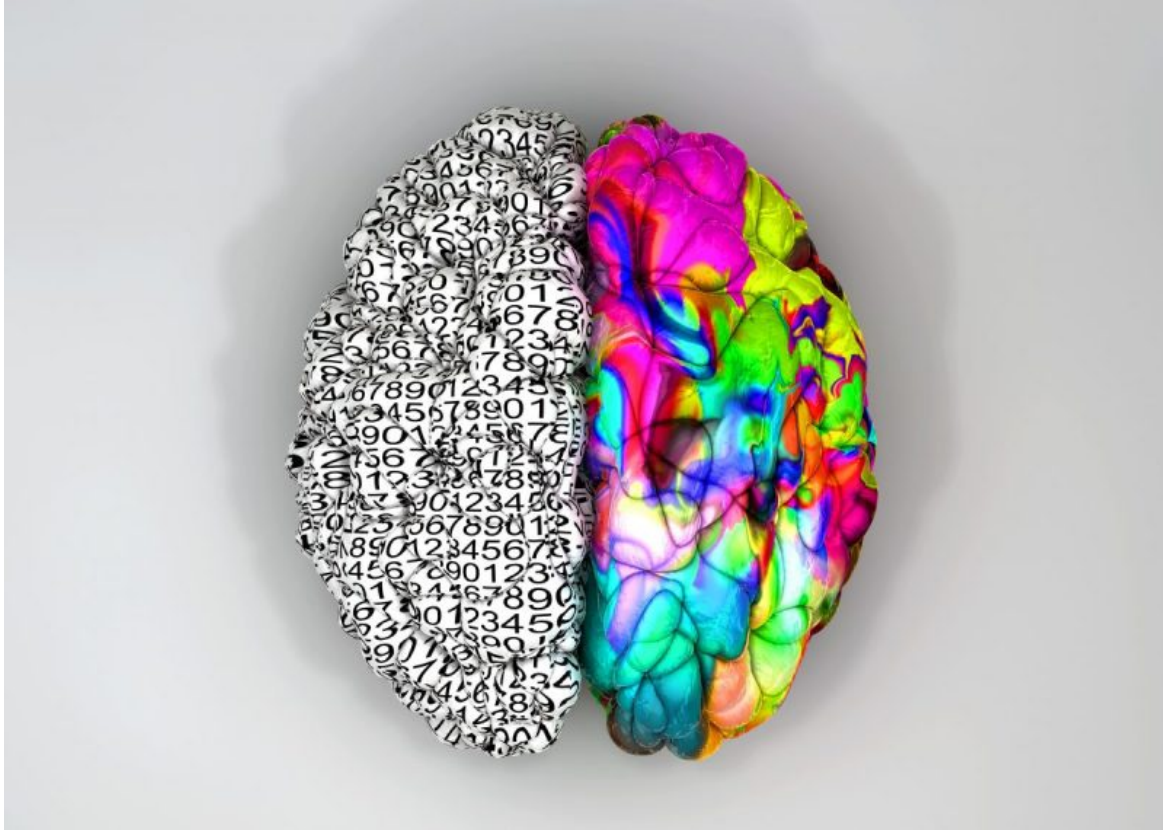


Dear tech world, STEMism is hurting us

- Peter Sena, Digital Surgeons and Michael Zimm, Digital Surgeons September 30, 2017



In a [blistering assault](#) on the value of the liberal arts many months ago, former Sun Microsystems CEO Vinod Khoshla offered anything but nuance in his opening indictment: “Little of the material taught in Liberal Arts programs today is relevant to the future.”

The rest of his article is a tirade against majoring in the liberal arts.

However, Khoshla’s own field, tech, is full of people who’ve devoted their university days to the liberal arts:

Susan Wojcicki (CEO of YouTube) majored in history

Reid Hoffman (founder of LinkedIn) majored in philosophy

Stewart Butterfield (CEO of Slack) majored in philosophy

Alexa Hirschfeld (cofounder of Paperless Post) majored in Classics

Parker Harris (cofounder of Salesforce) majored in English Literature

Jack Ma (cofounder of Alibaba) majored in English

These are not one-off unicorns. They are part of pattern — CEOs and founders with non-tech degrees. In his new book “[The Fuzzy and the Techie](#): Why the Liberal Arts Will Rule the Digital World,” Scott Hartley extensively discusses the numerous examples of “fuzzies” who’ve transformed the tech world.

The idea that the tech world is comprised exclusively of techies is a myth. People with humanities and art degrees (aka “fuzzies”) are crucial players in the innovation space.

The dangers of STEMism

We’ve reached the point where STEMism is harming innovation. Not to be misunderstood, we’re all for valuing STEM, just not worshipping it.

Organizations focused on hiring people with only STEM backgrounds risk having gaping deficits in [creativity, empathy, and communications](#). These are areas where liberal arts disciplines excel. Businesses are losing out on a huge source of brainpower and talent if they focus exclusively on STEM.

Steve Jobs understood the advantage of incorporating fields that focus on pushing the boundaries of human knowledge. His obsession with beautiful fonts stemmed from a course on calligraphy at Reed College. As he once [said](#), “it’s in Apple’s DNA that technology alone is not enough — that it’s technology married with liberal arts, married with the humanities, that yields us the result that makes our hearts sing.”

Our world overflows with talented minds that have achieved entrepreneurial success aided by a value for visual aesthetics and trained in literature, history, and philosophy.

This is not news for the business and tech world. Yet whenever STEM evangelists in tech preach the gospel of STEM, they inevitably trash the “soft disciplines.”

Tech companies need polymaths. Polymaths are multidisciplinary, knowledge-absorbing creatives. They can be found throughout history. Polymaths are not the type of individuals who raise one domain of knowledge over all the others. They gain insights through cross-functional learning. The CEOs we mentioned at the start of this article are modern-day polymaths. Those who say that an arts degree (visual arts, music, etc...) or a history or a Classics degree has little value today are ignoring the success that many of those degree holders have in Silicon Valley.

HEAT: A new framework for innovation

As the artificial intelligence (AI) revolution begins, it's apparent many jobs will transform. Computer programming is no exception, especially since many aspects of coding will be automated by AI software. In many ways, people trained in the arts and humanities are in a [strong position](#). Robotics and AI are going to usher in a new technological revolution. No one truly knows what this will mean for the future of humanity. But one thing is certain: For the foreseeable future, AI will not be able to automate novel sets of actions and creative thinking. We will still need human input to shape algorithms.

Promoting STEM to the exclusion of other fields of knowledge is by no means a guaranteed recipe for success. Better is a learning framework focused on: Humanities, Engineering, Art, and Technology, or HEAT for short.

A company comprised of people with HEAT backgrounds will produce diversity of thought — the yeast of innovative thinking. Training in psychology, anthropology, art, literature, history, philosophy, Classics, and journalism are skills that will advance innovative and creative thinking in an organization.

Scott Hartley articulates not just the value of the humanities in the tech world but the vital role the liberal arts will play in its future:

“When we talk about ‘software eating the world,’ there’s a flipside to that. Software is touching every aspect of our lives, which in turn means that we require more diversity of thought, passion, and methodology to apply that tech meaningfully to the biggest problems we face. Code is necessary, but not sufficient. Lost in the drumbeat of STEM is the human context.”

Adopting a more cross-functional approach

Developing innovative solutions demands cross-functional groups. One of us is a Classics PhD who applies his aptitude for persuasive writing and speaking to real world business challenges. The other is a CEO who loves design, computer programming, and visual language. Though we come from radically different fields of learning, we develop innovative solutions together due to (not in spite of) our different modes of thinking. We recommend that others give it a shot.

A HEAT-infused framework does not raise one discipline over all the others but harmonizes disparate fields of study and recognizes that no one field has a monopoly over learning today. Even code can become obsolete. Even coders can become automated.

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