

Will Silicon Valley's Confident Technologist Investors Save Healthcare?

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I write about capturing value in healthcare innovation.

“Every interaction in every area related to health is just so sh*tty,” explains Chamath Palihapitiya, a former Facebook FB +1.86% executive and founder of the VC firm Social+Capital Partnership. “The software is crap, the services are crap, the people are crap. So there is a lot of value that people like us can add because you have a very different perspective on how the system should work.”

That, in essence, seems to be the core thesis of a prominent group of Silicon Valley VCs (see table below) who view healthcare not just as a potentially lucrative investment space, but also as a moral imperative. In the same way that Clemenceau observed that “La guerre! C’est une chose trop grave pour la confier à des militaires” (often paraphrased as “war is too important to be left to the generals”), these technologists have apparently determined that healthcare is too important to be left to the doctors (or to the healthcare system).

Vinod Khosla may have fired the shot across the bow early last year with his notorious TechCrunch post, “Do we need doctors or algorithms” (a thesis refined in this white paper, and this slide deck), but he’s clearly not alone.

These technologists are emboldened by their own accomplishments, liberated by the wealth they’ve accumulated (“I’m rich, I don’t give a sh*t” Palihapitiya noted), and inspired by the disruption they’ve witnessed in other arenas.

Explains David Lee of SV Angel,

“Google GOOG -0.13% motivated a generation of bright computer scientists to learn the ins-and-outs of the advertising industry and turn it into a software problem. The original PayPal founding team went through the schlep work of learning the norms, regulations and other vagaries of the payment industry in the early 2000’s. And they used software to help re-invent it. And most recently, Palantir went through the hard, unsexy work of understanding the intelligence and defense industries and used software to attack hard, important problems. We want to back founders who want to do the same when it comes to health informatics.”

Many of these technologists seem to view their core mission as using technology to transfer knowledge – and power – from encrusted “elites” to consumers more broadly, and in the words of Palihapitiya, “deconstructing calcified centers of powers.” As Palhapitiya sees it,

“The business model of the future is to serve individuals, because individuals are now relatively smarter. That’s not correlated with education, by the way—they are smarter because they have access to tons more information. And so we are all more connected, we are all more engaged, and as a result we are all more cynical. And we all see that the emperor has no clothes. All these things that you thought were important—you just realize, man, these people just played the game longer than I did to get to the top of that mountain, but they are just as stupid

as anyone else, so why would you trust these people? That's true of banking, that is true of people who run educational institutions, it's true of healthcare. So the model of the future is to basically deconstruct all of that and empower the edges. That is the way you build a multi-gajillion-dollar company. Give people individual power."

It also seems clear that while the goal might be for everybody (especially doctors) to be equal, one group seems perhaps somewhat more equal than others – technologists. "Learn to code," Palihapitiya tells a McKinsey interviewer. "Everything else is secondary."

As applied to healthcare, the idea seems to be that technologists salvage medicine, while doctors should welcome the assistance, chip in where possible (Palihapitiya mentions the need to "marry up" engineering insight with "with people who understand healthcare in very specific circumstances"), but otherwise get out of the way.

The question, of course, is whether this is outrageous arrogance or just what our healthcare system needs.

I've struggled with this – I've critiqued Khosla, and Silicon Valley more generally for embracing an overly reductive view of medicine, and clinging to a caricature of medicine that understates the complexity and overlooks the humanity. Medicine is about more than robotically inputting symptoms receiving a diagnosis and therapy recommendations – though as Khosla correctly observes, those components are pretty important, and doctors often don't get it right.

Yet, I'm also inspired by the audacity of the technologists' ambition; healthcare urgently needs help, and not just in the areas of operational improvement, where so much attention is now focused, and where the goal seems to be to ensure that all patients receive the best care now possible. We also need to continue to raise the bar, and figure out how to definitively treat dreadful diseases, not just slightly beat them back. I'm tremendously excited by the promise of data-driven healthcare innovators such as Jeff Hammerbacher, whose work at Mount Sinai with Eric Schadt was recently highlighted in the NYT.

A significant concern remains: will the ambitious visions of the VC technologists find expression in their investments? To date, the picture appears, at best, mixed. There are some portfolio companies that seem promising but not exactly transformative, some that seem transformative but not especially promising; many are too early in their development to know.

But venture is an exception-based business – the point isn't whether most innovative healthcare investments flop, it's whether there is an occasional, extraordinary winner. When we get one, will it emerge from investors like Khosla and Palihapitiya, who believe in technology-as-driver, or from folks like Venrock's Kocher and Aberdare's Kaushal, whose investments seem more driven by healthcare insights?

The audacious hope is that one day, a truly disruptive investment firm figures out how to successfully integrate the ambitious vision of technologists with the compassionate wisdom of clinicians, and in doing so, is able to effectively catalyze the creation of the transformative healthcare companies our system so urgently requires.

Name	Fund	Background	Tech	HC Quote	HC Investments*
Vinod Khosla (Kevnote)	Khosla Ventures	Engineer, MBA	Sun Microsystems	"Computers are much better than people at organizing and recalling information. They have larger and less corruptible memories, remember more complex information much more quickly and completely, and make far fewer mistakes than a hot shot MD from Harvard. Contrary to popular opinion, they're also better at integrating and balancing considerations of patient symptoms, history, demeanor, environmental factors, and population management guidelines than the average physician." (Ref)	AliveCor CellScope Gamgee Ginger.io ZocDoc
David Lee (Article)	SV Angel	Tech lawyer	Google , StumbleUpon	"We believe that there is a massive opportunity in the intersection of software and biology, which we broadly define as 'Health Informatics.' ...We think the timing is right for software developers to make an impact in these areas. The ultimate goal is to use software, IT and data science to help diagnose, treat, reduce and cure disease – at the physical, mental and emotional levels." (Ref)	Counsyl CrowdMed DNA Nexus Flatiron Medisas
Bill Maris (Profile)	Google Ventures	Neuroscience	Burlee.com	"I'm interested in the ideas that sound a little crazy, such as radical life extension, curing cancer, being able to create a simulation of the human brain and map every neuron." (Ref)	23andme Adimab Foundation Med. OneMedicalGroup Wingu
Chamath Palihapitiya (Interview)	S+C Partnership	Software engineer	AOL , Facebook	"Every interaction in every area related to health is just so sh**ty. The software is crap, the services are crap, the people are crap. So there is a lot of value that people like us can add because you have a very different perspective on how the system should work." (Ref)	Asthmapolis Better Integrat. Plasmonics Neurotrack Simplee
Brian Singerman (Profile)	Founders Fund	Software engineer	Google	"We are not looking for incremental change. We are looking for absolute cures in anything we do." (Ref)	Natera Pathway Genomics Practice Fusion Ringadoc Signal. Therapeutics

*Not comprehensive