

Why Christians Should Study Computer Science (and other technical disciplines)

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In a talk he gave at the 2002 workshop on *Vocation and the Professions of Engineering and Computer Science* [2], physicist and entrepreneur Robert E. Slocum spoke of how his book **Maximize Your Ministry** [4] was originally titled **Ordinary Christians in a High-Tech World**. Unfortunately, the book did not sell well under its original title because “Christians aren’t into hi-tech.” Why is this? With a world that is increasingly controlled by computers and other technologies, why would Christians choose to opt out?

In this essay, we explore this question and present a few reasons Christians with the necessary gifts *should opt into* hi-tech careers like Computer Science. We can summarize these reasons as *obedience, worship, from the heart, and for eternity*. Although we focus on Computer Science, most of our discussion applies equally well to other technical disciplines (e.g., Engineering).

I. Out Of Obedience

Some Christians may opt out of computing-related careers by reasoning that: (i) the Bible makes no mention of computers; and (ii) the Bible is our rule of faith and life; so (iii) computers must not be important to our faith and/or life. However the Bible does speak extensively about God’s *creation*, and we have argued elsewhere [1] that computing is a part of God’s creation. Near the beginning of the book of Genesis, we read:

Then God said, “Let us make mankind 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 creatures that move along the ground.” So God created mankind in his own image, in the image of God he created him; male and female he created them. 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 1:26-28

This passage indicates that God created mankind to (among other things) subdue and rule over His creation.¹ If computing is indeed a part of God’s creation, then men and women who work to increase mankind’s understanding and mastery of computation (i.e., computer scientists) are obeying God’s command with respect to this part of His creation.

¹ Other biblical passages (e.g., Genesis 2, Psalm 24) imply that we are to rule as *regents* or *stewards* on God’s behalf, as opposed to despots on our own behalf.

II. As an Act of Worship

Another reason some Christians might shun a computing-related career is their view that some careers (e.g., minister, missionary) are more spiritual than others. Under this line of reasoning, the value of one's work depends on how directly it contributes to the salvation of people's souls. A "religious" career (e.g., missionary) is thus thought to be better in God's eyes than a "secular" career (e.g., computer scientist), in this view.

One root of this view is Old Testament Judaism, where special intermediaries (priests) mediated between holy God and sinful people. There, worship consisted of a person bringing an animal to a priest, who killed it as a sacrificial atonement for the person's sin.

In New Testament Christianity, a *priesthood of believers* replaces these special priests (1 Peter 2: 5-9), and Jesus' perfect sacrifice replaces ritual animal sacrifices (Hebrews 7: 26-28). So how do we as Christians worship in this new era? According to Romans 12:

Therefore I urge you, brothers (and sisters), in view of God's mercy, to offer your bodies as living sacrifices, holy and pleasing to God – which is your spiritual worship. Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is – his good, pleasing, and perfect will.

- Romans 12: 1, 2

That is, where the Judaic act of worship was the sacrificial offering of an animal, my Christian act of worship is the daily offering of my body as a *living sacrifice* through which God can work His will. Another way of saying the same thing is that I worship God by doing that to which God calls me, which is also known as my *vocation*.

Interestingly, even in the Old Testament (Exodus 28: 2-5; 31: 1-11; 35:30-36:2), God called people to perform tasks like weaving, carving, and metalworking that were not implicitly "spiritual". He did this by equipping them with abilities, knowledge, and skills – *gifts* – that they could use to His glory. This is still true today: when God calls people to a vocation, He equips them with the gifts for that vocation. The gifts God has given us thus provide us with hints as to our vocation – if God has given you the gifts to be a computer scientist, he may well be calling you to that as your vocation!

The notion that some vocations are more spiritual than others is thus *false*. What matters is that (i) we know what gifts God has given us, (ii) we strive to know God's will, and (iii) we use our gifts in keeping with that will. Put differently:

Whatever you do, work at it with all your heart, as working for the Lord, not men.

- Colossians 3:23

In summary, Christians can worship God by serving Him as ministers, computer scientists, janitors, ...; in fact, any task to which God calls them. Men and women whom God calls to be computer scientists, and who pursue this vocation in a way that is holy and pleasing to God, can thus do so as an act of worship.

III. From the Heart

Another reason some Christians might avoid a career in computer science is their belief that people should invest their resources in endeavors with eternal consequences:

Do not store up for yourselves treasures on earth, where moth and rust destroy, and where thieves break in and steal. But store up for yourselves treasures in heaven, where moth and rust do not destroy, and where thieves do not steal. For where your treasure is, there will your heart be also.

- Matthew 6: 19-21

In this view, people who engage in *temporal* concerns (e.g., writing software or designing computer systems) are storing up treasure on earth, whereas those who engage in *eternal* concerns (e.g., saving people's souls) are storing up treasure in heaven.

With a little thought, it should be evident that this is a different version of the same spiritual/secular vocational dichotomy we have previously argued is false. One can be a computer scientist without storing up "treasures on earth." (One can also be a pastor or missionary without storing up "treasures in heaven.") Jesus' point is this: What drives our day-to-day lives? On what do we spend our time? On what do we spend our money? When push comes to shove, *what motivates us?*

There are many possible motivations for being a computer scientist, including the job security, the financial rewards, the status of working in hi-tech, and so on. These are clearly "treasures on earth" – not especially Christian motivations. However there are good motivations for Christians to become computer scientists. One such motivation is *service*. The Colossians passage we cited earlier is worth repeating:

Whatever you do, work at it with all your heart, as working for the Lord, not men.

- Colossians 3:23

In a world that is increasingly driven by information, Christians with computational skills can use those skills in a wide variety of Christ-honoring ways, ranging from helping to bridge the "digital divide" between information haves and have-nots, to applying computational linguistics to facilitate Bible translation in an organization like Wycliffe Translators [5], to working to inject Christ's values into our materialistic tech-culture.

Another motivation is the joy that results from writing a program that works beautifully, designing an optimal algorithm, or crafting an elegant proof. Why do these activities elicit joy from within us? Genesis 1 and 2 teach that God created humans in His *image*, one facet of which is His creativity. By allowing us to express creativity, computer science lets us embody this aspect of God's image within us. It is not a coincidence that imitating God in this way brings about a sense of joy and fulfillment!

Another motivation is to know God better. Boyle, Kepler, Newton, Pascal, and other early scientists were motivated to discover the laws of God's creation, in order to better understand their Creator. Similarly, a theoretical computer scientist seeks to discover the limits of computation – computational laws [1]. As we discover the limits God has placed upon computing, we learn more about Him and thus know Him better.

IV. For Eternal Ends

A final reason some Christians might avoid a career in computer science is their belief that when Jesus comes again, things that are “of the world” will be consumed in the fire of His return (2 Peter 3: 7-13). In this view, computers and other technologies will not exist after Jesus returns, so why waste our energies on such things?

One problem with this view is the teaching of Genesis 1 and 2 in which God calls us to exercise dominion over and be stewards of His creation. If the creation is simply going to be burned away to nothing, what is the point?

One way of resolving this dilemma is to note that Peter speaks of a “new earth, the home of righteousness” (see 3:13), which is also described in John’s Revelation:

“Then I saw a new heaven and a new earth, for the first heaven and the first earth had passed away, and there was no longer any sea. And I saw the Holy City, the new Jerusalem, coming down out of heaven from God ... I did not see a temple in the city, because the Lord God Almighty and the Lamb are its temple. The city does need the sun or the moon to shine on it, for the glory of God gives it light, and the Lamb is its lamp. The nations will walk by its light and the kings of the earth will bring their splendor into it... The glory and honor of the nations will be brought into it. Nothing impure will ever enter it...”

- Revelation 21: 1, 2, 22-24, 26, 27a

In short, the earth will disappear in fire when Jesus returns, but a new earth will appear in its place, that will contain a city in which God will dwell among his people, and to which the nations of this new earth will bring their treasures (splendor, glory, honor).

Regarding these treasures, there would seem to be two possibilities: One is that these treasures are created after the destruction of our earth, using the perfect resources of the new earth. This possibility unfortunately leaves unanswered the question of why we should fulfill our duties as God’s stewards of *this* creation.

Another possibility is that these treasures are created on our earth, and have been *refined* and *purified* by the fire of Christ’s return. This possibility – that what we do in this world can survive (cleansed of impurities) into the new earth – motivates us to fulfill our mandate to serve God as His stewards by working to better our world. If correct, then it is an interesting thought-exercise to speculate on how computer systems that survive to the new earth (cleansed of their impurities) would be different from those of this earth.

The idea that what we do on this earth can survive the end of this world is not new. Tradition has it that Martin Luther said, *“If I believed the world were ending tomorrow, I would plant a tree today.”* Luther’s statement suggests that what we do on this earth can have eternal worth – if it is a thing God would consider to be good.

In his final Narnia story **The Last Battle** [3], C.S. Lewis paints a similar view of the new earth. In the next-to-last chapter (following the destruction of the Narnian world in the final battle between good and evil), the characters find themselves in a new place that they do not immediately recognize:

"If you ask me," said Edmund, "it's like somewhere in the Narnian world. Look at those mountains ahead-and the big ice-mountains beyond them. Surely they're rather like the mountains we used to see from Narnia, the ones up Westward beyond the Waterfall?"

"Yes, so they are," said Peter. "Only these are bigger."

"I don't think those ones are so very like anything in Narnia," said Lucy. "But look there." She pointed southward to their left, and everyone stopped and turned to look. "Those hills," said Lucy, "the nice woody ones and the blue ones behind-aren't they very like the Southern border of Narnia?"

"Like!" cried Edmund after a moment's silence. "Why, they're exactly like. Look, there's Mount Pire with his forked head, and there's the pass into Archenland and everything!"

"And yet they're not like," said Lucy. "They're different. They have more colors on them and they look further away than I remembered and they're more ... more ... oh, I don't know. . ."

"More like the real thing," said the Lord Digory softly.

Suddenly Farsight the Eagle spread his wings, soared thirty or forty feet up into the air, circled round and then alighted on the ground.

"Kings and Queens," he cried, "we have all been blind. We are only beginning to see where we are. From up there I have seen it all-Ettinsmuir, Beaversdam, the Great River, and Cair Paravel still shining on the edge of the Eastern Sea. Narnia is not dead. This is Narnia."

"But how can it be?" said Peter. "For Aslan told us older ones [in an earlier volume of the series] that we should never return to Narnia, and here we are."

"Yes," said Eustace. "And we saw it all destroyed and the sun put out."

"And it's all so different," said Lucy.

"The Eagle is right," said the Lord Digory. "Listen, Peter. When Aslan said you could never go back to Narnia, he meant the Narnia you were thinking of. But that was not the real Narnia. That had a beginning and an end. It was only a shadow or a copy of the real Narnia which has always been here and always will be here: just as our own world, England and all, is only a shadow or copy of something in Aslan's real world. You need not mourn over Narnia, Lucy. All of the old Narnia that mattered, all the dear creatures, have been drawn into the real Narnia through the Door. And of course it is different; as different as a real thing, is from a shadow or as waking life is from a dream."

Fast-forwarding to the next (and final) chapter, we read:

And Lucy looked this way and that and soon found that a new and beautiful thing had happened to her. Whatever she looked at, however far away it might be, once she had fixed her eyes steadily on it, became quite clear and close as if she were looking through a telescope. She could see the whole Southern desert and beyond it the great city of Tashban: to Eastward she could see Cair Paravel on the edge of the sea and the very window of the room that had once been her own. And far out to sea she could discover the islands, islands after islands to the end of the world, and beyond the end, the huge mountain which they had called Aslan's country. But now she saw that it was part of a great chain of mountains which ringed round the whole world. In front of her it seemed to be quite close. Then she looked to her left and saw what she took to be a great bank of brightly colored cloud, cut off from them by a gap. But she looked harder and saw that it was not a cloud at all but a real land. And, when she had fixed her eyes on one particular spot of it, she at once cried out, "Peter! Edmund! Come and look! Come quickly." And they came and looked, for their eyes also had become like hers.

"Why!" exclaimed Peter, "it's England. And that's the house itself--Professor Kirk's old home in the country where all our adventures began!"

"I thought that house had been destroyed," said Edmund.

"So it was," said the Faun. "But you are now looking at the England within England, the real England just as this is the real Narnia. And in that inner England no good thing is destroyed."

Lewis' picture of our reality as a mere shadowland, beyond which lies an ultimately indestructible reality, provides one way to reconcile our task as stewards of God's creation with the Bible's images of apocalyptic destruction. If this view is correct, then Christian computer scientists can pursue their vocation in this world in the hope that their "good" efforts will survive in the next world.

Conclusions

We believe that Christians who are suitably gifted should consider becoming computer scientists, and we have presented a variety of reasons for them to do so:

- To obey God's command to subdue (the computational aspects of) His creation;
- Because God will accept our lives (as computer scientists) as worship;
- Out of a godly, heartfelt, motivation, such as
 - To acquire (computational) skills by which we can serve others in today's world,
 - For the joy that comes from (computationally) imitating God's creativity,
 - To better know and understand our Creator (by discovering the limits He has placed on computation); and
- Because what we do (as computer scientists) can have eternal significance.

In the process, we have sought to address objections that Christians might raise to our views. We hope that these thoughts will encourage suitably gifted Christians to "get into" hi-tech, and so bring this area of God's creation under the kingship of Jesus Christ. To Him be the glory!

References

- [1] Adams, Joel C., "Computing Technology: Created, Fallen, In Need Of Redemption?", *The Proceedings of the Conference on Christian Scholarship ... For What?*, Calvin College, Grand Rapids, MI, September 27-29, 2001. Online at: <http://www.calvin.edu/fss/125conf/adamsjo.htm>
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- [3] Lewis, Clive S., **The Last Battle**, HarperCollins, 1994.
- [4] Slocum, Robert E., **Maximize Your Ministry: How You As a Lay Person Can Impact Your World for Jesus Christ**, NavPress, 1990.
- [5] Wycliffe Translators. Online at: <http://www.wycliffe.org/>.

When studying computer science, you look at both the hardware and software. To further break it down, you gain an understanding of how a computer performs (hardware) and its programming languages (software). What are the entry requirements? While entry requirements vary depending on the school you're applying to, it's typical for computer science degrees to emphasize mathematics. These courses may include advanced functions, and calculus and vectors. You gain a wide range of skills when studying computer science. Technical skills such as programming, and non-technical skills such as problem-solving and leadership, are amongst some of them. A degree in computer science can translate to roles in many different industries. The computer science study essentially involves both the theoretical principles and its practical implementation. The computer science fields of study also overlap on each other's subject domain. In this article, we will explore various computer science fields of study, research areas, latest trends in CS studies. There are many fields of study in computer science which do not fall exactly into a particular discipline but rather into an overlapping of two or more disciplines. And therefore, the computer science fields of study includes the study of many inter-related disciplines. The interdisciplinary nature of CS and the approach for computer science programs offered allows the students to learn by studying different disciplines and their interrelationship.

WHY STUDY IT? Computer ethics can be defined as the analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology [3]. We therefore learn or study computer ethics to convey a sense of professional responsibility not covered in other courses to deal with the true nature of computing as a service to other human. Why should therefore study Computer Science? Because you are genuinely happy doing it! 9. Do you mean, other than that you carry one or two powerful computers on your body at all times, and might want to know how they work? Do you mean, other than that you may have to do many boring, time-consuming tasks like sorting and alphabetizing in your lifetime, and you might want to know that there are efficient ways to do these tasks? Generally speaking, computer science is the study of computer technology, both hardware and software. It is really a good subject to study. 1.1K views. The service you are accessing is either under high load or has detected unusual activity from your network location. To protect this service from abuse please complete the challenge below to continue. What code is in the image? submit. Your unique support ID for this request is: 13059125321367775541. If you see this challenge frequently or believe you are seeing it in error please record this ID and contact the Deakin University IT Service Desk. Additional information is available from the IT Knowledge Base.