrance. A surprising number of people have decided to back into the parking spaces, feeling clever because they see themselves saving time when they exit the space and completely ignoring all the extra time they've spent angling and maneuvering themselves into the space in the first place. On most days, the "Compact Cars Only" spaces are, predictably, dominated by hulking, steroid-engorged pick-up trucks, the kind that, despite their looming bulk, don't have enough space in the truck bed to fit a mattress or a five-shelf bookcase. And, somewhere in the garage, you'll usually see somebody sitting in a backed-in pick-up truck, waiting for the person they've brought to the Cancer Center to walk out the door and clamber up into the passenger's side. It makes you feel sad, for both people involved, and it makes you think of when your mom said, shortly after your dad died, that she wished he had come into the mall with her when they would drive to Cherry Valley to go Christmas shopping instead of waiting for her in the parking lot. You've wondered, off and on, what made him think that was OK—they always seemed closer and much more affectionate with each other than that story would suggest. You try to picture him out there under the gray December sky, turning the car on to warm up for a few minutes before turning it off again to save gas, reading (?) a newspaper (?), sipping from a cup of cooling coffee he picked up from a bowling alley kitchen somewhere along the way (?). What did he feel he was saving himself from by sitting in the car? Why couldn't he see that she would have been happier to have him inside with her?

If you do end up parking on the second floor, you never pause to wait for the elevator—you may be a cancer patient, but you're convinced you're still active enough to walk down and up one flight of stairs. When your urologist was explaining your various treatment options, what he said about

the radiation track was that “some guys go through the whole treatment without missing a day of work,” and even though you have the kind of job that means you don’t actually have to drive in to work on any of the twenty-eight days of treatment, you feel grateful enough that you’re not going through a more disruptive process that you don’t want to pretend, even to yourself, that you’re malingering or suffering more than you really are. The people who usually come with you—Vicki, your wife, or Elisabeth, your youngest daughter—have stopped suggesting that you use the elevator: they’ve made it clear they think you enjoy being difficult, although that isn’t quite the way you see yourself.

There’s usually a blast of humidity in the breezeway between the parking garage and sliding doors of the Cancer Center proper—summer is asserting itself in confident, booming tones these days, even though technically we haven’t hit the date for the start of summer yet, and there haven’t been many days of rain: the forecasters on the TV news keep showing maps that color code the levels of drought in the surrounding counties and encouraging viewers to take comfort in the fact we’re not in severe drought territory quite yet. When you step inside, the AC usually seems like it’s set a little high—at one point in your treatment, the schedule gets backed up because the AC is out in one or more of the radiation suites, and if the radiation-extruding machines get too hot they won’t work anymore, so the temperature may be set just as much for the comfort of the equipment as for the human population.

The waiting area for the Cancer Center is glassed-in and kind of enormous—it reaches up to the second floor of the building, and the offices and waiting rooms on the second floor look out over the reception area (which is probably not the view that the phlebotomists and other health professionals on the second floor would have picked, given the choice). Both the outer and inner walls follow the same curve, so there are times you might feel like you’re under the dome of a giant cake stand. Although this is probably not what the architects had in mind.

There are two reception desks in the waiting area—the big one seems pretty standard, staffed by three or four people, curved, like the rest of the building, beige or some equally neutral color. And then they’ve also set up a temporary desk in front of the big one, the tiniest desk possible with room for a computer and a clipboard with a sheet of stickers on it, and perched on a chair behind the desk is a woman with piled-up hair who is, maybe, the receptionist for the receptionist, a little islet of reception, dropped, for some reason, in front of the main island of the big reception desk. Almost everybody goes up to the little islet desk and signs their name on one of the stickers, and then sits down to wait to be called by one of the many

receptionists at the bigger desk. The rest of the waiting area features a shop where people can buy headscarves and women's tops and t-shirts with inspirational sayings like "Faith over Fear," and, shoved up against the wall, a library cart full of books that you don't remember anybody even looking at during the time you've been coming here—the books, when you've glanced over the titles, seem like the equivalent of a smooth jazz station—light romance and religious titles, mainly, with several Readers' Digest condensed books, which you haven't seen since you were a kid. Almost all the people in the waiting area are looking at their phones, sitting on couches with no backs or in wheelchairs. Some of them are hooked up to oxygen tubes. Almost nobody in the waiting room looks comfortable—the interior design professionals who created this space seem to have decided that furniture in a waiting room isn't going to have anybody sitting on it for all that long, and so they didn't factor a nice balance of comfort and back support into their purchase requirements. On the other hand, it probably looks great in the brochures and publicity photos, although the people in the space don't seem to be in the mood to notice one way or another. Most of the ones who aren't looking at their phones are slumped a little in their seats or wheelchairs, too preoccupied by their crisis that's smoldering around in their bodies to be distracted by TikTok (although given the demographic span in the building, it's more likely to be Facebook). A few people chat with each other, and there's usually a volunteer sitting on a stool off to the side, stolidly positive, who'll ask you how you're feeling and tell you to have a blessed day if you make the slightest eye contact.¹ He can't have been wearing the same yellow shirt every time you've seen him, although it's truly impossible to picture him in anything else.

You haven't had to spend much time in the main waiting area, fortunately, once your treatment began—the radiology department has issued you an ID badge with your name and a barcode that you can wear on a string around your neck, so you're free to breeze through the outer waiting room and head down the hall to the right of the reception desk and past the elevators to the radiation waiting room, where you scan your ID at the barcode reader at the radiation reception desk and are immediately checked in. "Good morning, Mr. Malone," the pleasant woman at the computer behind the barcode reader says, before you've even finished scanning your

1. You are at the point of your life where you're trying not to be too "Have a blessed day" averse, since it doesn't seem to be going away and the people who say it are usually nice enough. Still, you find it a confusing way of phrasing things—how can a person *have* a blessed day? It seems parallel to saying "Have a day where a stranger walks up to you and hands you a fistful of cash"—it's a nice thought, but what steps can one take to *have* that kind of day? If what they're trying to say is "God bless you" without making God part of the equation, then you'd be happy to see them reconsider that approach.

ID. She's one of those prodigies, apparently, who can hold hundreds of names suspended in her consciousness. Up to half a dozen people can check in during the time you're sitting in the radiology waiting room, and she greets every one of them by name. You wonder if they're paying her enough. The bills for radiation therapy are going to be kind of daunting, to be honest, but you have no idea whether or not enough of that money manages to trickle down to the people who work with you every day. They all seem unfailingly pleasant and positive, concerned about you as an individual, but in a way that doesn't make you feel self-conscious—cancer is just another medical inconvenience, and we're happy to be here to help you get through it, without a lot of drama or suspiciously heartfelt emoting.

The people in the radiology waiting room spread out among twenty or thirty chairs—it's usually not too hard to figure out who's the patient and who's the companion/driver, although sometimes you're surprised. They're more talkative here than in the outer reception area, which isn't surprising, since we're all sitting closer together and, given the much lower ceiling, the acoustics aren't nearly as bad. The conversations mostly involve the varieties of tomatoes they've planted in their garden and how the weather is helping or hurting the various vegetables they're trying to nurse along, and also how long they've had to drive to make it to their appointments—one man drives in alone every day from Ripley, not far from the Mississippi River and a good hour away, and one of the couples makes the drive from Martin, not far from the Kentucky border and, again, about an hour's drive each way. You and Vicki (Elisabeth comes with you when Vicki has to be out of town, and a couple additional times when an appointment seems particularly significant) focus on your Wordle/Spelling Bee/Connections games when the conversation takes this particular turn—on days when you hit all the lights, you can be in the parking garage in about six minutes, which doesn't seem like a good talking point when you're surrounded by people whose radiation appointments require them to be on the road for two to three hours every day.

A volunteer comes around with a cart while you're sitting there almost every morning, asking if anybody wants a granola bar or a bottle of water. It's a kind gesture, and you'll feel bad every time you say no but a) you're diabetic and there aren't any snacks on the cart that are even remotely low-glycemic and b) the instructions for your particular course of radiation (it's for prostate cancer, for anybody who's read this far and is feeling curious) is to come in for the treatment with a full bladder and an empty rectum, so, like many of the men in the waiting area, you tend to be feeling somewhere between over-hydrated and bloated most mornings. The printed instructions you were handed at the preliminary appointment tell you to drink 20 ounces

of water on your way to the Cancer Center, and the radiology technicians are very conscientious about telling you when you've failed to measure up to the desired level of bladder inflation. "You really need to work on having it fuller," they'll say, their voices friendly but also very earnest. "The way that you did on the first day of treatment." The technician on the first day had told you that you probably didn't have to have your bladder quite as full as you did, which makes you wonder if the feedback you're getting on any particular day might reveal that radiology is more of an art than a science. And one of your fellow prostate cancer radiation targets tells you a story in the innermost of waiting rooms, the one where patients wait to talk with their oncologists after their treatments, without wives or other drivers—his bladder was so full one morning that once he'd laid down on the treatment bench of the radiation machine, he realized he wouldn't be able to hold it back any longer, and he asked the technicians to help him get up off the table. "But by then it was too late," he said, "And so it was 'clean up on Aisle Seven.'"

On most days, you suspect you might be the youngest looking person in the radiology waiting room. Vicki tells you that you look like you're in better shape than the other patients sitting around you, which strikes you as almost an anticompliment—the other people in the room may be five to twenty years older than you are, but it's really no victory to be the youngest person in the group of people being treated for cancer. Your dad died of lung cancer when he was 64, years after he'd given up smoking; you're going to be 62 on your next birthday, which is coming up fast, and you're starting to wonder if there's any chance you'll end up living longer than he did. Your mom died a few weeks short of her 91st birthday, and even though her last few years emptied out her memory and strength and, toward the end, a significant amount of her good cheer, you've been able to imagine, off and on, that you might be able to split the difference between the two of them and make it to, say, 77. But being diagnosed with cancer at 61 makes that hope seem overly optimistic.

A technician opens the door that leads to the inner workings of the radiology department and calls your name, "Mr. Malone?" with a slightly upraised, almost question on the last syllable. The technicians rotate in and out every week—there's a different woman summoning you to the back each week of treatment, and one week it's actually a man, who seems to allow himself to come across as slightly less warm and interested in you as a person than the women. Although that may say more about you than about him. As you're walking back toward the treatment area, the technician for that day asks you a) to confirm your birthdate and b) whether you're feeling any pain in your pelvic region and, if so, to rank it on the scale of

one to ten, ten being the most intense. Early on, you mentioned that you sometimes have less a pain than a sensation when you urinate, more of a pinching than a burning, really, only a one or a two. Then you overheard a man in the hallway telling the technician that his level of pain was about an eight, and after that your answer has been that you're not experiencing any pain at all. After the first week, you play around with telling the technicians your birthdate and pain level before they've asked you, but you decide to give that up pretty quickly—you get the feeling that it disrupts the technicians' routine and causes them to find you mildly annoying. And then the exchange begins to strike you as a small, unvarnished piece of liturgy, a rough moment of dependability that, if you were a somewhat more victorious Christian, would begin to appear almost holy.

Once the first technician has determined that you're the person they've been expecting, they send you into the radiation theater? Radiation room? Radiation staging area? You can't remember anybody giving it a name—they say something like, "They're ready for you in there," and it's just a couple of steps, a left turn, five or six more steps, a right turn and then you're at your final destination, a fairly big room with the bulky radiation-producing machine, and a couple of technicians wiping down the bench you'll be lying on and poking around with other things that will be needed for your treatment. There's a rack, similar to something you'd find in a clothing store, although what's hanging off it are plastic molds, mostly of people's legs, looking like the discarded exo-skeletons of human-sized bugs. There's also one that's head-and-shoulder-shaped, with an elongated nose that looks like a plague mask sculpted out of plastic wrap; you can't really imagine how someone puts that on during a radiation treatment.

"How are you doing today, Mr. Malone?" one of the technicians will ask—occasionally somebody will say something about the sunny weather or the excess humidity or, not often, the rain. You try to find something to say other than "It's kind of terrible that I have to be in the Cancer Center today"—they already know that, for one thing, and there's a part of you that's sort of bored with your feelings of gloom—you have a disease that's trying to batter its way out of the boundaries of your prostate gland and start squatting in your bones, your primary care physician has told you, and one of the consequences of that is astonishing, excruciating pain. But, you can't think about that all the time. There's a good chance that this will change when you get to that extreme point in the cancer's progress, but for now you're still going to stick with thinking that you can be something more than just your diagnosis.

One of the technicians holds out a rectangular piece of fabric over the general area of your crotch so you can pull down your pants and underwear

with a sense of privacy. You've started to think of it as "the modesty cloth," and you're partly convinced that it's kind of ridiculous—you're about to have the inside (and, inevitably, the outside) of your body bombarded with radiation with the hope of killing cancer cells while simultaneously hoping that the destructive rays won't do too much damage to the healthy cells in your pelvic area. And so what possible psychological or spiritual harm would it do for a couple of medical professionals to get a glance at your naughty bits? And yet at the same time you can't not participate in this ritual—human dignity seems shaky and fragile when you're sick and somehow it doesn't seem that irrational to think that having a thin cloth over your nether regions can serve as a totem, an allegedly enchanted chicken feather that you hold when it's dark to focus all the magical thinking that will keep you from feeling less than fully human.

When your pants and underwear are down around your ankles, you take the modesty cloth from the technician and lay down on the radiation machine bench. There's a sheet draped over the bench, in part, probably, to keep you from thinking about all the other partially naked people who have lain on the bench since the last time you were here. One of the technicians slides the plastic mold they've made of your legs onto the bench and arranges your actual legs so they fit in properly; the other technician hands you a small plastic ring, about the circumference maybe, of a baseball, to hold so as to prevent your hands from wandering down into the treatment area when the radiation starts to stream. They want you motionless to get as clear a shot at the organ as possible, and their years of experience seem to have taught them that they really can't count on you to hold yourself perfectly still. The plastic ring is pink, by the way, which probably keeps it from getting lost among the other accoutrements they have to keep track of, and also seems like an inherently funny thing to hand to old guys who are having problems with an organ that's only possessed by men.

Once you're firmly on the bench (it might be more accurate to refer to it as a slab, despite some unfortunate connotations), one of the technicians pulls the modesty cloth down a bit to expose the rudimentary map that has been marked on your body. On your preliminary visit to the Cancer Center,² they ran you through an open MRI³ and marked a little cross on each of your hip bones to help them line up where your prostate gland is supposed to be—it strikes you, in whimsical moments, as looking like the aftermath of a clownish re-enactment of an Ash Wednesday service. They covered the crosses with clear tape to make sure they stay fresh and visible, plus they've

2. The "practice run," as the printout they gave you might have called it.

3. This was your first encounter with the "full bladder, empty rectum" mantra.

marked a small line on your lower abdomen which you assume is directly above the place where your prostate gland sits. “Try to remember not to wash that off in the shower,” they tell you: one more thing to add to your list of cancer homework.

The machine emits a light onto your body, showing where the radiation is going to hit once the process gets going, and the technicians nuance you into the proper alignment with the three marks on your lower torso, tugging on the sheet underneath you to move your body into the right position. On the first day or two, you instinctively try to be helpful, turning your torso in the way you think they want you to go, but they quickly let you know that that’s not necessary—if you don’t just lie still and let them maneuver you, it will take much longer to get you where you need to be.

Once you’re in the desired position, one of the technicians picks up a wired control device, similar to what you’d use to raise and lower a hospital bed, and the slab rises up and backs you into the belly of the radiation machine. The business end of the radiation machine is a bulky cylinder of metal and glass, with a light brown/beige exterior, the kind of textured paint you might see on industrial lockers. It’s cylindrical, like an enormous wheel of cheese or ludicrously big hockey puck or the bottom half of an oil drum, with a round, glass face that’s pointed toward you, about the size of a clock on a schoolroom wall. Behind the glass is a large, rectangular mouth with what looks like hundreds of long, thin metal teeth, like the inside of a music box, or an extensive collection of Allen wrenches. Presumably this is where the radioactive part of the treatment is tucked away until needed, although none of the technicians seems inclined to explain anything about the machine to you, and you’re never given the feeling that it would be appropriate to ask. You’re sure that it looks absolutely nothing like an atomic bomb, and yet something about it seems heavy and sober-looking enough that you wouldn’t have any trouble picturing it in the hold of a bomber, soaring determinedly above a city that somebody, somewhere, is eager to destroy. It’s balanced out by a thinner metal structure, same color and texture, that doesn’t appear like it could produce radioactive emissions—it’s just here to hold everything together while the big wheel of radioactive cheese does its thing—and a couple of white screens on the periphery that you have gathered must be for taking x-rays.

Once you’ve been uploaded into the radiation apparatus, the technicians tell you they’re leaving the room so you can start your treatment. “OK, thanks,” you say, usually. (You find yourself thanking people a lot during this process—it seems appropriate, since they are trying to cure your cancer and prolong your life, but at the same time it’s also kind of ridiculous. This has no possibility of being as meaningful to them as it is to you. And how many

people have they shepherded through this same process, only to have the cancer continue to grow and spread? You can't deny that their kindness and care is genuine, as far as it goes, and you find it helpful, but how could they live emotionally healthy lives if they took any of this too personally? They're warm, kind people who would feel momentarily sorry to hear that your treatment hadn't worked and would then, of necessity, move on to the next patient.) You only rarely see them walk out—suddenly, like a magic trick, you're the only person left in the room.

When you're alone, suspended in the middle of the radiation equipment, you run out of things to look at, and your mind starts to wander. The truth is (or maybe it would be better to say "One truth is") that you're not convinced that any of this is going to work. The summer after you finished seventh grade, you and your brother and sister rode along in the back seat while your mom drove Grandma Malone to her radiation appointments at St. Anthony's Hospital in Rockford, Illinois, a forty-five minute trip, or so, each way. You remember reading *One Flew Over the Cuckoo's Nest* while you sat in the waiting room that summer, and seeing her pulling on the neck of her dress to show people the pink scar tissue that reached almost up to her clavicle. The radiation slowed the spread of her breast cancer for a while, but by your sophomore year of high school it was definitely back, and it wasn't long after that that she died. And then when you were in college, Grandpa Malone was diagnosed with esophageal cancer—he told his Sunday School class that cancer had taken away Edith (your grandmother's name, which you never used), but it wasn't going to beat him. But shortly after you graduated from college, he died, too. And then a couple of years after you got married, your dad broke his collarbone while lifting up the hood of the semi he drove, and after weeks of doctors running tests to try to figure out how something like that could have happened, they found the answer in an X-ray that showed that his lungs were crowded with tumors, and the cancer had already busted out and spread to other parts of his body. Over the next five or six months, they had to puncture his lungs with a tube and drain out dark, red fluid—he almost admitted that it was painful a couple of times—and tumors grew on his spine, putting him into a wheelchair, and while radiation initially shrank the tumors, giving him better mobility, they grew back quickly, and he died about six months after his diagnosis, one hundred or so days before your oldest child was born.

And then there's Amy Munson, who showed up in your third-grade classroom weeks after school had started and who responded to your attempts to be obnoxious with her with obnoxious observations of her own and turned out to be the funniest, smartest, kindest, most lightsome girl

you'd ever met, who always beamed at you when you came into the room, even during high school days when she was student council president and you were mostly hapless and resentful and embryonic . . . she announced on Facebook that she was being treated for breast cancer, and then was in remission for a few years, and then had it recur, and metastasize, and take her away from her husband and children and grandchildren shortly after her fifty-ninth birthday. This may not be the story that hurts the most, but it's the one that strikes you as the most illogical.

It's not that you're pessimistic, you tell Emilie, your oldest daughter. It's just that your overwhelming experience with cancer, since the time you were a preteen has involved people being diagnosed with one version of cancer or another, undergoing treatments that were only briefly successful, and then, seemingly inevitably, dying. More relatives—your mom's mother, Grandma Gerber (liver cancer); your dad's brother, Uncle Les (lung cancer, like Dad); your mom's brothers, Lauren and Lowell (both pancreatic cancer); your dad's sisters, Betty (breast cancer), Martha (liver cancer), and Dorothy (breast cancer). The stories of people you've known who've been treated for cancer and had many more years cancer free seem anomalous to you—you don't deny that they're real, but they haven't left nearly as vivid an impression.

"Your doctor told you that there's an eighty to eighty-five percent chance that they'll completely eliminate the cancer," Emilie tells you. "Why can't you focus on that?"

"I'm not trying not to believe him," you tell her. "I don't want to be a conspiracy theorist. I believe in science. But I've spent thirty or forty years with the thought that I understood how I was going to die playing hide and seek in the back of my mind. And now that it's shown up, I can't just convince myself to believe that I'm the one person in my family who's going to have it magically go away and never come back."

A light goes on in the radiology theater just at the edge of your vision—it's a sign not far from the entrance that says "Radiation in use"—you're not at an angle where you make the words out, but you remembered to glance at it a few days before when you were headed back to one of the waiting rooms. On either side of you, white screens slide nonchalantly into place so that the technicians, at a safe remove from all the hazards of radioactivity, where your prostate gland has positioned itself at this particular moment. On a good day, the screens will stay up for only a couple of minutes, and then they'll swiftly fold themselves away, like a large, inorganic bird tucking away its wings as it settles in its nest. On other days, they stay up longer, and you imagine the technicians staring at their screens, frustrated at how willfully inaccessible your prostate is and trying to work through calculations for the path of least resistance to your inconveniently located target. Minutes

later, the slab will shift a little, the head tilting up a bit while at the same time yawing your hips slightly to the left or right. You'll feel like a piece of machinery in an arcade game, sealed away in a glass case and being finessed ever so gently in the hope that when the player on the other side of the glass presses a button, he'll be able to snatch up the iPhone he's trying to win and not have the claw's fingers slide frictionlessly, heartbreakingly, off the surface of the prize. On days like these, the technicians make sure to tell you that you need to have your bladder really full, or your rectum immaculately empty, the way it was on the first day of your treatment.

Some days it's almost impossible for you not to feel as though all of this is some kind of elaborate distraction, that the medical establishment tells people to consume a certain amount of psyllium fiber every night and a specific stool softener every morning and to drink twenty ounces of water because it's just more satisfying for people, both doctors and patients, to do something rather than nothing.

It seems ungrateful to feel this way, but sometimes you can't help but believe that what the medical profession does best is keeping sick people busy, distracting them with machines and medications and procedures so that they feel like, somehow, they're making progress against their disease. It's parallel to what airlines do to break up long flights, by passing out drinks and snacks, giving every passenger a choice between chicken and pasta, picking up your tray, running the drink cart through the aisles again, giving you something to look at or taste or order every few minutes, dividing up the long hours into more digestible bits so you won't be overwhelmed by the experience of being crammed in a relatively small space, only inches away from hundreds of other people, thousands of feet in the air above the ocean in a metal tube that was manufactured by people who know more about maximizing shareholder profits than they do about aeronautics or basic physics or safety or design. You think of your Uncle Lowell who decided, after several rounds of chemotherapy, that the side effects (nausea, weakness, despair) weren't worth the extra weeks of life that he might have endured in return, frustrating his doctors and angering your Aunt Betty, who wanted him to die fighting rather than sink down and wait for the inevitable. After a certain point, treatment starts to feel like nothing but busy work.

You wonder if you've made the wrong choice, if it wouldn't have been wiser to opt for surgery over radiation. Your urologist (an older, greying, studiously off-hand man whose name is awfully close to your dad's) was pretty gung-ho for surgery from your very first appointment, but his description of it—removal of the entire prostate gland, an overnight stay in the hospital, several days of catheterization, plus several weeks of avoiding lifting anything heavier than fifteen pounds—sounded unnecessarily disruptive, but it turns

out that coming to the radiation lair for twenty-eight weekdays in a row can be kind of disruptive, too. The urologist has admitted that he gravitates toward the old school approach that presumes surgery is the correct answer to any prostate problem—when your PSA level⁴ was a couple of points above the upper level for your age of 4.0 (ng/mL)(which you looked up just a couple of minutes ago), he'd listed surgery as an option, even though he admitted that the PSA might not be related to cancer at all. And when a biopsy indicated that your cancer was, to use an actual, technical term, "indolent," he brought up surgery again, saying "some guys in your position will say, "just take it out, so I don't have to worry about it anymore." Which struck you as kind of an extreme reaction. And now you're not so sure. Your oncologist, a soft-spoken, slender man who's named after a pharaoh, apparently, thought that radiation was your best option, but he admitted that the advantage of surgery was that if it didn't work, patients can go on to take a course of radiation treatments, but you can't go the other way, because the radiation damages the tissue in and around the prostate, turning it into a dying planet where the oceans have gone dry and nothing green can ever grow again. Which would make surgery impossible. And every time you have a radiation treatment, you get to wonder if you're burning your bridges unnecessarily. On top of that, you've met a man in the inner circle of all the waiting rooms in the Cancer Center who told you and the one other person in there that he'd had his prostate surgically removed several years before but nevertheless was coming back for 30 plus days of radiation treatment because his PSA level had shot up to 2.0, which meant, his doctor said, that there were cancer cells in his prostate bed. Because apparently, even though nobody up to this point has mentioned it. There's. A. Prostate. Bed. And it can also develop cancer cells. Even when your prostate is utterly gone. Not a pleasant surprise.

All of the above makes it harder to believe that you'll automatically walk away at the end of 28 days and spend the rest of your days cancer free. Nothing in your journey so far has made you question the idea that cancer is mean. It fights dirty. It has a serious case of borderline personality disorder. It stays up all night, scouring the internet for new and unexpected ways to take away your life. It may not always win—it just almost always wins.

Anyway. The X-ray panels slide away, a little like a troupe of ballerinas fluttering backward, self-effacingly, toward the wings to open up some space for the prima ballerina to launch into her climactic solo. And, after a pause, the rest of the radiation apparatus wakes up, rotating around you like a robot

4. Prostate-specific antigen—the test measures a protein that's produced by your prostate gland—the higher the number is, the more likely that you have a problem, including an enlarged prostate, but also, more worrisomely, prostate cancer.

dog, circling your hip region to take in everything it can about your scent. After the first treatment, you texted your children that it was like being on the least exciting ride at Disney World—the circling and the hydraulic movement seems overly-smooth and hyper-determined, like the gestures of the animatronic figures in the Hall of Presidents. Once it's finished circling you, it pauses again, and then the big event begins—the radioactive cheese wheel/nuclear bomb rotates around the area with the modesty cloth, completing about three-quarters to seven-eighths of a circle, pauses again for a moment, and then rotates all the way back. As the glass face passes over you, you hear a different kind of sound from the glass face of what you might as well call the radiation emitter—a rattling or chattering noise that sometimes strikes you as entirely mechanical and sometimes reminds you of voices.

It doesn't last long. Some mornings, when the technicians leave the radio on, you'll notice that the song that was playing when the treatment began is still playing when the radiation emitter has fallen silent. You know for a fact that the treatment is shorter than Hall & Oates' "Rich Girl" or Bryan Adams "Summer of 69." And there's really no sensation of any kind—no light, no heat, no goosebumps. Radiation is, allegedly, beaming into your organs, but as far as you can tell, nothing is happening. Again, you're the type of person who is naturally hostile toward conspiracy theorizing, but every so often it doesn't seem crazy to wonder if radiation treatment isn't just a version of the snake oil con: massive, impressive machinery spinning artistically around the body and accomplishing exactly nothing, a technological mirage powered by fear and hope.

On days when they haven't left the radio on, and you're acutely aware you're alone in the middle of the radiation chamber, you sing. Honestly, it's more humming than singing, because you're aware there's a microphone in the room and you don't want to give the technicians the impression that you're asking questions or calling for help. There are only two songs you can think to sing—the first is:

I want Jesus to walk with me.
 I want Jesus to walk with me.
 All along life's tedious journey,
 I want Jesus to walk with me.

And the other one is pretty similar:

In the morning when I rise,
 In the morning when I rise,
 In the morning when I rise,

Give me Jesus.
 Give me Jesus.
 Give me Jesus.
 You can have all this world,
 But give me Jesus.

“Do you feel him in the room with you?” Vicki asks you when you mention to her that you’ve started singing during the radiation.

You shrug. “The truth is, I don’t know,” you tell her. As far as you understand Jesus may be right there beside you, along with a thousand shining angels jammed together in the radiation sanctum, their wings rustling against each other, filling the room with glorious light and singing “Hosanna, Hosanna” in unparalleled harmony, but you’re no more capable of perceiving the presence of Jesus than you are of seeing and feeling the radiation that’s bombarding you. “All I know is that I just want to keep singing those songs.”

Your pastor has preached a sermon on Psalm 23 in the past couple of weeks, and you’ve come to the irritating realization that the verse on walking through the valley of the shadow of death suddenly applies to you. You’ve been more than ready to rebel against this—your particular cancer isn’t all that deadly, based on what people have been trying to tell you, and there are a lot of people whose illness puts them even more in the V. of the shadow of D. than you are at this moment. At some level, though, you’re starting to become aware that you’re trying too hard. You don’t have to be like David, fleeing the swords of the Philistines and the swords of King Saul, to be in the Valley of the Shadow of Death—most of us live there more than we realize, aware, at least in the abstract, that all human beings are mortal, but only sporadically thinking that this applies to us in particular. It’s hard for you to think about this without feeling queasily melodramatic. Even with a regimen that requires having radiation beamed into your body for 28 days in a row, you don’t feel like you’re in the *valley* of the *shadow* of death. Which is probably a significant misperception. How near death do you have to be to be considered in the valley of its shadow? Conceptually, at least, we could all be walking through the valley of death’s shadow on the healthiest days of our lives. It’s kind of a basic contradiction: you can’t imagine that you’re not going to die of cancer, but at the same time you have a hard time imagining that you’re really, actually, sincerely going to die.

In *Rosencrantz and Guildenstern are Dead*,⁵ Rosencrantz delivers a monologue about how we lack the capacity to think about death: “I mean, one thinks of it like being alive in a box. One keeps forgetting to take into

5. The play by Tom Stoppard, 1966.

account that one is dead. Which should make all the difference. Shouldn't it? I mean, you'd never know you were in a box, would you?" Every single one of us has an unrealistic view of our own death, because we have absolutely no experience of not being alive. We have no memories of any time we haven't been alive—we're aware, in a generic sort of way, that there was a time before which we did not exist, but even when we acknowledge that it seems unreal. How can we have any sort of coherent thought about what it's like to be dead when we can only look at death through life-colored glasses?

A blogger that you'd read for years wrote a post about fighting a rare form of bone marrow cancer for over five years. People would ask him what he'd learned from his struggle to find a treatment and get the cancer under control, and he wrote that all he'd really learned was that cancer sucks. He didn't feel like he had any particular insight into mortality or disease or suffering—cancer, he asserted, hadn't taught him anything. He's been somebody you've always thought was reliable and level-headed—one of your reasons for choosing radiation was the story this blogger told about having to undergo radiation treatment for his prostate cancer in the middle of all his other treatments, especially his report, a couple of months later that his PSA level had dropped down to 2.0—and it's not impossible to see his point. Having cancer doesn't necessarily give people deep philosophical insights into human mortality. We all know that everybody dies—even a four-year-old is able to tell you that everything dies—but all our biases and experiences involve being alive. Even when we see other people die, our conceptions of our own deaths are rudimentary and uninformed—we imagine ourselves still sentient, somewhere, cut off from our loved ones, maybe even experiencing unending bliss, but it never stops being some variation of being alive. When you try to think about what will happen if the treatment doesn't work, or if it does work and you eventually end up following in your uncles' footsteps with pancreatic cancer, what makes you feel fragile and weepy and insecurely moored is the thought of not being there for Vicki⁶ and your kids, of Vicki lacking somebody to encourage her during times when she feels insecure or running out to AutoZone when the battery in her car goes dead, your son and daughters not having someone to talk to when they've done something spectacular or suffered something heartbreaking, the projects around the house that you've neglected and will now have to be taken up by somebody else, the person who will be stuck with the job of clearing all of the books out of your office. There's a line in the stage production of *Peter Pan* that

6. Since you got married, Vicki has been telling you that she has to be the one to die first, since she doesn't think she's capable of dealing with the grief of losing the person she loves. Which, obviously, has never been something you've been able to control, but that whole decades-long discussion still makes your cancer diagnosis feel like that much more of a failure.

goes, “Death will be an awfully big adventure.” Maybe so. All your thoughts are unembodied speculation, limited and suspect, a pale, sad effort to master the Mystery of Existence. The only thing you know for sure, as you’re suspended on a slab in the middle of the air bombarded by particles you can’t feel or see, is that you want Jesus to walk with you.

And listen. Even if the radiation turns completely successful, if the prostate cancer somehow, miraculously, never comes back again, that’s not going to be the end of the story. Jesus raised his friend Lazarus from the dead, but that miracle wasn’t permanent. Lazarus died again. The disciples who saw the miracle of the resurrected Lord were persecuted, and some died painful deaths, were stoned to death or sawed in two or perished by the blade of the sword. The last verse of one of the songs you sing on the slab ends with the lines, “And when I come to die,/When I come to die, O, when I come to die, Give me Jesus.” A lot of us⁷ want to believe that God is in the business of making our dreams come true so we can live happily ever after, but the Bible implies that God is more interested in us growing more faithful and holy and long-suffering and temperate. Which has to mean that if you’re not miraculously, spontaneously cured from your particular disease, that can also somehow be miraculous, and your suffering is given to you as a blessing. If you do get a miracle,⁸ there’s a good chance that in a few years you’ll be sitting in the passenger’s seat in a bright parking lot while Vicki pops in to the grocery store to pick up Pedialyte and some Clorox wipes; you’ll feel weaker and shakier than you’ve ever felt before in your life, and you’ll look at the people walking past you to their cars with envy and awe.⁹

To be completely candid, you aren’t happy with these thoughts. If Jesus was your fairy godfather, you’d submit a wish for staying alive indefinitely, with no disease or physical or mental diminishment. Sanctification may sound good in the abstract, but you’ve been reasonable happy living a life that’s significantly less than saintly, untouched by the harsh blessings that might take away your selfishness and pettiness and pride. And while the idea of Heaven seems notionally attractive, you don’t feel any kind of urgency to go there. You aren’t the type of person who enjoys going to new places for one thing, and, more often than not, the thought of going even to a place you’re convinced you’ll enjoy feels like a burden.

7. You have to include yourself in that number, to be honest.

8. There are days when you honestly believe that if you were offered a miracle, you’d be inclined to turn it down—if other people haven’t been given a miracle, why should you have one? If Amy Munson, who arguably deserved a miracle far more than you do and, you’re pretty sure, would have done more good with one, didn’t get miraculously healed from her cancer, what makes you think that it should happen for you?

9. Jane Kenyon’s “The Sick Wife” begins with the lines, “The sick wife stayed in the car/while he bought a few groceries./Not yet fifty,/she had learned what it’s like/not to be able to button a button.” It shouldn’t be hard to find the rest online.

A woman you've known for about forty years recently told you that even though she's been an atheist all her life, getting a master's degree, or certificate, or something similar, in death studies has convinced her that there's life after death. "No matter what culture you're in, no matter what religious beliefs people have, the reports from people who have died and been revived are all the same," she says. "There must be something there." Surprisingly, this admission didn't make you feel happy or vindicated: it kind of made the notion of the afterlife feel stressful and foreign. And as you've thought it through, you've started to wonder if it's because the thought of an afterlife that could somehow exist without Jesus doesn't seem appealing to you. You'd almost rather think about death as falling asleep forever rather than contemplate a generic, Jesus-free afterlife, since at least you've fallen asleep before. You already know what that's like.

The radiation emitter stops moving, and everything is quiet for a few seconds. If the radio has been playing, "Rich Girl" comes to an end, and the next song, something you've heard a hundred times before and can't imagine choosing to listen to, begins. Sometimes, the technician has come back into the room without you knowing, and the slab starts to slide out of the radiation emitting apparatus and lower down (the mad scientist lowering the sewn-together monster down from the top of the medieval tower) before you've even noticed that you're not alone anymore.

When the slab completes its descent, the technician will ask you if you need help getting up, and you'll say "no thanks," pleased with yourself because you're still strong enough to sit up on your own. You'll hand the pink plastic ring back to one of the technicians and slide down to the floor, where you'll pull up your pants and drop the modesty cloth on the slab. You'll take a moment or two thanking the technician and telling him or her you hope they'll have a good rest of the day; you'll feel awkward because they've already turned their attention away from you and are busy preparing for the next patient. You'll head toward the waiting room, feeling disoriented from lying down for a short time, maybe, and maybe also from being bombarded with radioactivity; usually you'll take a couple of minutes to visit a toilet, starting out with a sense of urgency that transitions into a sense of overwhelming relief. Vicki will look up at you as you come through the waiting room doors; she'll smile and hand you your phone and ask you how it went, and you'll shrug and tell her that it was OK, you guess, and sometimes you'll hold her hand as you make your way out of the Cancer Center into the humidity and the predictable chaos of the parking garage. After twenty-eight days of treatment, they'll have you ring an over-sized bell, and people in the outermost waiting room will clap for you, ready to be in the position that you're in now, and about six weeks later, you'll come back

for the follow-up appointment, where your slim, soft-spoken oncologist will tell you that your PSA level has dropped from 10.5 to 1.9. He is, he will say quietly, pleasantly surprised. You, too, will be pleasantly surprised. It will be a moment that seems nothing short of a miracle, and yet in that same moment you'll be aware that your life up to this point, and the entire universe, for that matter, are no less of a miracle, and that even in this story of your miracle you're also one step closer to your next disease, to suffering and loss, to death, to whatever it is that Heaven will be, to mystery and wonder and eternity.

David Howard Malone

Chair and Professor of English



David Howard Malone has taught American literature and creative writing at Union University since 1999; he currently serves as chair of the department of Languages, Literature, and Writing. Some mornings he wakes up feeling joy and awe and gratitude; some mornings he wakes up feeling like his ordinary, cranky, petty, uninspiring self.



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