Perspectives on Faith, the Liberal Arts, and Computer Science

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A Christian liberal arts education seeks to explore several fundamental questions: What does it mean to be human? For what purpose did God create us? How do we develop to our full human potential? What sets us free, liberates us, to be all that God intends us to be?

In Genesis, we learn that to be human is to be created in the image of God; to bear the image of God. To be human is to rule over the earth, to fill it, and to be a steward for it. To be human is to have gender; to express that part of God that is male or female. To be human is to live in relation to other humans, to help others, and to be helped by others. To be human is to be an instrument of redemption in a fallen world.

In the Westminster Catechism, we find the following question and answer: "What is the chief end of man? Man's chief end is to glorify God, and enjoy him forever." Thus, our purpose is first to focus on the creator, to bring glory and honor to him, and second, to find our enjoyment in him.

The goal of developing the whole person to become all that God has created each individual to be is carried out primarily through relationships. First and foremost is the relationship between God and the individual believer. This relationship must be nurtured and encouraged through scriptural study and meditation, prayer, worship, discipleship, and service. Second, human relationships must be developed through teaching, mentoring, and investing in lives; mutual care and sharing of passions, and working together in the classroom, laboratory, athletic field or dormitory. We must become a community that builds each other up in Christ, that considers "how to stimulate one another to love and good deeds" (Hebrews 10:24). Finally, there are relationships between the individual and the creation, which must be fostered through study, observation, interaction, experimentation, creation, analysis, and documentation.

In the Image of God

To seek what it means to be human, we look to the account of creation, and particularly to the account of the creation of man and woman. We see first of all that man and woman are the pinnacle of creation. All of the creation has been pronounced by God as good, but now God creates human beings, and calls the creation *very* good.

We also see that God creates man and woman in his own image. "Then God said, 'Let us make man in our image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground.'

> "So God created man in his own image,
> in the image of God he created him;
> male and female he created them." (Genesis 1:26-27)[1]

To be human is to bear the image of God. To become fully human, we need to live in relation to God and to learn more about him in order to more accurately reflect his image.

[1] All Scripture quotations are from the Holy Bible, New International Version, Zondervan, 1984

All truth comes from God. "Knowledge points to God as the ultimate source of truth. Human theories and laws reflect God's laws imperfectly... Knowledge is grounded in God's revelation of Himself in His created reality and in the Bible."[2] As we learn more about creation, we learn more about God the creator. Romans 1:20 tells us, "For since the creation of the world God's invisible qualities - his eternal power and divine nature - have been clearly seen, being understood from what has been made..."

These general principles apply to the specific field of computer science. As we become more conformed to the image of God, we grow in the qualities that are necessary to be effective in computer science, and as we grow in our knowledge and understanding of computer science, we see more of who God is.

One of the first things we learn about God is that he is creative. Genesis 1:1 says, "In the beginning God created the heavens and the earth." God spoke and created all of the beauty and complexity of the universe. We are made in the image of God and thus are made as creative people. Creativity is one of the most important attributes of a computer scientist. All of the great computer scientists (Alan Turing, John Von Neumann, Donald Knuth, and Edsger Dijkstra, to name a few) have been highly creative thinkers. The ability to envision new algorithms and create new solutions to complex problems requires great creativity.

God is also a rational and logical being, and in the image of God we are also rational and logical beings. Logic is an extremely important attribute of a computer scientist. The ability to break a complex problem into subproblems; the ability to write an algorithm, which is just a step-by-step procedure for solving a problem; and the ability to prove the correctness of a given solution and analyze its complexity, all require the use of logic.

Our God appreciates beauty. It is God who created sunsets, rainbows, the shimmering ocean, and snow-capped mountains. It is also he who created in us an appreciation for beauty. This beauty is found in the study of computer science. An elegant algorithm is no less beautiful than a sonnet or a sonata.

God also cares about details. "Indeed, the very hairs of your head are all numbered." (Luke 12:7). Details are very important in computer science. If you do not get the details of an algorithm right, it will not work. We often talk about "off-by-one" errors in computer science: if you have a loop that is supposed to execute a million times, but instead it executes a million and one times, it is wrong. If you leave out one semicolon in a C++ program consisting of thousands of lines of code, the program will not run. In addition to attention to details, we thus also learn about absolutes in computer science; something is either right or wrong. Our God is a god of absolutes; "He who is not with me is against me, and he who does not gather with me scatters." (Matthew 12:30)

As computer scientists, we are called to reflect God's image in specific ways, as we function as agents for beauty, knowledge, creativity, logic, detail, and truth.

Rule Over the Earth

The Genesis account of creation gives us further insight into what it means to be human and the purpose for which God created us. We read, "God blessed them and said to them, 'Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground.' " (Genesis 1:28)

To be human is to live in relationship to the creation; specifically, to rule over the earth; to nurture it, tend it, be a steward for it, fill it, and exercise dominion over it. To do this we must understand all that we can about the earth and about the creation as a whole.

[2]Information obtained from CCCU Northwest Regional New Faculty Workshop, 2002

"In the curriculum, students learn about God's creation and how humans have unfolded it, investigating and personally responding to interpretations and issues."[3] In the computer science curriculum, students learn about the big ideas of computer science, which are ideas found throughout the creation, and how humans have unfolded them. Some of these big ideas of computer science[4] include: naming; abstraction (both data and procedural); algorithms; hierarchy, layers; virtuality; global versus local; parallelism; tradeoffs between time and space; and information representation and transfer.

While the field of computer science is not always viewed as central to the liberal arts, it has a place there. In medieval European universities, the seven designated liberal arts were grammar, rhetoric, logic, arithmetic, geometry, astronomy, and music. Of these, the first three, called the linguistic arts, formed the trivium and the latter four, known as the mathematical arts, comprised the quadrivium.[5] Of the seven liberal arts, three are integrally connected with computer science: grammar, logic, and arithmetic, and both categories, the linguistic arts and the mathematical arts, are foundational to computer science.

Perhaps the least intuitive connection to computer science (at least to those outside the field) is that with grammar and linguistics. However, these areas are very important in theoretical computer science and programming languages. The study of programming languages includes both syntax and semantics; the main way of describing syntax is through context-free and regular grammars, originally defined by noted linguist Noam Chomsky. Attribute grammars can be used to describe both the syntax and static semantics of programming languages. Compiler design involves both lexical analysis and syntax analysis, or parsing, which is fundamentally a linguistic concept. Research in natural language processing at the University of Aix-Marseille led to the design of the Prolog programming language.

Related to grammar and linguistics is the idea of naming and of *abstraction*, which is the representation of the essential qualities of an item or concept apart from the details. Naming and abstraction are key concepts in computer science. Naming is a form of data abstraction when we give names to memory locations in the form of variables and constants, and a form of procedural abstraction when we give names to actions in the form of function or method names.

We read about naming and abstraction in the Genesis account. "Now the LORD God had formed out of the ground all the beasts of the field and all the birds of the air. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name. So the man gave names to all the livestock, the birds of the air and all the beasts of the field." (Genesis 2:19-20) We see here that Adam was utilizing abstraction. In order to choose a name that represented the animal, he had to find the essential qualities of each animal.[6]

In addition to grammar, the study of logic is another of the seven liberal arts that is integrally connected with computer science. Logic languages, which comprise one of the four major categories of programming languages, require expressing programs in a form of symbolic logic and using a logical inferencing process to produce results. Logic is also employed extensively in imperative and object-oriented languages in flow control constructs such as iteration and selection, and there is often a Boolean data type in such languages. At the hardware level, digital logic gates are the fundamental building blocks of a computer system. As we have already stated, God is a rational and logical being, and by studying logic as a property of the creation we learn more about him.

Mathematics is another of the seven liberal arts. As the word *computer* suggests, mathematics, including but not limited to arithmetic computation, is fundamental to computer science. Perhaps

[3] ibid

[4] Idea from Gene Chase, CCCU Disciplinary Workshop on Mathematics and Computer Science, 2003

[5] Information obtained from Christian Hoeckley, Institute for the Liberal Arts, Westmont College.

[6] Idea from Gene Chase, CCCU Disciplinary Workshop on Mathematics and Computer Science, 2003

the key concept in computer science is that of an *algorithm*, which is a step by step method of solving a problem; this concept is also fundamental to mathematics. Another key idea in both mathematics and computer science is that of abstraction. Mathematical proofs are integral to computer science, as is mathematical analysis. A number of people have suggested that mathematics is the language of God. While this may be open for debate, most would agree that mathematics is the language of science, and science is fundamentally the study of the universe that God created.

While the purpose of a Christian liberal arts education is not that of training students for a career, computer science majors at such an institution will be well prepared to make a significant contribution to the field, whether it be in industry or in academia. The communication, problem solving, and group skills that are emphasized in such an educational setting are critically necessary in the field of computer science today, in which large software development projects involving teams of professionals from diverse fields and perspectives are the rule rather than the exception. Further, in a field like computer science that is moving and changing very rapidly, the understanding of general principles, rather than the knowledge of specific applications, is key, and is what must be emphasized in the liberal arts education.

It is important to have a vision for preparing computer scientists that are not only technically competent, but that are also strong communicators, are able to work effectively with others in diverse settings, can articulate ideas in both verbal and written form, and will be leaders in wrestling with ethical issues in technology. To this end, we must prepare assignments that involve writing and oral presentations, that include group projects as well as individual work, and that require reflection and response on ethical issues.

In addition to seeking to understand the universe in order to better fulfill our purpose of tending it and ruling over it, we are also to enjoy the universe. "Then God said, 'I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food.' " (Genesis 1:29) As we explore the universe, and enjoy its fruits, we appreciate the goodness of what God has created, the beauty of its order and elegance, and its sustenance for our lives.

We also learn that we must obey God in how we interact with the creation. "And the LORD God commanded the man, 'You are free to eat from any tree in the garden; but you must not eat from the tree of the knowledge of good and evil, for when you eat of it you will surely die.' " (Genesis 2:16-17) While the creation is subject to us, we are subject to God. We are to function as agents to cause the creation to flourish in accordance with God's design and his laws.

Male and Female

To be human is to have gender; to be male or female. Part of our purpose as men and women is to express the part of God that is male or female.

> "So God created man in his own image,
> in the image of God he created him;
> male and female he created them." (Genesis 1:27)

Knowledge of the specific ways in which God created us as male or female can be used for redemptive purposes in the field of computer science. A particular area of concern is the under-representation of women in computer science. The situation has its roots in the basic differences between men and women, differences that were present from the beginning of creation and are part of the way that God made male and female uniquely. In order to ensure that both talented men and women are attracted to computer science, we need to understand the differences between men and women, and how those differences affect the way we approach computer science.

How man and woman were each uniquely created, and for what purpose each was created, is explained in Genesis 2. "And no shrub of the field had yet appeared on the earth, and no plant of the field had yet sprung up, for the LORD God had not sent rain upon the earth, and there was no man to work the ground" (Genesis 2:5). "The LORD God formed the man from the dust of the ground, and breathed into his nostrils the breath of life, and man became a living being" (Genesis 2:7). "The LORD God took the man and put him in the garden of Eden to work it and take care of it" (Genesis 2:15).

Here we learn some specifics regarding the creation of man. First, it is noted that there are two reasons why there are no shrubs or plants: there is no rain, and there is no man to work the ground. This sets up the next event, where we see that God creates the man and puts him in the garden to work it and take care of it. Thus, the task for which man was created was to work the soil and to tend the garden. We also see the material out of which man was created: dust of the ground, or inorganic material.

Having solved the dilemma that there is no man to work the ground, God now describes the next dilemma. "The LORD God said, 'It is not good for the man to be alone; I will make him a helper suitable for him" (Genesis 2:18). As we read further, we see the way in which God remedies this situation. "So the man gave names to all the livestock, the birds of the air, and all the beasts of the field. But for Adam no suitable helper was found. So the LORD God caused the man to fall into a deep sleep; and while he was sleeping, he took one of the man's ribs and closed up the place with flesh. Then the LORD God made a woman from the rib he had taken out of the man, and he brought her to the man. The man said,

> 'This is now bone of my bones,
> and flesh of my flesh;
> she shall be called 'woman,'
> for she was taken out of man.' " (Genesis 2:20-23)

The resolution to the dilemma that it is not good for man to be alone is the creation of woman. The purpose for which woman was created was to be a helper, or a companion, to man. We also observe that the material out of which woman was created is the rib of man, and thus is organic material.

The purpose for which man was created is one of function: cultivating the garden. The purpose for which woman was created is one of relationship: being a companion to man.[7] It is important to note that these differences occurred *before* the fall. On the whole, men are more *functional*, and women are more *relational*. Even the very material of which they were made, inorganic material versus organic material, suggests function versus relation. This is not to say that men are not relational, or that women are not functional. However, their primary orientation, the way they find their primary fulfillment, is related to the original purpose for which they were created.

How does this functional versus relational orientation impact the approach that men and women each bring to computer science? Men come to computer science through the machine itself, as something to be played and tinkered with, and that is worth pursuing for itself. This makes sense given their functional nature. In their book "Inside the Clubhouse," Margolis and Fisher state "many more boys than girls get inside the machine and become tinkerers. They learn it inside and out, whereas more girls stay on the outside and limit their involvement."[8]

Women, on the other hand, come to computing from many directions. Some of the key interests for women are those of helping people and social concerns. This follows from their relational

[7] Idea from Steve and Erica Lawry, personal communication, 1979

[8] J. Margolis and A. Fisher, *Unlocking the Clubhouse: Women in Computing*, MIT Press, 2002

nature. "Women students' descriptions of why they are majoring in computer science are a 'counternarrative' to the stereotype of computer scientists who are narrowly focused on their machines and are hacking for hacking's sake. Instead, these women tell us about their multiple interests and their desire to link computer science to social concerns and caring for people."[9]

Women have a strong need to be needed and wanted, and to make a difference in the lives of others. They want to help and nurture people and to work together with others. These needs and desires arise from their fundamental relational orientation. In general, women don't want to sit alone in front of a computer all day; they want to be with people. They also need to make connections with other fields, and have a desire to relate what they are learning to their personal experiences. Problem solving plays an important role in all of these areas. Women enjoy helping people solve problems and working in groups to solve problems.

Given an understanding of the differences in the way that men and women approach and view computer science, we can make the field more attractive to women. First of all, it is important to recognize the different perspectives that men and women bring. We must talk about the differences and similarities in orientation. Men and women must be taught to value and respect the approach and perspective that the opposite sex brings to the field of computer science, rather than judging and disapproving.

Different approaches to computer science are important and complementary. However, considering the under-representation of women in computer science, it is worth examining our pedagogical methods to see if we can place more emphasis on the aspects of computer science that appeal more to women. A number of people have given suggestions for this. These suggestions include redesigning the introductory courses to provide a broader view of the field of computer science (as opposed to focusing only on programming); providing support, encouragement, and mentoring opportunities; providing female role models; engaging students in undergraduate research; emphasizing the connections between computer science and other fields; and making use of cooperative learning and group projects.

Live in Relation to Others

To be human is to live in relation to other humans; to help others and be helped by others, to encourage others, to use our gifts for others, to serve others, and to stimulate growth in others. In the creation account we read, "The LORD God said, 'It is not good for the man to be alone. I will make a helper suitable for him.' " (Genesis 2:18). The passage goes on to recount Adam's task of naming the animals, which required him to study them and determine their essential character. We then read, "But for Adam no suitable helper was found. So the LORD God caused the man to fall into a deep sleep; and while he was sleeping, he took one of the man's ribs and closed up the place with flesh. Then the LORD God made a woman from the rib he had taken out of the man, and he brought her to the man. The man said,

> 'This is now bone of my bones
> and flesh of my flesh;
> she shall be called 'woman,'
> for she was taken out of man.'

"For this reason a man will leave his father and mother and be united to his wife, and they will become one flesh."

This passage shows that there is something unique about human relationships. Relationships with other humans cannot be replaced by relationships with anything else in the creation.

[9] ibid

Human relationships must be developed through teaching, mentoring, and investing in lives; mutual care and sharing of passions, and working together in the classroom, laboratory, athletic field or dormitory. We must become a community that builds each other up in Christ. "And let us consider how we may spur one another on toward love and good deeds. Let us not give up meeting together, as some are in the habit of doing, but let us encourage one another - and all the more as you see the Day approaching." (Hebrews 10:24-25)

The faculty-student relationship is central to the mission of the Christian liberal arts college and contributes significantly to the overall quality of the educational experience. Faculty must serve as role models and mentors, both in their Christian faith and in their professional area of expertise. "Knowledge goes beyond one's intellect and involves personal response, commitment, and service."[10] It is crucially important for faculty members to seek to develop relationships with students, both in and out of the classroom. We must love, nurture, serve, lead and inspire our students, and thus encourage and equip them for lives of thoughtful Christian service and lifelong learning. Learning must take place with the goal of exploring biblical perspectives on individual areas of learning and knowledge, as well as the interconnections between disciplines, in the knowledge that God is the author of all truth.

It is important to be encouraging to students, especially those who lack confidence or who are struggling. Faculty members who notice and point out special aptitudes, especially those that are not readily apparent, can be blessed to observe some rather remarkable transformations in which students blossom academically. It is of great importance to be motivational in helping students desire to do well academically.

It is crucial to build a sense of community within a computer science program. We must recognize that our students are a diverse group that includes extreme extroverts as well as introverts, spiritual leaders and those who struggle with faith, and those who have been experimenting with computers all their life as well as those who just recently got their first computer. They must be taught, in words and actions, how to minister to and encourage each other toward growth in many areas. We may see extremely shy students who will become more comfortable socially, students who struggle with faith who will grow spiritually, and students who have little computer experience who will develop confidence. The ways in which we attempt to minister to, care for, motivate, and encourage students will truly matter, and the relationships are formed over the years will be of fundamental importance.

Building community and fostering growth in human relationships are particularly important within a computer science program for several reasons. First of all, it is important to produce computer scientists who are not only technically competent but who also have people skills and can work well with others. A recurring theme in industry is the need for computer scientists who are able to function well within a group. Large software projects have become the norm, and development teams have increased in size and diversity to include not only those with technical skills but also non-technical specialists. Group skills, communication ability, teamwork, and leadership are skills and abilities that are increasingly desirable and necessary for professional growth and competence among computer scientists. All too often, practicing computer scientists are "nerds" who are consumed by their machines and unable to communicate effectively with other people. The narrowly focused "geek" who cannot communicate or work with others is increasingly placed at a disadvantage in the workplace, as compared to workers with similar levels of technical competence but greater people skills. But, more importantly than that, God desires for us to grow in all ways.

[10]Information obtained from CCCU Northwest Regional New Faculty Workshop, 2002

Sin and Redemption

To be human is to be an instrument of redemption in a fallen world. In the creation account we read that man sinned and disobeyed God, and as a result, the creation fell. "So the LORD God said to the serpent, 'Because you have done this,

> 'Cursed are you above all the livestock
> and all the wild animals!
> You will crawl on your belly
> and you will eat dust
> all the days of your life.
> And I will put enmity
> between you and the woman,
> and between your offspring and hers;
> he will crush your head,
> and you will strike his heel.'

"To the woman he said

> 'I will greatly increase your pains in childbearing;
> with pain you will give birth to children.
> Your desire will be for your husband,
> and he will rule over you.'

"To Adam he said, 'Because you listened to your wife and ate from the tree about which I commanded you, "You must not eat of it,"

> 'Cursed is the ground because of you;
> through painful toil you will eat of it
> all the days of your life.
> It will produce thorns and thistles for you,
> and you will eat the plants of the field.
> By the sweat of your brow
> you will eat your food
> until you return to the ground,
> since from it you were taken;
> for dust you are
> and to dust you will return.'

"Adam named his wife Eve, because she would become the mother of all the living." (Genesis 3:14-20)

In this passage we learn that after the fall, the ground produced thistles, and man had to toil to eat of the ground. Computers are part of the fallen world. Part of our calling as Christians is to redeem the creation, and that includes computer software and hardware.

One way of redeeming computers is to employ good software engineering principles to make the use of computers as simple and as non-frustrating as possible.[11] This would include not cutting corners in software design and documentation, and developing clean and simple interfaces that are intuitive and easy to use.

[11] Idea from Joel Adams, "A Christian Perspective on Computing," available online http://www.calvin.edu/ adams/html/interests/professional/Xian/Essay95.html

Research in survivability involves designing systems that remain correct and reliable despite accidents or malicious intrusions that damage some of the processors in the system. Similarly, work in computer security includes protecting the resources of the system from intruders. In the design of operating systems, a key concern is that of effectively managing the finite resources of the system, such as CPU cycles and memory. These are further ways of redeeming part of our fallen creation.

Computer systems are designed and viewed as a hierarchy of layers, each of which solves a particular problem and/or provides a particular service. For example, in the field of networks, packets from a lower layer might be lost or corrupted, but the next level up will provide for reliable delivery by using techniques such as retransmission and checksums. Thus, each layer has its own fallenness, and provides some means of redemption.[12]

An area of specialization within computer science is that of distributed systems. A distributed system consists of two or more processors that work together on a common problem, and that communicate with each other by sending messages. In such a system, coordination is always a problem, particularly in asynchronous systems in which there is no common clock and no known bound on message transmission time. Each processor has only a limited view of what is happening elsewhere in the system, which makes it difficult for processors to reach agreement. The processors in a distributed system can be viewed as a picture of us who, as limited humans, lack the knowledge and perspective that only God has. In distributed systems we often speak of "God's view" of the system, in which everything about the system is known.

In a seminal work on distributed computer systems, Halpern and Moses[13] wrote, "distributed knowledge corresponds to knowledge that is 'distributed' among the members of a group, while common knowledge corresponds to a fact being 'publicly known.' " They demonstrated that, while being highly desirable, common knowledge is unattainable in any practical distributed system. This limit on knowledge attainable in a distributed system provides insight into the larger picture of the human condition. In I Corinthians 13:12 we read "for now we see in a mirror dimly, but then face to face." While God's view is perfect and complete in knowledge, we as limited humans cannot attain common knowledge in this life.

As Christians we must wrestle with ethical issues in computing, such as intellectual property rights, computer security and privacy, and internet pornography. Christian computer scientists must lead the way, in both words and actions, in addressing these very difficult problems. As people who understand the technological issues, as well as God's word and plan for life, we need to function as agents of redemption and provide an example of mercy and justice, as God has shown us through his word. "He has showed you, O man, what is good. And what does the LORD require of you? To act justly and to love mercy and to walk humbly with your God." (Micah 6:8)

We are called to do our work heartily for the Lord. As computer scientists we must strive for excellence in all of our work, whether it is software development, computer science research, or teaching. We also must view the environment in which the Lord has placed us as a mission field. As computer scientists, we can reach people for Christ who could not be reached in any other way. A calling to the secular workplace is no less a calling than is one to vocational Christian service. This is yet another area in which we can function as agents of redemption.

[12] Idea from Gene Chase, CCCU Disciplinary Workshop on Mathematics and Computer Science, 2003

[13] Joseph Y. Halpern, and Yoram Moses, "Knowledge and Common Knowledge in a Distributed Environment," *Journal of the ACM* 37(3):549-587, 1990

Conclusion

A Christian liberal arts college has a high calling: that of educating the whole person and equipping the individual to become all that God intends him or her to be. The scriptures teach us that as a youth "Jesus kept increasing in wisdom and stature, and in favor with God and men" (Luke 2:52). This indicates that He was growing intellectually, physically, spiritually, and socially. The college experience must stimulate growth in all of these areas. It must equip students for a lifetime of Christian service and leadership, whether it be on the mission field, in the church, in academia, or in the secular workplace. The college as a whole must function as the instrument of God to bring the message of love and salvation to a fallen world. In this aspect it has the same task as the individual believer, and in fact the institution must be preparing individuals for the very task of becoming salt and light to the world.

Faculty members in a Christian liberal arts college must take these words to heart: "In the presence of God and of Christ Jesus, who will judge the living and the dead, and in view of his appearing and his kingdom, I give you this charge: Preach the Word; be prepared in season and out of season; correct, rebuke and encourage – with great patience and careful instruction. For the time will come when men will not put up with sound doctrine. Instead, to suit their own desires, they will gather around them a great number of teachers to say what their itching ears want to hear. They will turn their ears away from the truth and turn aside to myths. But you, keep your head in all situations, endure hardship, do the work of an evangelist, discharge all the duties of your ministry."(II Timothy 4:1-5)

In the area of computer science, we are called to teach our discipline to students with patience and care; to correct and encourage, to share our gifts of creativity, logic, and attention to detail, and to share our love of the field. We will endure trials and hardship, but we must continue to pursue truth, justice, and mercy, and to act as agents of redemption in a fallen world.