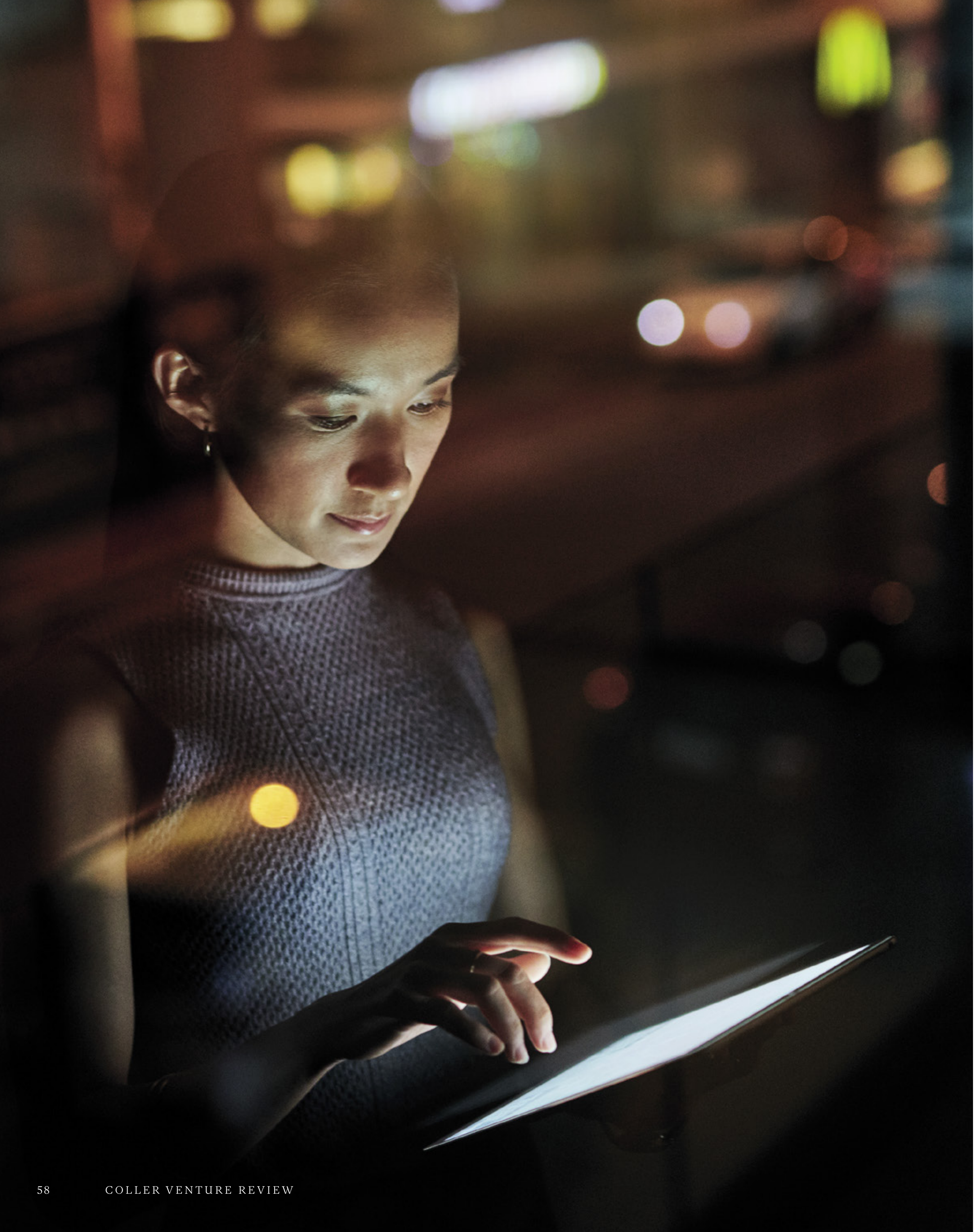

Shifting the Entrepreneurial Paradigm to a Data-Driven View

Professor Ethan Mollick
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Author of The Unicorn's Shadow: Combating the Dangerous Myths that Hold Back Startups, Founders, and Investors

In this interview with the Coller Venture Review, Wharton Associate Professor Ethan Mollick emphasizes the importance of methodical testing and measured adaptation among startups in a post-COVID-19 world. Mollick discusses the most enduring myths about entrepreneurship and how recent research shows that these are false. He also speaks about how founders get ideas for new ventures, how to make better pitches for capital, and what the world can learn from Israeli startups. Most importantly, he offers advice on which skills founders should build in order to help their ventures scale up and succeed.

> Myths about who should become an entrepreneur are dangerous because they discourage people who otherwise might start companies from doing so

Coller Venture Review —
What inspired you to write a book about myths of entrepreneurship? Did your experience as an entrepreneur shape your thinking before you entered academia?

Mollick —
It did—but my ideas were shaped more by teaching thousands of students about entrepreneurship. It is such a powerful concept. People want to become founders. They read a book about Steve Jobs or Mark Zuckerberg or Peter Thiel, and they try to emulate these models. Looking at such examples is fine, but the issue is that in the last 10 years, there has been a boom in entrepreneurial research that uses real data to get at deep questions about how you start a company and what you should do as a founder. Data often contradicts some of the received wisdom. That is what encouraged me to write this book. Many people become discouraged from entrepreneurship because they follow the wrong advice.

Coller Venture Review —
What do you consider to be the most wrong advice? What are the most dangerous myths and monomyths about entrepreneurship? Where do they come from and why do they persist?

Mollick —
I separate them into myths about whether you should become an entrepreneur, and those about how to be successful as an entrepreneur. Myths about who should become an entrepreneur are more dangerous because they discourage people who otherwise might start companies from doing so. That is a problem because we already know a lot of biases exist. Founders of venture-backed, high-growth companies are disproportionately male, white, and highly educated. It would be nice to see more people from other backgrounds launch companies.

The myth that you must launch a company as a young techie does not match up with the data, which shows that older founders are more successful. Another myth is that you must have a certain personality type to be a good founder; we have lots of evidence that that is not true—there is no entrepreneurial personality type. Such myths are dangerous because they discourage people from even trying.

Another big myth is that once a company is launched, you should just start doing stuff, just go out and start selling. But there is a process that entrepreneurs should go through when they want to run a company, a process of disciplined experimentation. It is not about just starting to do things. You need a disciplined approach.

20%–50%

The boost to your chance of success by writing a business plan even though they are out of style

> This does not mean that every company should be founded by solo entrepreneurs, but there is little support for the view that you should always found companies in teams

Coller Venture Review —
One of the issues you address in your book is the need for co-founders, which venture capitalists seem to almost insist on. What does the evidence show?

Mollick —
I have a research paper with Jason Greenberg at New York University "Sole Survivors: Solo Ventures Versus Founding Teams" where we show that solo founders often outperform groups of founders. This does not mean that every company should be founded by solo entrepreneurs, but there is little support for the view that you should always found companies in teams. A lot of evidence suggests that founding a company as a team can create all kinds of tensions. If you have someone with whom you are launching a company, it is often difficult to resolve those tensions. A study from about 20 years ago surveyed venture capitalists. It showed that when a company fell apart, 65% of the reasons had to do with conflicts within the senior management team. That is a common way for companies to fall apart. People are too willing to emphasize having co-founders. In fact, you can hire people to work with you or give them equity stakes without them being co-founders.

Coller Venture Review —
What kind of shadow do unicorns cast over the entrepreneurial ecosystem, especially in places like Silicon Valley? What myths do unicorns breed, and what are the implications?

Mollick —
Unicorns—or private companies worth more than $1 billion—are the lottery ticket winners. Those are the touring rock bands or the Hollywood actors, to use analogies from other fields. That is why people go into acting, or why they start playing the guitar, or why they become entrepreneurs… they believe they are going to be unicorns. Part of the issue with unicorns is that becoming one requires a lot of luck and good timing. When you look back at unicorns that were successful and you try and emulate them, not only are you at risk of emulating bad behavior—what we call superstitious learning—but you are also not necessarily emulating the core of what made that unicorn successful.

For example, think about Facebook. It was not the first social network. What lessons can you learn from its meteoric rise? Certainly, some of it might have been because of the clever strategy of launching in colleges first and creating demand. But it also was at the right time at the right place. People were connected to the internet and found it interesting. What can you replicate from that? If you just take lessons from these unicorns, you might end up emulating things that may or may not have been responsible for their success.

Coller Venture Review —
You write about the importance of using data to bust myths. Could you offer more examples of how new scholarship is overturning conventional wisdom?

Mollick —
Sure, the book is full of data like that. For example, you get about a 20% to 50% boost to your chance of success by writing a business plan even though they are out of style. That is not because business plans are useful as your plan, but they help you as a team surface issues and coordinate on the future. That is a useful process. I talk about data on the age of founders and the psychology of founders, and where all that comes from. One of my favorite examples is the data showing overwhelmingly, that if you want to be more creative, both sleep and coffee help. That is useful information. Everything in the book is data informed.

Coller Venture Review —
Coming up with ideas for a startup is often the first challenge for an entrepreneur. Where do founders come up with startup ideas?

Mollick —
In the book I discuss a few different ways, because there is not one magical method. Often a good way to start is by scratching your own itch to think about an effectual approach to entrepreneurship. What do you know, who do you know, what resources do you have at hand, and what can you build from that? You are probably an expert in something, whether it

“The first thing you need to do is know how to tell a good story. [...] A lot of founders overemphasize showmanship over preparation”

is a hobby or a particular task at your job. So where are the gaps?

Another way I like to give people a hint is when you're at a job and you see Microsoft Excel being used for anything other than adding up numbers, it's almost always an opportunity for a piece of software. This is because Excel is the programming language available to the masses, so it's a great place to start to find a business idea.

Coller Venture Review —
Capital is the fuel that drives startups. What does the evidence show about how entrepreneurs should raise capital to keep their ventures growing?

Mollick —
There are two flavors of capital—dilutive and non-dilutive. Non-dilutive capital tends to be the founder's own money, or resources raised through crowd funding or grants. Those are all nice forms of capital because you do not have to give up any equity of your company. Then you have massive dilutive funding, which includes things like venture capital or angel investment. There is a lot in the book about how you can sell and pitch to these groups of people. But the general goal is, only raise as much as you need and only when you need it, which is easier said than done. But it's not a trophy; it's a means to an end. Your venture is an engine—and capital is fuel for your engine. Your job as an entrepreneur is to build the engine and then get the right fuel for it at the right time.

Coller Venture Review —
Has the ability of founders to raise capital dried up because of the pandemic? If so, how are entrepreneurs dealing with that situation?

Mollick —
The latest numbers just came out a little while ago. People were predicting that there would be a big drop in the amount of capital being invested and worrying about the changes to geography. For most venture capital funding, the average distance for companies in which VCs invest is only 80 miles, and 40% of VC investments are within two miles of their headquarters—so investment has been highly centralized. People thought, maybe there will be a drop in capital investment, but maybe then we will be using Zoom to make investments and we may not need to go to Silicon Valley anymore. Both those things have turned out not to be true. So far, the change in capital investment has been small, and the capital is still going to the same old places it always went to.

Coller Venture Review —
Interesting. The more things change…

Mollick —
Exactly.

Coller Venture Review —
Pitching to angels, VCs and other potential investors is among the most important skills for any entrepreneur. What are some of the most common mistakes that you have seen founders make in this regard? How should they correct them?

Mollick —
The first thing you need to do is know how to tell a good story. That often means sticking to a standardized method by which you tell these stories, a set of slides you use. I would recommend sticking to that method, but also making sure you can tell that story in a compelling way. A lot of founders overemphasize showmanship over preparation. The evidence shows that for professional investors, showmanship, like passion, does little, while preparedness and organization and clarity does a lot. For amateur investors, showmanship can often work better, but for professionals—that is the kind of investment that founders are looking for—you want to show methodical testing. The things that make you successful as an entrepreneur should make you successful at raising capital. You want to show the experiments that you have been conducting are successful, and what they have taught you, and how you can continue to learn and grow in the future.

Coller Venture Review —
Many new ventures flounder because, though they start strong, they fail to scale. What are some of the biggest challenges that startups face in building their operations over time and across regions? How should they deal with them?

Mollick —
The most important thing is organizing yourself early. Companies tend to continue along their initial path. Founders who do a good job setting up their organizational structure and caring about it from the beginning generally do better. A paper that just came out shows that you cannot make up later for missed organizational opportunities at the beginning. Figuring out how you want to grow your company, how it will look, what the org chart will be early on is helpful. In addition, hiring methodically, using proven techniques like behavioral questions, can be extremely helpful. On the customer side you need to make sure of the product-market fit. Make sure you understand why your customers are buying your product before you start spending a lot of money on marketing.

Coller Venture Review —
As founders think about the human side of scaling, you said that many ventures fall apart because of conflicts in the management team. As a company scales, how should it integrate the right kind of management expertise so that this does not happen?

Mollick —
It is important for founders to be aware of their own skill sets and to bring in people who have complementary skills early on and have a clear span of control for

those people. Knowing what they are responsible for helps prevent conflict and helps you scale up well. Founders also need to constantly let go of things as they grow, because they cannot have their fingers in everything the way they did when the company first started. Having a structure where you are training and handing things off to people from the beginning is extremely helpful.

Coller Venture Review —
What are some of the most important lessons you have learned about evidence-based entrepreneurship based on your research and that of other colleagues?

Mollick —
The most interesting paper I recall is one that showed that most stories that people tell about why their startups failed end up not actually telling you the root cause of why they failed. They are to help the emotional process of grieving for a company from the founder. It's hard to learn stuff from just observing. If you want to learn things, there is a strong mismatch between the popular view and what the data suggests. I think that people do not want to necessarily know, and I do not think the data is the only answer. You want to be unique, you want to tell your own story, but I think you should be aware of what the data says so that you can make the right choices about when to ignore it.

Coller Venture Review —
What is the Saturn Parable, and how does it tie into the themes of leadership and teamwork that you discuss in the book?

Mollick —
In addition to this book, I wrote another one a while ago on video games in business, a subject that I have been interested in for the last 15 years. It is about how you use games and simulations to teach effectively. I have been teaching using an entrepreneurship simulation in my classes for the last four or five years. Students run a realistic fake startup company over the course of several weeks, and they must manage all the processes from legal issues to customer issues. I bring in a mix of actors and real people to play roles. I have professional dungeon masters who play various characters.

I have been working with a new group at Wharton that I founded along with my colleague Sarah Toms called Wharton Interactive. The goal of that group is to take games we have been running in the classroom and use them to help transform education. One of our first products is called Saturn Parable, which takes place on a fake mission to Saturn in 2087. A lot of the stuff about it is realistic because we want the science to be real. But the idea is that, if you put people in a fake setting, they often learn better than if it is a realistic setting—especially about leadership or teamwork. We have you play this simulation, and crazy things happen that stress you in all sorts of interesting ways, and they force you to make errors with your team that are the kind of errors that happen in real life but in an accelerated way. It's a really cool discussion. Think of it as an escape room meets leadership training experience meets a classroom.

Coller Venture Review —
Israel is often called a startup nation because it has more startups per capita than any other country. What lessons can entrepreneurs in other parts of the world learn from Israeli startups?

Mollick —
Israel is either third or fourth in the expanded European, Middle East area in terms of fundraising. One of the most powerful lessons of Israel is the importance of ecosystems. They are not easy to start—you cannot just start an ecosystem. You need successful founders, sources of capital and government investment. Then it becomes self-sustaining in a useful way.

Starting with community, with a group of people and creating a virtuous cycle, is an important lesson from Israel. The other thing that Israeli startups teach us is about improvisation and bricolage. In a place where there were not necessarily a lot of resources or capital to get started, there was lots

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of need to improvise. We know that startups that improvise tend to survive. In contrast, startups that have too many resources fail at a higher rate than startups with less resources. You don't want to have no resources, but you don't want to have too many. In the middle, there's improvisation—and figuring out what to do with what you have. That kind of outward focus of having a small market that you need to quickly overcome is one of the reasons why Israeli companies have been so hungry and successful.

Coller Venture Review —
One of the most important messages from your book is that entrepreneurship is not in-born, but a skill that can be taught and learned. What advice would you give founders about the most important skills they should learn to succeed, even if their firms are not unicorns?

Mollick —
We know that the two things you can learn that will make you more successful as a founder—based on actual controlled experiments—are pitching and experimenting. You can learn how to do pitching better, and it has an effect. You can also learn how to run experiments better. A study in Italy found that companies that learned how to run experiments in a scientific way for their startup had twice as high revenue a year later as those that did not take a scientific approach. Those are two clear skills that founders could focus on to be more successful. What I urge all founders to do is realize that you must design your startup so that you can always keep learning. You have to learn about yourself as a founder. ■

About

Professor Ethan Mollick is an Associate Professor of Management and Ralph J. Roberts Distinguished Faculty Scholar at the Wharton School of the University of Pennsylvania, where he teaches innovation and entrepreneurship. He is an award-winning author of numerous publications, recently *The Unicorn's Shadow: Combating the Dangerous Myths that Hold Back Startups, Founders, and Investors*. His work on crowdfunding is the most cited article in management published in the last five years.

As the Academic Director and Co-Founder of Wharton Interactive, Professor Mollick works to transform entrepreneurship education using games and simulations. He has long held interest in utilizing games in education, and he co-authored a book on the intersection between video games and business that was named one of the American Library Association's top 10 business books of the year. He has built numerous educational games, which are used by tens of thousands of students around the world.

Professor Mollick holds a Ph.D. and MBA from MIT's Sloan School of Management and a B.A. from Harvard University, *magna cum laude*.