Saving Western civilization one student at a time.

Indiana Jones and the Mystery of the Lost Scrolls

Interview with Professor Brent Seales

The Judgment of Thamus

by Martin Cothran

INFORMING OURSELVES TO DEATH

by Neil Postman
Letter from the Editor

In Praise of Accidental Knowledge

by Martin Cothran

O
ne of the few books we had in our house when I was young was a set of World Book Encyclopedias. When you looked up something in the encyclopedia you first had to find the volume which housed all the words beginning with the first letter of the word you were searching for. If you wanted to find out about aardvarks, you looked in the "A" volume. If you wanted to investigate llamas, you would go to the "L" volume. And if it was the attributes of zebras you were interested in, you could go to the "W, X, Y, Z" volume.

This sounds like a cumbersome process in a world in which most people resort to Google several times a day.

We assume Google is better because it is easier. You just type the word in and push the "Enter" button, and it takes you exactly where you want to go. But the old, cumbersome process had an advantage over Google: Although a Google search is quicker and more accurate, you learn less from it. The very inefficiency of the encyclopedia was its greatest benefit.

If I went hunting for "aardvark," I was likely to have to pass by words such as "Australia," "asteroid," "artillery," "Archimedes," "anthropology," and "Agave." These new things paraded before my eyes—how could I simply pass them by?

In trying to find out about a mere animal, I learned about a country in the southern hemisphere, a heavenly body, weapons, a classical scientist, the academic discipline of the study of human cultures, and a kind of cactus plant. I would get lost for hours.

I knew about the "lemur" because I had looked for "Robert E. Lee." I knew about "Tertullian" because I had tried to find "turtle." I knew about "neurosis" because I had hunted for the "Netherlands."

To this day I think that most of what I know I learned by attempting to learn something else.

This is true of learning in general, and it is particularly true when it comes to reading good literature. I read Robert Caro's biography of Lyndon Johnson, but I also learned about the history of Texas and the development of politics in the twentieth century. I read Rafael Sabatini's Scaramouche hoping for a good adventure story, but I also got a lesson on the French Revolution.

Could I have found out about these things by doing an internet search? Sure I could. But I probably would never have gone to the trouble, and even if I had I would not have remembered them as well.

Google takes us where we want to go. And that is its disadvantage. Too much reliance on technology makes us narrow.

A Google search is like taking a plane to get somewhere: It gets you there faster, but you miss everything in between. We would be better off taking a train.

To this day, I try to make sure I read a few things that, on their surface, do not interest me—because if I only read the things that interest me, I am likely to miss certain kinds of things that I would never otherwise encounter.

We need to guard ourselves—in our schools and in our lives—against the narrowness that modern technology can produce in us, and we do this best by staying low-tech. Real books may not be the most efficient way to learn a particular thing, but they are the best way to learn everything.
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There is a famous restaurant in Memphis called Rendezvous. It is down an alley off a sidestreet, with a small awning underneath a neon sign. You go in the door and down a couple flights of stairs into the basement, where you find tables with red and white checkered tablecloths and walls decorated with memorabilia—antique guns, old photos, and newspaper clippings. If you hang around long enough, they ring a big bell to tell you that they are about to close, and if you want more food, you better order now.

Rendezvous serves the best barbecue ribs in a city famous for its barbecue. We ate there once with a large group after a two-hour wait following a college basketball game back in the eighties.

After finally getting our seats, we began mulling over the menu, but to no avail because it became apparent that our waiter knew what we should order and was not going to brook any dissent. "Bones!" he told us. "Large plate." When I demurred that a sandwich or small plate of ribs would be enough for me, he would have none of it. A large plate of "Bones!"

was, I think, the only order he would accept, and so we all acceded to his authority.

He was, of course, right, which became clear when the waiter brought the plates. A big slab of ribs—dry, not covered with barbecue sauce, but seasoned to perfection. Why order a small plate when the large is just a dollar more? Why order something ordinary on a menu that offers you the best ribs in the world?

Never argue with a knowledgeable waiter.

Latin, to make a shameless analogy, is a lot like those Bones—in more ways than one. When I was in elementary school I remember thinking that school was nice; I liked my teachers, but nothing too important or demanding was going on. In the ninth grade I took Latin and algebra, and I was thrilled that for the first time I was being asked to do something difficult, to actually learn something challenging. After all those years in school I was excited to have something real to learn, something I could really chew on. Bones, if you will.

I don't want my students to have to wait until high school to have something challenging to learn, so I have students start Latin in the second grade at Highlands Latin. The first two grades are rightly consumed with reading, writing, and arithmetic. But beginning in the second grade students who have

Cheryl Lowe was the founder of Memoria Press and the author of the Latin Forms Series, Classical Phonics, and many other books. She also founded Highlands Latin School in Louisville, Kentucky, where all Memoria Press materials are developed and tested.
made a good start on those skills are ready for a new challenge. They need a new challenge. For me, grades 2-8 without Latin is like ordering a mere sandwich when you can have Bones. It is, in short, Learning Lite.

Students who begin Latin early know that they are engaged in a long-term learning project. They know that they will not finish Latin grammar until eighth grade. They see and hear the students ahead of them, learning the next declension or conjugation, learning the passive voice, the subjunctive, and the ablative absolute. They know they will be learning those things in the future. When Latin is the focus in grades 2-8, the curriculum has a focus. It is going somewhere, there is a purpose, a goal, an end. There is some good meat to chew on year after year. Nothing can be forgotten in Latin. Everything is cumulative. It is the cumulative nature of math and Latin that make them so rigorous, so fulfilling, so nourishing—like a large plate of Bones!

Even in modern curricula there are what I call "prestige" subjects. They are subjects that require our respect because they are necessarily complex and difficult. They are subjects that have prerequisites, and are therefore by their very nature advanced. You literally cannot do them unless you have gone through a certain amount of preparation. Calculus is one of these subjects. You cannot do calculus unless you have achieved some mastery over arithmetic, and unless you have taken pre-algebra and algebra. The mere fact that you are taking calculus indicates that you have already achieved a great deal. This is why schools are always eager to offer as many levels of calculus as they can. It shows the world that you are an academically rigorous school.

But calculus is a subject in mathematics. What language courses do we offer that demand this kind of respect? Where are the prestige subjects in the language arts? We might offer "English III" or "English IV." But these designations do not really indicate any particular extent of achievement. Many times they only tell you what grade level the students who take it are in. A student transferring into a school might never have taken English I or II, but, if they are in a particular grade, they will be placed in English IV. These titles tell you little about what students taking them have actually achieved.

But if a school offers Latin IV, the situation is very different. Offering such a class tells us something. Such a class is a "prestige" class. It is more like calculus in that regard than English. You cannot put a student in Latin IV merely because he or she is in a certain grade. There are prerequisites. You cannot allow students in Latin IV unless they have first taken Latin I, II, and III. Like calculus, a Latin IV course tells us that the students who take it have achieved an advanced level of knowledge and skill.

Math and science have prestige and respect in our culture because they are difficult and demanding. But the entire language side of the curriculum has declined in respect and prestige, partly because it has become undisciplined and unstructured.

There are no standards left in English, history, and humanities. They have become subjective, tools for propaganda. Latin does for the language/humanities side of the curriculum what math does for the science side. Without the fundamental discipline of Latin, the humanities will continue to decline. The study of Latin will reinvigorate our flabby curriculum and give it the backBone and discipline it needs. Latin provides the structure, the framework, the Bones, of a good curriculum. Almost every other subject can be taught around Latin and integrated through Latin—history, geography, vocabulary, spelling, composition, literature. Latin is the skeleton that supports everything else. Latin is a universal study through which knowledge integrates naturally.

So skip the sandwich. Go for the Bones.
There is one argument today that seems able to trump all others. It is not really an argument, though we tend to treat it as one, and it is one that is often considered definitive: "A study has found …"

This phrase seems to many people to have an almost religious gravity to it, lending to whatever finding is cited a sort of oracular status. Just as someone in the Middle Ages might have believed anything uttered by someone wearing a mitre, so many people today will believe almost anything uttered by someone with a report in hand.

"A study has found …" serves the same function today as "Thus saith the Lord …" might have served five hundred years ago.

But there are two reasons we should treat any citation of a scientific study with skepticism. The first has to do with the inherently tentative nature of science and scientific reasoning. Such reasoning can render a conclusion probable at best. I dealt with this problem in a previous article "Science's Useful Fallacy."

The second has to do with the state of current scientific research. In his book, Rigor Mortis: How Sloppy Science Creates Worthless Cures, Crushes Hope, and Wastes Billions, NPR science writer Richard Harris explains the many factors that go into the bad science that gets passed on through research.

How big is the problem? "Each year," he says, about a million biomedical studies are published in the scientific literature. And many of them are simply wrong. Set aside the voice-of-God prose, the fancy statistics, and the peer review process, which is supposed to weed out the weak and errant. Lots of this stuff just doesn't stand up to scrutiny…. Sometimes the scientist has unconsciously willed the data to tell a story that's not in fact true. Occasionally there is outright fraud. But a large share of what gets published is wrong.

Harris focuses on biomedicine, but the problem is endemic throughout the research community. Sloppy practices, cut corners, ignorance of proper procedures, mischievous incentives, cheating, and sheer apathy abound.

The most significant aspect of the problem is called the "Replication Crisis": the inability to replicate the results of the original study. Replication has been called the "gold standard" of scientific research. If a study has not been re-performed—and the original results replicated—it is not considered reliable. This replication is necessary because studies often fail to produce the same results twice.

When C. Glenn Begley was preparing to leave his job as a researcher with Amgen, he decided to scour the research literature for promising new
drugs and found fifty-three studies that appeared groundbreaking. Company scientists repeated the experiments to see if they could reproduce the same results. Of the fifty-three studies, they could reproduce the results of only six. The German drug company Bayer conducted a similar survey and was able to replicate only 25% of the studies.

And often when someone decides to try and replicate an experiment, there are problems getting the raw data from the original research, or the original researcher is not interested in replicating the study—or even resistant to doing so and hostile to those who might try. Begley also points out that many experiments are so poorly designed that even if they could be successfully replicated, it wouldn't mean anything.

But, even worse, faulty studies often continue to be cited long after they have failed replication. Steve Goodman, a former biostatistician and epidemiologist at Johns Hopkins University and founder of the Meta-Research Innovation Center at Stanford (METRICS), has discovered numerous examples of this.

"Years after two of the largest and most expensive medical studies ever undertaken had debunked the claim that vitamin E reduces heart disease," says Harris of Goodman's findings, "half of all articles on the subject still cited the original study favorably."

"These results get entrenched," said Goodman. "You cannot get rid of them."

Begley said one of the studies he couldn't reproduce has been cited more than two thousand times by other researchers, who have been building on or at least referring to it, without actually validating the underlying result.

Goodman's METRICS co-director John Ioannidis, a professor of medicine and statistics at Stanford University, is well-known for his contention that most published research is badly done. He wrote a now infamous paper in 2005, entitled "Why Most Published Research Findings Are False," one of the most highly read and downloaded scientific papers on the internet. Ioannidis argues that simply by looking at the way scientific research is designed and executed you can tell that most research conclusions are false-positives.

In their paper "Reproducibility in Science," Begley and Ioannidis assert that 75-90% of preclinical medical research is irreproducible and that 85% of biomedical research is "wasted at-large" because of faulty research practices.

The replication problem in the soft sciences is even worse. Harris points to the work of University of Virginia psychology professor Brian Nosek, who opened the Center for Open Science to combat the problem of shoddy research in his field. Over a period of several years, he and his colleagues attempted to replicate one hundred studies in his field. The result was an August 28, 2015, New York Times headline: "Psychology's Fears Confirmed: Rechecked Studies Don't Hold Up." Says Harris, "Two-thirds of the reproduced results were so weak that they didn't reach statistical significance."

There is the problem of studies that can't be replicated, and then there is the problem of the number of studies that no one has even bothered to try and replicate, which is the majority of them. This is a particular problem in fields like education.

In a meta-study released in 2014 by the Educational Researcher, Matthew C. Makel of Duke University and Jonathan A. Plucker of the University of Connecticut, conducted a wide-ranging analysis of educational research to determine how many of the education studies published in the one hundred most prominent education journals had been replicated.

Of the 164,589 studies published in these education journals, only 221 of them were replications, an overall replication rate of .13%. Of the studies that were replicated, only 67.4% were successful, but 48.2%—nearly half of these replications—were conducted by the same people who did the original study, a bad research practice in and of itself.

In other words, less than 1% of education studies in the one hundred most prominent education journals meet the bedrock standard of replication, meaning that there is over a 99.9% chance that when someone quotes a study in the field of education, it cannot be relied upon as definitive.

The problem, of course, is that those who are now questioning the quality of scientific research are not popular with researchers themselves, since their questions dampen the excitement produced by the latest headline-grabbing finding. These questions also seldom draw the attention of the popular media, which benefits from publishing the latest study that promises to cure cancer or halt the aging process.

No one mentions these things when they say, "A study has found ..." They should.

"Each year, about a million biomedical studies are published in the scientific literature. And many of them are simply wrong."
I was at a meeting of private educators in our state a couple of years ago, and afterwards an acquaintance, who was the superintendent of a local private school system, came up to me. He was very excited. He had gotten a grant to provide students in his schools with iPads. I didn't have the heart to tell him, but I was not nearly as excited about the prospect as he was. In fact, I didn't think it was a good idea at all.

As educators, I think all of us are aware of the technological idolatry that characterizes much of our profession. There is an assumption that the more technology we use, the better off we are. But we should be cautious about the excessive use of technology in schools, and specifically as classical educators, we should be especially so.

The Judgment of Thamus

In Plato's dialogue, *Phaedrus*, Socrates tells a parable: A famous old god called Theuth is being questioned by another god, Thamus, king of Egypt, about the many arts he has invented. About the art of writing, Theuth declares: "Here is an accomplishment, my lord the king, which will improve both the wisdom and the memory of Egyptians. I have discovered a sure receipt for memory and wisdom." Thamus replies:

Those who acquire it will cease to exercise their memory and become forgetful; they will rely on writing to bring things to their remembrance by external signs instead of their own internal resources ... What you have discovered is a receipt for recollection, not for memory. And as for wisdom, your pupils will have the reputation for it without the reality: They will receive a quantity of information without proper instruction.

He says that writing is a kind of communications technology. Though it may be said to help the person using it gain knowledge, it can actually do the opposite.

Note that Thamus does not say that writing is, of itself, bad. Plato elsewhere talks of what writing is good for, and says that, when rightly used, it can even serve the purpose of knowledge acquisition—when used as an aid for memory, and not as a replacement.

Writing has a place, and its main place, argues Plato, is to facilitate the engraving of the True, the Good, and the Beautiful on our own souls. Plato's problem with writing is that, when not used properly, it doesn't do this. And if it doesn't do this, then it is useless, even harmful. And the problems Plato thinks are brought about by writing are exacerbated by more sophisticated communications technologies we see today. What writing does, computers do in an exponentially more egregious way.

When used carelessly, educational technology doesn't give us encouragement to develop our minds—it doesn't

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*Martin Cothran is the editor of The Classical Teacher and author of Traditional Logic Books I & II, Material Logic, and Classical Rhetoric.*
provide us with encouragement to remember, with encouragement to know, or with encouragement to think. Instead, it provides us with encouragement not to have to memorize, not to have to know, not to have to think. It is not there to facilitate what we already do—it promises to do it for us.

When used improperly educational technology doesn't serve to help you. It serves only to replace you.

**Outsourcing Knowledge**

There is an old episode of "Gilligan's Island" (yes, I know, it's a steep dropoff from Plato to Gilligan, but stay with me) in which Gilligan saves the life of a native girl who has been taken to the island. She feels beholden to him and vows to serve him. One of Gilligan's daily routines is to exercise on an exercise bicycle the Professor has made for him. Gilligan shows up one morning and she is pedaling the exercise bicycle. Gilligan says, "What are you doing?" She responds, "I am exercising for you."

Though the native girl is trying to help, she is not, in fact, helping him. In order for Gilligan to get his exercise, he must do it himself. It cannot be done for him. The Professor helped him by building the bicycle, but the native girl does something quite different: She does not help him, she replaces him.

What writing does (and what computer technology encourages us even more to do) is not to inculcate knowledge, but to outsource it.

Knowledge, by definition, involves memory. But to memorize something is to know it without external helps.

Now, again, educational technology can help. I remember a fairly primitive piece of technology, which was popular when my kids were young. It was called "GeoSafari" and was designed to teach students geographical facts. It did this beautifully and efficiently. My daughter spent hours at this machine, and gained a great deal of geographical knowledge from it.

Educational technology when rightly used is like the Professor, who assists Gilligan by helping him do what he needs to do. Educational technology when wrongly used is like the native girl, who does the work for him, and therefore prevents him from receiving its benefit.

**Dulling Wisdom**

Thamus not only thinks that learning technology—in his case, writing—will hamper the acquisition of knowledge, but that it will hamper the development of wisdom: "And as for wisdom, your pupils ... will receive a quantity of information without proper instruction."

What does he mean here by "proper instruction"? What kind of instruction do we need in order to deal with information? The answer is that we need a framework in which to interpret it, a structure within which we can see its meaning. This is what Plato means by "wisdom." Outside of an intellectual framework, information has no meaning. This is the problem that much modern technology tends to magnify. Our problem is not an information dearth, but an information glut—a glut of unorganized and out-of-context information.

As Neil Postman has pointed out, starting in the seventeenth century schools were formed for specifically this reason: to bring order to the chaos of information that had been produced by the print revolution. And in large part, they were able to accomplish this. Why? Because, despite the volume of information during this period, there was still a structure in which everyone together could understand it.

But our institutions of education today acknowledge no coherent picture of the world. They admit no inherent order in either the structure of knowledge itself or in the way it should be presented to students. When we unquestioningly admit educational technology into our schools, we make things worse.

There are two solutions to this problem: the modern one and the classical Christian one. The modern solution to the problem of random, disconnected information is to provide students with more of it. The classical Christian solution is to teach our children how to order it.

"That man is wise," says St. Thomas Aquinas, writing in the fourteenth century, "who orders things rightly." In other words, the wise man is the man who knows where to put things. He knows what is important and he knows what is less so—and what should be done with his knowledge and what shouldn't be done with it. And the only way he can know this is to have a system of meaning that dictates the proper place of everything.

That is what wisdom is: It is knowing how to order our knowledge of the world so we can know how to think about it. And this is what classical Christian education provides. Through the human, natural, and theological sciences, we gain the knowledge we need. And through the liberal arts, the training of our faculties of thought, we develop the wisdom we need to know what to do with this knowledge.

Technology can help in doing this, but often it doesn't, and we need wisdom to tell us the difference.
A Case for Memoria Press Study Guides

by Leigh Lowe

Many of us did not have the privilege of a classical education growing up, but we recognize its value and we want it for our children. Because all people are worthy of its ends (truth, goodness, and beauty), classical education should be available to all who seek it. However, we understand that it can seem intimidating and overwhelming to pursue. It takes some courage to say, "I am going to teach Latin, logic, ancient history, and the great books—and I am going to teach to mastery—never mind that I am not, in fact, a master of these subjects." We understand.

At Memoria Press, our goal is to provide a classical education that is accessible. We have conscientiously mapped out a curriculum that enables students to achieve the high standards of the classical tradition. Though we may each set our sights on different peaks, the climb should not feel daunting nor the destination unattainable. Enter the Memoria Press Study Guides. Like an experienced friend who offers encouragement and expertise, our guides provide a helpmate for the journey and a champion for the cause.

Please know our study guides are not mere workbooks intended to be passed off to the student to fill in and return. Memoria Press curriculum works best when teacher-led. Our guides are intended to assist the teacher and focus the student. Of course, as with any plan, flexibility is expected. So that you can get the richest experience from a text, we have tried to provide everything a teacher might need in order to learn the material well and teach students with confidence. We all know that success in a classroom or homeschool increases if the teacher is over-prepared and has a robust plan to keep things moving. So we have written guides to enhance the study of literature, history, and science.

The Classical Core Curriculum provides a cohesive plan, not just a compilation of well-meaning parts. Each lesson, each book, each course builds on the next in meaningful and intentional ways. For teacher and student alike, it’s rewarding and exhilarating to recognize connections, observe patterns and themes, and notice influences across the curriculum. This is what classical education offers. Our guides are replete with the vocabulary, comprehension questions, discussion topics, and enrichment ideas that make this complete experience possible. Each exercise proves a small step toward a slightly less fragmented world.

At Memoria Press we teach from real books. We believe that slow, thoughtful attention is required

Leigh Lowe is the daughter-in-law of Cheryl Lowe, founder of Memoria Press and Highlands Latin School. Leigh was one of Cheryl’s first hired teachers and worked closely with Cheryl for years, as a teacher, editor, and writer, helping to develop Cheryl’s vision for classical education. Leigh is currently busy raising her five children (all students at Highlands Latin School) with her husband, Brian, but she finds the time to consult on curriculum, train teachers at conferences, and speak publicly about education and the vision of Memoria Press and Highlands Latin School.
of the books prioritized in a curriculum. In a single course, students typically study a limited number of texts. They are trained to delve deeply. Of course we encourage broad reading of additional great books as a discipline, hobby, and delight. But if students are not trained to read conscientiously and develop patience with new vocabulary and unfamiliar ideas, they have the potential to stagnate and reading can be robbed of some value.

Take a book we all love, like *Charlotte’s Web* by E. B. White. The book is brilliantly written, speaks to the heart about friendship, and provides an entertaining perspective of the family farm. Independently, a student could easily read *Charlotte’s Web*, fully understand the story, and have a memorable, enjoyable experience. But, our goal is to train students in observation and discernment. We are seeking not merely knowledge, but wisdom. We want our students to learn to recognize every morsel of goodness, truth, and beauty available. Without direction, will they notice that Fern’s last name is Arable and make the connection to Latin (aro, “to plow”)? Will they recognize the scientific reference to spiders in Charlotte A. Cavatica’s name? Will they pause to consider the injustice that outrages Fern? Or compare Charlotte’s act of sacrificial love for Wilbur to similar acts in history? Will they recognize Templeton’s gluttony and compare it to the other vices? Will they understand that the word “yarn” is used to mean story, not thread? Will they stop to marvel at the miracle of Charlotte’s *magnum opus*—or at the miracle of spiderwebs altogether? Be honest and ask yourself: Will your students’ journey through *Charlotte’s Web* be as fruitful without a “guide”?

Memoria Press seeks to produce materials that are purposeful and clear. Our guides are similar in format and appearance across the curriculum. In defense of this, I like to quote C. S. Lewis who said, “a good shoe is a shoe you don’t notice.” When there is routine and repetition, students know what to expect. Effort can go into new content instead of a new system for doing things. Our goals are consistent from book to book, subject to subject, grade to grade, so it should not be unexpected that our materials look similar across the curriculum as well. In general, we are seeking mastery learning and thorough coverage of the books we study. The format of our guides serves these ends in efficient and thoughtful ways. Below is an explanation of the common elements.

**Vocabulary**

This section of our guides is perhaps the most often misunderstood. The vocabulary section is intended to be a discussion of vocabulary words that appear in the chapter and might inhibit understanding. We seek definitions in context. One goal of this exercise is to develop patience and perseverance in our students as they read. While pursuing accurate definitions, we want students to begin to look for context clues that help them decipher words. Because students will hopefully always be reading at increasingly difficult levels, we want them to recognize and understand that meeting unfamiliar words is expected, even into adulthood. Isn’t that a key point of reading, to broaden ourselves?

We find that young readers sometimes either stop entirely or ignore new words when they are encountered. When students encounter new vocabulary we want them to have a willingness to investigate and the discipline to continue reading. This process works best if teachers discuss new vocabulary before reading and students write down agreed upon definitions. This can easily be an oral activity for those who seek less writing. Keep in mind that while we can see the value of using the vocabulary lists to practice dictionary skills, consider doing so after students are able to choose the best, most relevant definition for the word in use.

**Comprehension Questions**

Comprehension is a skill that must be trained in readers from the beginning. Again, students need to know that completed does not necessarily mean comprehended and comprehended does not always mean contemplated.

The comprehension questions in the Memoria Press guides graduate in degree of difficulty as the student matures. Beginner guides seek answers that are easily identified objective facts—the who, what, where, when questions. Later, students are asked to discern information, and finally to analyze. Students learn to answer questions completely, concisely, and
eventually, eloquently. This is no easy feat. Our guides offer many opportunities to practice meaningful, articulate responses in both oral and written form.

Student answers should be developed with supervision until proficiency is achieved. Teacher and student should compose a well-prepared response together. It need not look exactly like the answer in the teacher’s manual. But strive to do good work. Discuss spelling, grammar, punctuation, capitalization. Choose interesting vocabulary words. Edit as needed. Each response could realistically be a complete composition exercise. In fact, we hope it is.

It’s important to note that the strategy above takes time—a lot of it. Our lessons are thorough and there are many opportunities for writing and discussion. We like complete, accurate responses; feel free to do some questions orally if necessary. For written responses, set the standard high.

**Facts to Know and Reading Notes**

The Facts to Know and Reading Notes sections in our guides prioritize for easy reference the key ideas in the chapter. These are the major takeaways. Use the Facts to Know for drill questions, memory work, recitation, and regular review. This section is formatted so the student can easily quiz independently or the teacher can quickly check for mastery. This section prepares students to notice main ideas in their reading.

**Memory Work**

The Memoria Press guides have numerous opportunities for students to memorize and recite. Recitation requires mastery of a subject and fosters confidence in students—the kind of confidence earned by accomplishing a challenging feat, the kind that enables them to humbly believe they can learn anything. The Scripture, facts, poetry, songs, and literary passages memorized by the student are formative and life-giving. They become the truths to which they will cling, the resources from which they will draw, the facts with which they will persuade.

**Discussion and Enrichment**

Discussion and Enrichment opportunities are often the bridges from knowledge to wisdom. These are the questions, connections, and suggested activities that greatly enrich the learning experience. For instance, consider this activity in our grammar school *D’Aulaires’ Greek Myths* guide: “Compile a list of heroes hidden in youth.” This is an exercise that can change the way students see their history, their literature, their faith, their world. By thinking broadly outside the bounds of a single story about Zeus, or Romulus and Remus, or Moses, or Jesus, students learn to recognize trials and triumphs that are common in the human experience. Consider these opportunities in your school day as you pause on your trek to take in the vistas. This section of the guide, if completed with enthusiasm, typically provides the satisfaction and delight that motivate progress.

**Additional Resources**

It is important to flesh out stories in a way that makes them tangible. When students understand the geographical locations and historical periods in which stories happen, they can better see how the history of the world is knitted together. If lessons are left in isolation, students are apt to overlook the interconnectivity of their subjects and dismiss the influence events and people have on each other. In addition to the specific work in the literature and history guides, the Memoria Press Geography and Timeline programs are inordinately valuable in giving students a mental poster on which they can paste facts as they travel across the curriculum. Little by little, broader scenes emerge and greater understanding is achieved.

**Conclusion**

Many of us started our classical education late. We understand how it feels to embark on this path with inexperience or questions. We remember wondering if Latin was within our reach and asking what in the world a recitation is. At some point (or at many), we were convinced and encouraged—thus we persevere. As we continue on, we can see the fruit. We continue to pursue the wisdom and virtue that are intrinsically consequential to this broad and grounding curriculum. In gratitude for those who guided us, our goals at Memoria Press will always be to simply encourage, inspire, and offer help as we are able. In our study guides, we hope to be doing just that.
Certain authors have the gift of clarity, and Peter Kreeft is one of them. He is often compared to C. S. Lewis, and it is not an inapt comparison. But he reminds me of Thomas Aquinas. Like Aquinas, Kreeft is able to take an esoteric idea and explain it in simple terms.


The section on Christian belief is divided between Christian apologetics and natural theology on the one hand, and creeds and revealed theology on the other. In fact, the book can serve partly as an introduction to how to defend the faith. And the section on revealed theology serves as an excellent introduction to the three central texts studied in Christian catechisms from Aquinas to Luther: the Apostles’ Creed, the Ten Commandments, and the Lord’s Prayer.

Kreeft introduces the study of Christian morality by explaining the difference between the three theological virtues (faith, hope, and charity) and the four classical or cardinal virtues (justice, temperence, prudence, and fortitude), and how the theological virtues complete the cardinal virtues. Finally he explains the basics of Christian spirituality by using the Lord’s Prayer.

What are the twelve objections to miracles? What are the five questions regarding God’s existence? What are the two essential kinds of religion? What are the twelve ways in which Christianity is unique? On every issue, Kreeft explains what is in question and lays out the relevant positions.

*Fundamentals of the Faith* may be the clearest explanation of Christianity in print.
My daughter and I received the delightful but daunting request to read an author-friend’s 294-page manuscript. I agreed to write a thorough review, and Michelle said yes to creating an original poem to be placed in the back of the book. We set aside one weekend to complete our tasks.

With no quick or inexpensive way to print the entire work, we settled for reading on my computer screen, sitting side by side atop my bed. Well-written and engaging, the pages found us sometimes laughing, pausing and rereading, and sometimes just looking at each other, eyes wet with heartfelt understanding. Hours passed. We looked at our page count so far: only 70 of 294. We both exhaled deeply.

We stopped to eat lunch. We needed a longer break. We agreed upon a fifteen-minute break. Then we would resume work. Neither of us wanted sound. (We had already asked my son, Michael, to stop composing on the piano.) Michelle went out to the backyard. I cleaned the kitchen. No talking. No radio. No words.

When we resumed reading we embraced the necessary act of concentration. We dove in for hours. Afterward we sensed an even more intense desire for silence. I needed to ponder suitable words for my review; she needed time to contemplate themes for her poem. Tempted to hasten our pace or, worse, plop words onto paper ahead of finishing the assigned reading, we knew that rushing either the reading or the writing would be foolish. What to do? The pace was mentally relentless that first day. We had had no time to reflect upon what we were reading.

Michelle said it best: “I need space—thought space.” We decided to call it a day.

The next morning, refreshed, we resumed our reading. We accrued 100 more pages, but this time we knew to predict our need for quiet. During longer breaks we went outside, and we remained separate and silent. This is unusual for us, so the very need for quiet made me reflect upon that need.

That afternoon, warmed by a mug of tea, I soaked up rare January sunshine while she sat silently by her gray tabby on the porch swing. We said nothing. Our minds were already too full of words. We had absorbed and considered the thoughts on those pages. We returned to the book.

Near the end we began to realize with astonishment that the author had woven Michelle herself into the final pages of the book. The author named her Mary. We were in awe, and both of us felt tears rise as we finished the story. When we read the last lines we closed the book. We smiled. In another of our unspoken agreements for sustained quiet prompted by necessity, she slid off the bed, trotted off to pick up a legal pad, slipped into her room, and closed the door. We do not interrupt Michelle when she writes. She plunged into what I knew would become a strong, edifying selection of poetry.

I wanted to write, but my writing would need to be postponed. My husband’s out-of-town best friend was staying with us, and I still needed to make dinner. As I did, warmly animated conversation with the two of them quickly submerged my thoughts. I enjoyed the time of company and trusted that silence would come.

In the wee hours of the morning, I awakened. I usually rise early, but not this early. Desiring not to stir, open doors, or squeak floors and wake our houseguest,
I remained in bed, my mind brimming full of the 294 pages. Words composed slowly in my mind. This happens often for me. Turning thoughts into phrases and phrases into sentences, I became ready to write. There in the dark I had found my bits of thought space.

By 6 a.m., a more respectable time to arise with company in the house, my first draft was ready to place onto paper. I crept downstairs. On my desk, I found the captivating poem Michelle had penned in the quiet of her room the day before. My reflections added to hers.

We had completed our tasks. We finished, not merely by reading 294 pages of words, but by protecting the necessary absence of words, the silence that enabled us to create. The power of thought space seemed a marvelous revelation to me, but the power of silence is nothing new. In *The Intellectual Life*, A. G. Sertillanges tells us:

> When silence takes possession of you; when far from the racket of the human highway the sacred fire flames up in the stillness; when peace, which is the tranquility of order, puts order in your thoughts, feelings, and investigations, you are in the supreme disposition for learning; you can bring your materials together; you can create; you are definitely at your working point.

As Sertillanges concludes, “Silence is the hidden content of the words that count.” The truth of this impressed me. I vowed to allow more thought space in our everyday work and life.

This is not to say that we seek isolation above all else. Perpetual silence is not good for us. Sertillanges clarifies,

> Too much solitude would impoverish you. The man who is too isolated grows timid, abstracted, a little odd: he stumbles along amid realities like a sailor who has just come off his ship; he has lost the sense of the human lot.

We engage in our work, in our play, and in companionship as we seek those who need us and those we need. In the midst of this, we may need some silence, and so may our children. In a clattering world of relentless words on screens and airways interrupted only by more hollow, manipulative words of advertisement toward consumerism, we need some silence.

Your thought space may come when camping under the stars, in the stillness of a museum, or while ambling through a library. Your thought space may spur you to make music, create art, or solve a problem with renewed insight.

In our house the awareness of a need for thought space arose from a deadline and resulted in published writing, but we need not wait to respect silence. We can determine not to yield thoughtlessly to whatever careless chatter, gloom, or clamor that tries to distract us. We can take care not to cause such clatter for others, especially for the sake of our children. Let us give each other, ourselves, and our families some thought space. Who knows what may happen?

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Simply Classical: A Beautiful Education for Any Child

Cheryl Swope is the author of *Simply Classical: A Beautiful Education for Any Child* and Memoria Press’ *Simply Classical Curriculum*. 
God has instilled in us a passion to learn and a need for knowledge. Education as we know it has been with us for over two millennia, but the tools of learning have changed. In biblical times, texts were meticulously copied onto scrolls using nothing but a sharpened reed and ink. Over time, reeds were replaced by feathers, nibs, pens, and keyboards, and parchment was replaced by printer paper and touchscreens. Newer technology has made information amazingly accessible.

Technological advances, however, are a mixed blessing. Entire surgeries can now be conducted by robots making only the slightest incision, men and women are being sent to do research in outer space for months at a time, and self-driving cars are rolling among us. But for every lifesaving technology there is one that disconnects or damages or distracts.

As Ellen Glasgow once said, "All change is not growth, all movement is not forward."

We should be especially wary of inviting technology into our classrooms. Proponents of tablets in classrooms cite health benefits, convenience, and a crackdown on cheating as primary advantages of tablets over textbooks. Tablets are just one of the next big trends and will soon enough be replaced by some newer educational tool. The tablets-versus-textbooks debate has precipitated a divide in the academic community, and in this technologically-enthralled world, the device seems to be winning. Still, textbooks have stood the test of time and have proved to effectively help students succeed in school.

Some experts argue that students develop back pain from carrying around heavy backpacks, and that using tablets instead can alleviate this. When a heavy backpack is incorrectly placed on the shoulders, the weight's force can make the spine compress unnaturally, leading to shoulder, neck, and back pain. But people who are pro-textbook argue that many students develop health issues over time with the use of tablets as well, mainly vision and neck problems. There are valid arguments on both sides, but abandoning a time-tested and proven tool of learning just because of a heavy backpack seems an overreaction.

Advocates also point to the convenience of educational technologies. Technology, they argue, can turn any place with an internet connection into a classroom, bringing lesson plans, books, worksheets, and videos outside of the physical classroom. But the selling point of a tablet is also its downfall: It is one little device that provides constant access to the wider world. Without proper controls, students who are supposed to be reading or working on their tablets can easily close their schoolwork and covertly open another app or watch a video or text their friends. To combat this a teacher must spend precious class time, not making sure students are understanding the material, but making sure they are even paying attention to it.

When people are constantly tempted to multitask, they are not working as hard on what they are supposed to be doing. They are pulled this way and that, and over time the ability to stay focused on any task fades. Backers of tablets think that textbooks do not hold students’ focus well enough. In reality, though, they should not have to hold attention. By the time students get to high school age, they should be able to go to the task at hand and stay focused on it for an extended amount of time.

In "How Today's Computers Weaken Our Brain," Tim Wu observes,

Today’s machines don't just allow distraction; they promote it. The Web calls us constantly, like a carnival barker, and the machines, instead of keeping us on task, make it easy to get drawn in—and even add their own distractions to the mix. In short: we have built a generation of 'distraction machines' that make great feats of concentrated effort harder instead of easier.

In his article, "Humans Have Shorter Attention Span Than Goldfish, Thanks to Smartphones," Leon Watson points to a Canadian study involving two thousand participants that showed a significant decline in the average human attention span. At this rate, future generations using educational...
technologies will have much more difficulty in school. The simplicity and single-minded purpose of textbooks allows students to focus on the task at hand and learn deeply, without added distraction.

People who are against textbook use often believe that tablets are a better choice because they make cheating more difficult. It is true that there is software that allows faculty and staff to monitor what is being displayed on iPad screens, but it is not a fool-proof option. Systems fail, students get around having the software downloaded, and there are always other ways to cheat. Carol Baker, president of the Illinois Science Teachers Association, said, "Today, kids are used to obtaining any kind of information they want [online]. There are so many things that are free out there, I think kids don't have the same sense of, 'Gee, it's wrong to take something that somebody else wrote.' The Internet encourages all of us to do that." Cheating has become easy with tablets and computers as accomplices. Instructors should not have to monitor these learning tools so closely, thereby losing time that could be better spent lecturing and helping students grasp the topic at hand. Rather than making it harder to cheat, technology has made it easier.

There is also the argument that textbooks can only provide knowledge, while tablets have tools that help make learning more fun and engaging. There is nothing wrong with having fun in class, but the main focus of education is not how enjoyable learning is. Parents do not enroll their children in school to entertain them and keep them engaged, but to teach them how to think. Using tablets in school will prepare students to be a part of this tech-savvy world, but they must be able to think on their own as well. Textbooks create opportunities to focus and excel in the classroom, where tablets create opportunities for distraction.

Technology has given mankind some amazing opportunities, but it also presents some significant drawbacks. Children who should be spending their time exploring, learning, and making discoveries are wasting time on iPads. Students who should be reading and reasoning and soaking in information from textbooks and teachers are navigating apps and playing "educational" games. Textbooks don't magically improve a student's concentration, but they don't innately erode it in the way that tablets do. Paper and pencils don't eliminate the temptation to cheat, but they don't invite opportunities the way many educational technologies do. Giving up on textbooks altogether is not the solution to heavy backpacks. Tablets in classrooms are a growing fad, but the advantages and deficiencies should be carefully weighed.
Can you explain what it is you do? Reading about you makes me think of Indiana Jones, except maybe without the chase scenes.

Yes, well, certainly these things can sound more glamorous than they really are! As a computer scientist and a computer vision imaging specialist, I am interested in both increasing access to and revealing things that are new. That confluence has been right in my wheelhouse.

What got you into this? How did you get involved in unlocking the secrets of ancient documents?

There was an evolution over time that pulled me toward antiquities and it started with digital libraries. Libraries are made up of all these amazing works that were not born digital. The push for conversion to digitization was the starting point for me. The work I did in the mid- to late nineties with the British Library is the thing that really pulled me toward true manuscripts and things that are fairly badly damaged. That work involved the Beowulf manuscript, which is part of the Cotton Collection at the British Library. That was the period of time during which I really became fascinated with the archives in libraries and museums that most of us don't get to see, not only because they contain things that are precious, but also because they are incredibly fragile and difficult to handle.

So there are manuscripts out there that we would like to read but can't, and you have a technical expertise you can bring to these projects to make it possible. Tell us about that.

Yes, as an imaging and computer specialist I started trying to imagine how new ways to image things could help reveal parts of those things that we can't see with the naked eye. But imaging alone is not the solution because there's an algorithmic side, a computational side, that also has to be applied. Putting those two things together is really the set of instruments that I've been using.

Was there a methodology you had to figure out in order to get to what was inside these things? How did that happen?

We initially worked on damaged or faded open pages, using the technology to improve on what you see with the naked eye by making the contrast better. But that quickly evolved into an idea: We might be able to image something that is completely closed and reveal what is within. So I started to see what appear as lumps of coal as more like time capsules—pieces of evidence that had valuable information inside and we just needed to find a way to get inside without destroying them.

How long does it take you to find out what is inside?

The technical approach we use is a combination of an imaging method, which is the scanning part, as well as algorithms that we apply to make sense of what we scan. These are computer programs that we have written in-house as part of the research that we do. The scan, which takes about a day, captures everything inside, but using the algorithms to decipher what's inside and virtually unwrap the layers can take months. The software takes us through each of the steps and allows us to solve those steps by doing transformations on the data.

Can you tell us about the projects you have worked on?

Yes, I've worked with the Dead Sea Scrolls material, the scroll from Ein Gedi, and also scrolls from Herculaneum. And some early medieval manuscripts, one of which is in the Morgan Library in New York City.
What is the most exciting discovery that you have made in your time doing this?

Our most exciting discovery was the revelation of the complete text from inside the scroll from Ein Gedi. The scroll was found in 1970 in an archaeological dig on the shore of the Dead Sea, in a town named Ein Gedi. It was discovered in the floor of what was found to be the holy ark of that synagogue. It was burned, it was small, and there was no physical restoration that would allow that team or the curating team later to have access to the text that might be inside. So the scroll sat for almost fifty years in an archive. The team in Israel created a scan of the scroll and then gave that data to us, which was the raw scan, and then we applied the research software that we had been working on to be able to do all the steps necessary to convert that raw scan into the writing that was inside. We discovered that there was a well-formed, readable text inside. It was parts of the first two chapters of the book of Leviticus, written in Hebrew, dated to about the second century. It was a Torah scroll, and it opened up the ability of biblical scholars to look at that text and determine when the text was first written, how it had changed over time, and whether it was the same text as what we have now, or if there were variations. We produced an image without opening the scroll that was good enough for biblical scholarship to actually be done. That's never been done before. On anything. The Ein Gedi scroll is the earliest copy of Leviticus that we have that is an exact match to the settled Masoretic text that we have today. It's our earliest record of that settled text.

So tell us about the Herculaneum project, which is the discovery of what they think is the villa of Calpurnius Piso, Julius Caesar's father-in-law, in one of the cities covered by the ash of the eruption of Mt. Vesuvius in 79 A.D.

What's really interesting about Herculaneum is that it is the only intact library from antiquity. It is also the largest number of scrolls excavated from a cache. The Dead Sea Scrolls produced about 900 manuscripts. It's thought that Herculaneum produced maybe twice that many, maybe about 1,800, and there may be more yet to be excavated. When you poke back through the very narrow keyhole of the Middle Ages and you get back to antiquity, we know very, very little. A lot of our witness is only secondary witness now. But this is original material—authentic, original material. I mean it's very exciting. It's been a slow process, but we're going to be excited to announce this spring a major effort that involves all of the Herculaneum material. I'm so eager to be able to move the material to something that looks like open scholarship so that scholars worldwide can easily answer the question, "What's in the collection?"

Is there anything in particular that you are looking for in your work?

Well you know I'm a Christian and I've grown up as a faithful believer, and I recognize that Christianity is based in textual history. And if you look at the textual record, we don't have much that's earlier in terms of witness to the life of Jesus Christ before the second century. There just isn't anything. That period of time was really exciting in the emergence of Christianity. The second temple period, the Council of Nicea—that 500-year slice of history is where Herculaneum sits. For me personally, I would love to be able to find texts that are meaningful for the world religions at their emergence, and in particular, early Christian texts. That would be very exciting. Evidence of things like the hypothesized Q manuscript would be a huge breakthrough in the community of Christian scholars. With early Jewish texts it's the same thing. And there are a lot of unanswered questions even in the classical works.

What is it like to hold in your hand a manuscript that no one has held in millennia?

That realization was one of the most powerful feelings in the work we did in Ein Gedi, when my team and I realized that we were the first people to read this in 1,800 years. The research is about new technology, but it's also about the adventure of discovery and satisfying that thirst to be able to have those moments where something new is truly discovered. It's a direct message from one person's hand to our brains. It's the power of text.
With one exception I have never heard anyone speak seriously and comprehensively about the disadvantages of computer technology, which strikes me as odd. After all, anyone who has studied the history of technology knows that technological change is always a Faustian bargain: Technology giveth and technology taketh away, and not always in equal measure. A new technology sometimes creates more than it destroys. Sometimes, it destroys more than it creates. But it is never one-sided.

In the case of computer technology, there can be no disputing that the computer has increased the power of large-scale organizations like military establishments or airline companies or banks or tax collecting agencies. And it is equally clear that the computer is now indispensable to high-level researchers in physics and other natural sciences.

But to what extent has computer technology been an advantage to the masses of people? Technology always has unforeseen consequences, and it is not always clear, at the beginning, who or what will win, and who or what will lose. I will try to explain what is dangerous about the computer, and why.

Now, I think I can begin to get at this by telling you of a small experiment I have been conducting, on and off, for the past several years. Here's how it works: It is best done in the morning when I see a colleague who appears not to be in possession of a copy of The New York Times.
"Did you read *The Times* this morning?" I ask. If the colleague says yes, there is no experiment that day. But if the answer is no, the experiment can proceed. "You ought to look at page 23," I say. "There's a fascinating article about a study done at Harvard University."

"Really? What's it about?" is the usual reply. My choices at this point are limited only by my imagination. But I might say something like this: "Well, they did this study to find out what foods are best to eat for losing weight, and it turns out that a normal diet supplemented by chocolate eclairs, eaten six times a day, is the best approach. It seems that there's some special nutrient in the eclairs—encomial dioxin—that actually uses up calories at an incredible rate."

Sometimes they say, "Really? Is that possible?" Sometimes they do a double-take, and reply, "Where'd you say that study was done?" And sometimes they say, "You know, I've heard something like that."

Now, there are several conclusions that might be drawn from these results, one of which is that the world in which we live is very nearly incomprehensible to most of us. There is almost no fact—whether actual or imagined—that will surprise us for very long, since we have no comprehensive and consistent picture of the world which would make the fact appear as an unacceptable contradiction. We live in a world that, for the most part, makes no sense to us. Not even technical sense.

Perhaps I can get a bit closer to the point I wish to make with an analogy: If you opened a brand new deck of cards, and started turning the cards over, one by one, you would have a pretty good idea of what their order is. After you had gone from the ace of spades through the nine of spades, you would expect a ten of spades to come up next. And if a three of diamonds showed up instead, you would be surprised and wonder what kind of deck of cards this is. But if I gave you a deck that had been shuffled twenty times, and then asked you to turn the cards over, you would not expect any card in particular—a three of diamonds would be just as likely as a ten of spades. Having no basis for assuming a given order, you would have no reason to react with disbelief or even surprise to whatever card turns up.

The point is that, in a world without spiritual or intellectual order, nothing is unbelievable; nothing is predictable, and therefore, nothing comes as a particular surprise.

The belief system of the Middle Ages was rather like my brand new deck of cards. There existed an ordered, comprehensible worldview, beginning with the idea that all knowledge and goodness come from God. What the priests had to say about the world was derived from the logic of their theology. The medieval world was, to be sure, mysterious and filled with wonder, but it was not without a sense of order.

Ordinary men and women might not have clearly grasped how the harsh realities of their lives fit into the grand and benevolent design, but they had no doubt that there was such a design, and their priests were well able, by deduction from a handful of principles, to make it, if not rational, at least coherent.

The situation we are presently in is much different. And I should say, sadder and more confusing and certainly more mysterious. It is rather like the shuffled deck of cards I referred to. There is no consistent, integrated conception of the world which serves as the foundation on which our edifice of belief rests.

There was a time when information was a resource that helped human beings to solve specific and urgent problems of their environment. This began to change, as everyone knows, in the late fifteenth century when a goldsmith named Gutenberg, from Mainz, converted an old wine press into a printing machine, and in so doing, created what we now call an information explosion. Nothing could be more misleading than the idea that computer technology introduced the age of information. The printing press began that age, and we have not been free of it since.

But what started out as a liberating stream has turned into a deluge of chaos. Everything from telegraphy and photography in the nineteenth century to the silicon chip in the twentieth has amplified the din of information, until matters have reached such proportions today that for the average person, information no longer has any relation to the solution of problems.

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Neil Postman is the author of *Amusing Ourselves to Death* and *Technopoly*. This article is an abridged version of a speech given to the German Informatics Society in 1990.
The tie between information and action has been severed. Information is now a commodity that can be bought and sold, or used as a form of entertainment, or worn like a garment to enhance one’s status. It comes indiscriminately, directed at no one in particular, disconnected from usefulness; we are glutted with information, drowning in information, have no control over it, don’t know what to do with it.

And there are two reasons we do not know what to do with it. First, as I have said, we no longer have a coherent conception of ourselves, and our universe, and our relation to one another and our world. We no longer know, as the Middle Ages did, where we come from, and where we are going, or why. That is, we don’t know what information is relevant, and what information is irrelevant to our lives. Second, we have directed all of our energies and intelligence to inventing machinery that does nothing but increase the supply of information. As a consequence, our defenses against information glut have broken down; our information immune system is inoperable. We don’t know how to filter it out; we don’t know how to reduce it; we don’t know how to use it.

Now, into this situation comes the computer. It would be fatuous of me to warn against every conceivable use of a computer. But there is no denying that the most prominent uses of computers have to do with information. When people talk about “information sciences,” they are talking about computers—how to store information, how to retrieve information, how to organize information. The computer is an answer to the questions, how can I get more information, faster, and in a more usable form? These would appear to be reasonable questions.

But now I should like to put some other questions to you that seem to me more reasonable. If children die of starvation in Ethiopia, does it occur because of a lack of information? If criminals roam the streets of New York City, do they do so because of a lack of information? If you and your spouse are unhappy together, and end your marriage in divorce, will it happen because of a lack of information?

I believe you will have to concede that what ails us, what causes us the most misery and pain—at both cultural and personal levels—has nothing to do with the sort of information made accessible by computers. The computer and its information cannot answer any of the fundamental questions we need to address to make our lives more meaningful and humane.

The computer cannot provide an organizing moral framework. It cannot tell us what questions are worth asking. It cannot provide a means of understanding why we are here or why we fight each other or why decency eludes us so often, especially when we need it the most. The computer is, in a sense, a magnificent toy that distracts us from facing what we most needed to confront—spiritual emptiness, knowledge of ourselves, usable conceptions of the past and future. Does one blame the computer for this? Of course not. It is, after all, only a machine. But it is presented to us, with trumpets blaring, as a technological messiah.

But the computer has a nature as well. True, it is only a machine but a machine designed to manipulate and generate information. That is what computers do, and therefore they have an agenda and an unmistakable message.

The message is that through more and more information, more conveniently packaged, more swiftly delivered, we will find solutions to our problems. And so all the brilliant young men and women, believing this, create ingenious things for the computer to do, hoping that in this way we will become wiser and more decent and more noble. In a world populated by people who believe that through more and more information, paradise is attainable, the computer scientist is king. But I maintain that all of this is a monumental and dangerous waste of human talent and energy. Imagine what might be accomplished if this talent and energy were turned to philosophy, to theology, to the arts, to imaginative literature, or to education? Who knows what we could learn from such people—perhaps why there are wars, and hunger, and homelessness, and mental illness, and anger.

Here is what Henry David Thoreau told us: “All our inventions are but improved means to an unimproved end.” And here is what Socrates told us: “The unexamined life is not worth living.” And here is what the prophet Micah told us: “What does the Lord require of thee but to do justly, and to love mercy, and to walk humbly with thy God?”

There is no escaping from ourselves. The human dilemma is as it has always been, and we solve nothing fundamental by cloaking ourselves in technological glory.