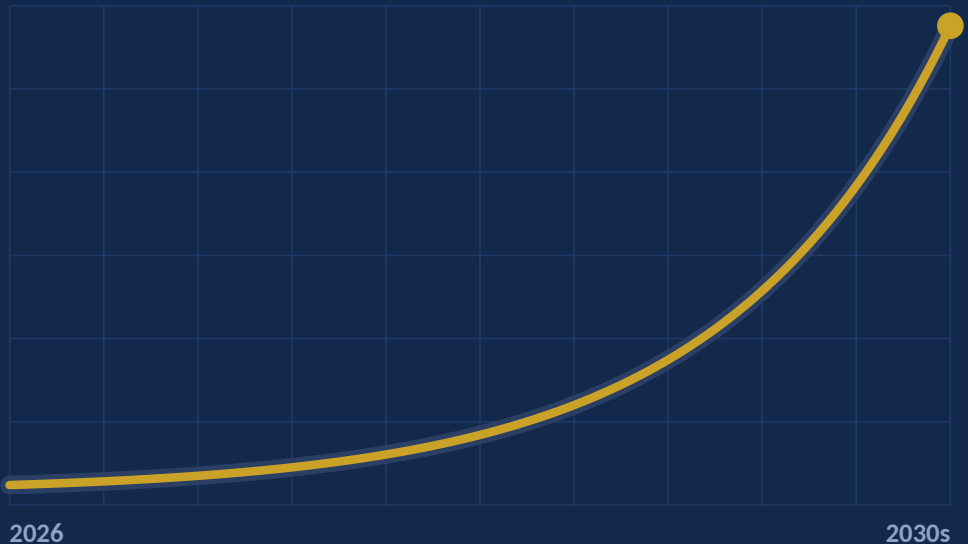

How AI Will Create a Radically Better 2030s

*And How the Triad Math Army Helps
Its Members Take Advantage of It*



Craig Hane, Ph.D.

"Dr. Del"

TMA.cool

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Inspired by the *American Optimist* podcast episode hosted by Joe Lonsdale, with Anthropic's Sholto Douglas and Nick Marwell. Watch it at

[youtube.com/watch?v=6D1wC95htTM](https://www.youtube.com/watch?v=6D1wC95htTM)

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INTRODUCTION

Why an 88-Year-Old Mathematician Is Paying Attention

I am 88 years old. I earned my Ph.D. in mathematics at Indiana University in the 1960s, taught as a professor for seven years, and then spent decades in business. I have seen a lot of new technologies come along. The slide rule gave way to the calculator. The calculator gave way to the computer. The computer gave way to the internet.

None of them prepared me for what is happening right now.

Recently I watched an episode of a podcast called *American Optimist*. Its host is Joe Lonsdale, an entrepreneur and investor who co-founded Palantir and started the venture firm 8VC. His guests were two young men who work at the very center of the artificial intelligence revolution: Sholto Douglas and Nick Marwell. Both are technical leaders at Anthropic, the company that makes the AI called Claude. Both work on something called *reinforcement learning*, which is one of the main ways these AI systems get smarter.

The episode was titled "How AI Will Create a Radically Better 2030s." I borrowed that title for this book because I believe it. But I also believe it will only be radically better for the people who prepare for it.

Why I care

I don't watch these things as an outsider. I use AI tools every day.

I write books with Claude. I treat it the way a famous person might treat a ghostwriter. I bring the ideas, the experience and the judgment. Claude does most of the hard work of putting words on the page. Then I edit, and we go back and forth until the book is mine. A human ghostwriter would cost me thousands of dollars per book. Claude costs me about \$20 a month.

When my grandson needed help with AP Calculus, I tried tutoring him over the internet. Then I discovered that Gemini, Google's free AI, could tutor him as well as I could, maybe better, and at any hour. So I made a video teaching students how to do it.

For some things, I am a hundred times more productive than I was two years ago. And I'm 88.

Augmented intelligence

Most people call it *artificial* intelligence. I prefer to call it **augmented intelligence**. It augments your intelligence. It doesn't replace it.

AI does not have ideas of its own the way you do. When I write a book, the AI never would have thought of writing that book. It only knows what I ask it to do. The ideas, the purpose and the final judgment are mine.

That is the key to everything in this book. The coming decade will reward people who learn to direct these tools. It will be hard on people who don't.

Two classes of sapiens

I believe we are about to see two classes of *sapiens*, two kinds of human beings. One kind learns to use AI to amplify what they can do. The other kind doesn't. The gap between them will grow every year.

That is why I built the **Triad Math Army**. It started as a six-tier mathematics program that takes students from a simple \$10 calculator all the way through calculus and differential equations. I added more than 30 *wisdom tools*, lessons about the consequences of our habits and actions. And now I am adding training on how to use AI tools well.

How this book works

Each chapter takes one big idea from the podcast. I explain it in plain language, in my own words. I tell you what I think of it. Then I show you what members of the Triad Math Army, and their families, can do about it.

I'm not going to repeat everything these young men said. You can watch the video yourself, and I hope you will. What I want to give you is the view of an old mathematician who has lived through many changes, and who thinks this one is the biggest of all.

CHAPTER 1

From Typing Code to Managing AI Teammates

When Joe Lonsdale asked his guests what it feels like to work at the cutting edge of AI, Sholto Douglas answered with a story about his own job.

Eighteen months earlier, he said, he typed nearly every line of computer code by hand, the way programmers always had. A few months later, he was guiding an AI model to write the code for him. But he had to check on it every few minutes, because it made mistakes and wandered off course.

Today, he can hand the AI a task that would take a day or two and let it work on its own. He described it as being like a junior member of his team. In fact, he joked that while they were recording the podcast, several of these AI teammates were back at the office working on his projects.

Think about what that means

In a year and a half, AI went from a tool you hold in your hand to a coworker you give assignments to.

A tool needs you every second. A hammer doesn't drive a nail unless you swing it. A coworker is different. You explain what you want, you check the results, and you correct them. Then you move on to the next thing while they work.

That is a completely different skill. Using a tool is about your hands. Managing a coworker is about your head: knowing what you want, explaining it clearly, and judging whether the result is any good.

This is not just about programmers

Computer programming changed first, and we'll see why in Chapter 3. But the same thing is coming to every job that is done at a desk: accounting, writing, design, engineering, research, sales, law, medicine.

I've already lived it. My books used to take me months or years. Now I give Claude a video transcript and my ideas, and we write a book together in days. I am the author. Claude is my teammate.

What most people are doing wrong

Right now most people use AI the way they use Google. They ask it a question, read the answer, and stop. That's fine. I do it too. But it's like hiring a brilliant assistant and only asking them what time it is.

The people who will thrive in the 2030s are the ones who learn to give AI real work: write this, analyze that, build this, check that. And they learn to judge the result.

What Triad Math Army members do

In the Triad Math Army, we teach members to do exactly this.

- **Start with a tutor.** Members learn to use Gemini as a free personal math tutor that explains every step, at any hour.
- **Move to a teammate.** Members learn how I use Claude to write books, and how they can use AI to do projects they could never do alone.
- **Build judgment.** You can't judge whether an AI's math is right unless you understand the math yourself. That is why the math program is still the foundation.

The young man from Anthropic went from typing code to managing AI teammates in 18 months. Our members can make the same leap, starting this month.

CHAPTER 2

AI Is Already Doing New Mathematics

As a mathematician, this was the part of the podcast that made me sit up.

Nick Marwell explained that until recently, AI was mostly learning to do things humans could already do, like writing a piece of software that a team of programmers could also have written. What's new, he said, is that AI is starting to push *past* the frontier of human knowledge.

His example was mathematics. AI systems have recently produced proofs of problems that mathematicians had been interested in for a long time and never solved.

A test written by professors

Sholto Douglas gave a number that astonished me. There is a test called *FrontierMath*, a set of very hard problems written by professors in many fields of mathematics. Not long ago, AI models scored close to zero on it. Over about a year, the scores climbed to somewhere between 40 and 60 percent.

I spent years earning a Ph.D. in mathematics. I know what it takes to solve problems at that level. For a machine to go from nothing to a passing grade in one year is something I never expected to see.

Is the AI really creative?

Joe Lonsdale asked a fair question. Is the AI coming up with brand-new ideas, or is it just very good at grinding through possibilities faster than a person can?

Nick's answer was wise. He said the AI isn't yet producing ideas humans could never have had. But he pointed out that most human progress doesn't look like that either. Most discoveries come from connecting the dots: taking ideas that already exist and putting them together in a new way.

I agree completely. In my own career, my best work came from seeing that something from one area of mathematics could solve a problem in another. That's what AI is starting to do, and it can do it across more fields than any one person could ever learn.

What this means for students

Some people will say, "If AI can do math, why should my child learn math?"

That is exactly backwards.

When AI can do the calculations, the person who understands *what to calculate and why* becomes far more valuable. Somebody has to set up the problem. Somebody has to know whether the answer makes sense. Somebody has to explain it to a customer, a boss, or a jury.

A person who doesn't understand math can't do any of that. They will be at the mercy of the machine.

The Triad Math Army approach

I've been teaching math this way for years, long before today's AI arrived.

- **Tier 1** teaches students to use a \$10 TI-30XA scientific calculator. It's kinesthetic and easy, and it takes away the fear.
- **Tiers 1 and 2** teach the practical algebra, geometry and trigonometry needed for about a thousand technical jobs.
- **Tier 3** prepares college-bound students for the SAT.
- **Tiers 4, 5 and 6** use *Wolfram Alpha*, a tool that came out in 2009, to teach deeper algebra, trigonometry, calculus and differential equations. A subject that used to be a difficulty level of 8 drops to about a 2.

I don't teach the old manual techniques that nobody will ever pay you to do. I teach students to understand the mathematics and use modern tools to do the work, which is exactly how professionals do it. I have students who start in eighth grade and finish differential equations by 16 or 17.

The AI researchers are showing that machines can now help discover new mathematics. Our members learn to stand on top of those machines rather than underneath them.

CHAPTER 3

"As Capable as Humans" in a Couple of Years

Here is the boldest claim in the whole conversation.

Sholto Douglas said that Anthropic believes AI models that are as capable as humans, or more capable, are very likely to arrive in the next couple of years. People in the industry call this *AGI*, short for artificial general intelligence.

Joe Lonsdale asked him to explain what that means. Sholto said it means an AI that can do everything a human can do on a computer. Later, once robots are advanced enough, it means an AI that can do everything a human can do in the physical world too.

Do I believe it?

I'm a mathematician, so I look at the trend lines.

In 18 months, coding went from typing by hand to handing off days of work. In about a year, scores on professor-written math problems went from near zero to roughly half. These aren't small steps. They are the kind of curve I have spent my life studying: exponential growth.

I don't know whether it will take two years or five. But I am confident the direction is right. And whether it's two years or five, a child in middle school today will graduate into that world.

How does an AI get smarter?

Sholto explained that there are two main ways AI models improve, and it's worth understanding them.

First, reading. The models are trained on enormous amounts of text from the internet and other sources. This is how they learn language, facts and reasoning.

Second, practice. This is what Sholto and Nick work on: reinforcement learning. The model works through problems, and then the answer gets checked. Right answers are rewarded. Wrong ones are not. Over millions of problems, the model gets better.

Does that sound familiar? It should. It's exactly how a good student learns. You read and listen, then you practice problems, check your answers, and learn from your mistakes.

Why math and code came first

Here's an interesting point. Math and computer programming advanced much faster than other skills. Why?

The technical reason is that math and code are easy to check. A proof is right or wrong. A program runs or it doesn't. A love poem is much harder to grade.

Nick added a second, more human reason that made me smile. The people building AI mostly came from math and computer science. When you ask mathematicians and programmers to build intelligence, they start with the subjects they understand and love.

The guests said they believe other kinds of problems can be put into this checkable form too. So the progress we've seen in math and coding is coming to other fields.

The lesson for every student

The AI learns by practicing and checking. So should you.

In the Triad Math Army there is only one grade: you learn it or you don't. Pass or fail, just like graduate school. Every lesson is a short tutorial video, usually five to ten minutes. During the video I tell you to stop and do a problem. Then you check yourself. You can rewind as many times as you want. Mistakes aren't failures. They're how you learn.

That's reinforcement learning for human beings. It works for machines, and it works for people.

CHAPTER 4

Biology, Medicine and Longer, Healthier Lives

When Joe Lonsdale asked which new areas AI should be working on, both guests gave the same one-word answer: biology.

Nick Marwell said this is the area he is most excited about over the next two years. He expects AI to transform biology the way it has already transformed software. And he expects the benefits to spread widely, to all of us, in the form of cured diseases and healthier lives.

He went further. He said he believes AI will be the most important technology in the life sciences in our lifetime, and perhaps ever.

The bottleneck isn't the AI

What surprised me was Nick's biggest worry. He wasn't worried that AI would fail to be smart enough. He was more worried that we won't have enough laboratories to test what the AI suggests.

An AI can propose a thousand promising ideas for a new drug. But each one still has to be tested in a real lab, with real cells, by real people. Nick said that America needs more lab space and better labs, and that in some ways we are falling behind countries like China. He called it one of the great infrastructure projects of our time.

This matters for young people. If the bottleneck is labs, then the world will need many more people who can work in labs: technicians, biologists, chemists, engineers and data analysts. And every one of those jobs uses math.

Longer lives

Joe mentioned that there are billions of dollars now going into research on longevity, how to keep the body younger longer. The guests believe AI will be critical to that work. Sholto even suggested that in the abundant world of the future, we may solve aging itself.

I'm 88. I have no health problems and take no medicine. I credit that mostly to the habits I've built, one of my wisdom tools at a time. But I'd certainly welcome the help. And I'd like my great-grandchildren to live in a world where today's terrible diseases are history.

What Triad Math Army members can do

The biology revolution will need people who understand numbers.

- **Statistics and data.** Modern biology is a data science. You must be able to read a graph, understand a rate of change, and know when a result is meaningful.
- **Calculus and differential equations.** These describe how things change over time: how a drug spreads through the body, how a population of cells grows, how a disease spreads. Differential equations are the workhorse of science and engineering. Tiers 5 and 6 of the Triad Math Army teach them with Wolfram Alpha, in a fraction of the time it used to take.
- **Healthy-living wisdom tools.** You don't have to wait for AI to cure aging. The wisdom tools teach how habits and addictions, good and bad, shape your health and your life.

If your child dreams of being a doctor, a nurse, a researcher or a lab scientist, the 2030s may be the most exciting time in history to do it. The math is the doorway.

CHAPTER 5

The Real Risks — and Why Caution Makes Sense

The podcast is called *American Optimist*, and these guests are optimists. But they didn't pretend everything is safe. In fact, Sholto Douglas said plainly that the public's concerns about AI are extremely reasonable.

He named the biggest worries. One is unemployment, which we'll discuss in Chapter 9. The more immediate ones are in biology and cybersecurity, and he said those risks are real right now.

Dual use

Nick Marwell explained why these areas are so hard. They are what experts call *dual-use*.

Take computer security. Suppose someone gives an AI a company's software and says, "Find every weakness." That could be the company's owner trying to protect it. Or it could be a criminal trying to break in. The request looks exactly the same.

Biology is the same way. The knowledge that helps a researcher destroy a cancer cell could, in the wrong hands, help someone cause harm. Nearly everyone asking is a good actor. But a tiny few are not.

The guests said Anthropic's view is that these technologies should not be released until there are ways to keep bad actors from misusing them.

Offense and defense

One of the most interesting ideas in the conversation was *offense versus defense*.

Throughout history, technology has sometimes favored the attacker and sometimes the defender. Joe gave a great example. In medieval Europe, walled city-states could defend themselves. Then the cannon came along, and walls could be knocked down easily. Power shifted to whoever had the biggest guns.

Sholto said that today, both cyber and bio are *offense-dominant*. It's easier to attack than to defend. But he believes that within about two years, cybersecurity can become *defense-dominant*. Everyone will be able to use AI to attack their own systems first, find the weak spots and fix them before criminals arrive.

Biology is harder. He said making the world safe from biological threats will take enormous investment, possibly hundreds of billions of dollars, and advanced robotics.

My view

I'm glad the people building this technology are taking the dangers seriously. I've lived long enough to see what happens when powerful new things are rushed out without thought.

But I'm also an optimist, like Joe. The same intelligence that creates the danger can be used to build the defense. The answer to powerful tools in bad hands is more powerful tools in good hands.

A wisdom tool for the age of AI

The core idea behind every one of my wisdom tools is simple: *every action has consequences*. Once you understand the consequences, you can choose your actions to get the results you want.

That is exactly what responsible AI companies are trying to do: think through the consequences before they act.

Triad Math Army members learn to think this way about their own lives: their habits, their addictions and their choices. A young person who learns to ask "What will happen if I do this?" is a young person who can be trusted with powerful tools. In the 2030s, that will be everyone.

CHAPTER 6

Rules, Rivals and the Race With China

This was the most political part of the conversation, and Joe Lonsdale didn't go easy on his guests.

The "regulatory capture" charge

Joe said that some of his smart friends in tech suspect Anthropic of *regulatory capture*. That's when a big company pushes for government rules that hurt its smaller competitors. The critics say Anthropic warns about AI dangers to get rules passed that slow everyone else down.

Nick Marwell gave two answers.

First, he said the companies making *open-weights* models, AI that anyone can download and run, are no longer small, underfunded hobbyists. They include some of the largest corporations in the world, along with well-funded Chinese labs. These companies can handle regulation just fine.

Second, he pointed to Anthropic's own actions. He described a time when Anthropic had the best model in the world by a wide margin. It could have rushed it out for business advantage. Instead, he said, the company chose to work with the government on a careful rollout. He called that a bad economic decision, but one that matched the company's values.

Sholto Douglas added that so far, Anthropic has slowed itself down more than anyone else.

Joe pushed back a bit too. He said he thought some useful defensive cyber abilities were held back to satisfy government officials, and he considered that a mistake. Reasonable people disagree about where the line should be.

What Anthropic says it wants

Sholto said that personally, both men support open source. He learned machine learning himself on open-source models. What they want is a single set of safety thresholds, set by society, that *every* model must meet before release, whether open or closed. Beyond that, people should be free to do what they want.

What about China?

Joe asked the obvious question: what if America slows down and China doesn't?

Sholto said the ideal would be cooperation with China, since China doesn't want cyberattacks on itself either. But he admitted that's very hard. And when Joe asked directly whether there's any scenario where they'd slow America down and let China go ahead, the answer was no. Any slowdown would have to be fully coordinated with every party, with complete trust.

Copying: the distillation problem

The guests also discussed *distillation*. That's when a competitor uses a leading company's AI to train a cheaper copy of it.

Nick explained why this matters. Building the next, smarter AI costs enormous sums, and soon it may cost tens or hundreds of billions of dollars, or more. Companies can only invest that much if they can earn it back. If anyone can make a copy within a week or two for a fraction of the cost, no one can afford to push the frontier forward.

He compared it to drug development. Patents let companies earn back the cost of inventing new medicines. But in AI, he noted, last year's frontier becomes cheap very quickly anyway, so the public still gets the benefit fast.

My take

I'm not going to tell you who is right on every policy question. Thoughtful people disagree. But I'll say this: the decisions being made about AI in the next few years will shape your children's lives. Citizens who understand the technology, and the math behind the money, will have a voice. Those who don't will have to take somebody else's word for it.

The Triad Math Army's job is to make sure our members understand.

CHAPTER 7

Why Smarter AI Is Worth Exponentially More

This chapter is about an idea that even the guests found hard to believe at first. As a mathematician, I find it beautiful.

The puzzle

Joe Lonsdale raised a fair challenge. If last year's AI keeps getting cheaper and easier to copy, isn't building AI a crazy business? Don't you have to keep running faster just to stay in place?

Yes, the guests said, the frontier has to keep moving. But here's the key: the value at the frontier keeps growing faster than the cost.

Exponential returns to intelligence

Nick Marwell described it this way: each extra unit of intelligence is worth exponentially more than the one before it.

His example came from computer programming. The first useful AI for programmers was *autocomplete*, which suggested the next few words of code as you typed. Helpful, but modest. Today nobody could build a business on autocomplete alone.

The next step was AI that writes whole programs on its own while you supervise. Nick said that step was enormously more valuable than autocomplete.

And what comes after that? An AI that is a complete software engineer, better than any human. An AI that serves as an executive assistant for every part of your work. An AI that helps cure cancer. Each step is worth far more than the last.

Nick admitted this ran against his instincts. In ordinary life, he said, exponential growth never seems to last very long. But here it keeps going.

Costs fall ten times a year

At the same time, Sholto Douglas said, the cost of any given level of intelligence drops by roughly ten times every year. Last year's best AI becomes this year's bargain.

Think about what that means for you. Abilities that cost a fortune today will be nearly free in a few years. The question isn't whether ordinary people will have access to powerful AI. They will. The question is whether they'll know what to do with it.

How small AI still is

Sholto pointed out one more thing. Total AI revenue is somewhere above \$100 billion a year, which sounds like a lot. But the world economy is worth tens of trillions of dollars. AI has barely begun to spread into it.

By the time AI is commonplace everywhere, he said, the whole economy will have been transformed, and it will probably be far larger.

Why every member needs to understand exponentials

Most people think in straight lines. If something grew by 10 last year, they expect it to grow by 10 next year. Exponential growth doesn't work that way. It doubles, and doubles, and doubles. It looks slow at first and then explodes.

People who don't understand exponentials are always surprised. They're surprised by compound interest, by epidemics and by technology. People who do understand them see what's coming.

That's why understanding exponential growth is part of what Triad Math Army members learn. I also use exponential growth in my own mission: if each member brings in others, and they bring in others, the army grows exponentially. I hope to reach a million members.

The AI companies are betting on exponentials. Our members should understand the bet.

CHAPTER 8

A World of Abundance — and Who Shares In It

Joe Lonsdale asked his guests a simple question: with all these concerns, why push ahead so fast? What are you fighting for?

Sholto Douglas's answer was the most inspiring part of the podcast.

Centuries of progress in a decade or two

Once we have AI as capable as a person, at a computer and eventually in the physical world through robots, Sholto said we could take technology that would have taken centuries to develop and compress it into a decade or two.

Joe added an example from his own investments. He said airplane designs that might have arrived in the 2040s may start showing up in just a few years.

Sholto said we could keep doubling the productive capacity of humanity, the total amount of thinking and building that people can do. And that, he said, could lead to a *post-scarcity* world.

What post-scarcity means

Post-scarcity means a world where most things cost little more than the energy needed to make them.

In such a world, Sholto said, building a home might cost little more than the energy to build it. Joe joked that the middle class could have giant mountain homes. Sholto agreed: what's luxury today could be ordinary then, just as our everyday comforts would have amazed the kings of centuries past. He imagined a world where we've cured every disease and maybe even solved aging.

He described a level of abundance available to everyone on earth that even the richest people today don't have.

The hard question

But Sholto was honest about the catch. Getting there is tricky. And once we're there, how do we share it?

He worried that the gains might flow only to people who already own capital, the people who were rich before AI arrived. He said there is a big social and political question about how to make sure everyone can share in the abundance if they want to.

Joe added an important caution: we're not there yet, and we shouldn't act as though we are. The dignity of work still matters today.

My view

I've studied money for a long time. One of my wisdom tools is called *Money: Good, Bad and Ugly*. Its lesson is that you don't need to be a billionaire. I wouldn't want to be one. What you need is enough money to do what you want to do. I've always had that, thanks to the wisdom tools.

In an age of abundance, the question shifts. It's less about how much you have and more about whether you know how to take part.

How Triad Math Army members get their share

The people who share in the abundance will be the people who can participate in creating it.

- They understand enough math to work with the new technology.
- They know how to use AI tools to build things, start businesses and solve problems.
- They understand money, ownership and compound growth, so they don't just earn wages but build wealth.
- They have the habits and character to use abundance wisely instead of being ruined by it.

That is what the Triad Math Army teaches. I want our members on the side of the line that shares in the 2030s, not watching from the outside.

CHAPTER 9

Jobs in the Short Run and the Long Run

Every parent I talk to asks the same question: will there be jobs for my kids?

The guests were honest about this. Sholto Douglas said Anthropic feels a responsibility to talk openly about the risks it brings into the world, and that unemployment is one they are quite concerned about.

But the full picture has two parts.

The short run: AI makes workers more valuable

Sholto described a chart that surprised him. In the Philippines, many people work in call centers and other outsourced business jobs, the kind of work people expected AI to wipe out first. Yet employment there went *up*. He also said software engineering employment in America has grown.

Why? Because right now, AI makes people dramatically more productive. A worker paired with AI can do much more than before, so companies want more of those workers, not fewer. There is so much more to do.

The long run: a warning

Nick Marwell added a serious caution. Right now, he said, you still need a human working alongside the AI to get the full value out of it. That's why AI is making workers more valuable today.

But he believes a time will come when the human is no longer needed in the loop for many tasks. That's when he and his colleagues get nervous.

Joe Lonsdale compared it to chess. For about 30 years, the best chess player in the world was a human working with a computer. Now the computers are simply better on their own. The guests expect that partnership period to be much shorter for many other kinds of work.

A window of opportunity

Here's what I take from this. There is a window, maybe a decade, maybe less, when a person who knows how to work with AI is enormously valuable. Nick said earlier in the conversation that there could be a 10- or 20-year period when helping AI spread into the world is itself a great career.

The people who use that window to build skills, savings, businesses and relationships will be in a strong position whatever happens next. The people who ignore it will be caught flat-footed.

What to do now

- **Learn the practical math.** Tiers 1 and 2 of the Triad Math Army teach the practical math used in about a thousand technical jobs: welding, plumbing, carpentry, landscaping and more. When a student finishes those two tiers, they know more useful math than most high school graduates. Many hands-on jobs will last longer, because robots in the physical world are coming more slowly than AI on computers.
- **Learn to pair with AI.** Be the worker who is twice as productive because you know how to use the tools.
- **Build ownership, not just wages.** If AI eventually does more of the work, the people who own things will do better than the people who only sell their time. The money wisdom tools address this.
- **Stay adaptable.** Wisdom tools about habits and learning help members keep growing for life. I'm still learning new things at 88.

The honest truth is that no one knows exactly how the job market will look in 2035. But I know which young people I'd bet on: the ones who start preparing today.

CHAPTER 10

The Decade of the Generalist

Joe Lonsdale asked a question that matters to every family: what should a smart, ambitious young person do with their career if they aren't working inside an AI company?

Nick Marwell's answer is the best career advice I heard in the whole conversation.

The specialist era is ending

Nick said he's thought about this a lot because his own brother is in college now. His view is that the next decade will belong to the *generalist*.

For the past 20 to 50 years, he explained, the way to have a great career was to develop a set of specialized, marketable skills and depend on other people for everything else. You became a very good accountant, or a very good engineer, and you stayed in your lane.

That's changing. With AI, a single person can have the power of a thousand-person company behind them.

The new defining skill: choosing the right problems

If one person can do the work of a thousand, what matters most?

Nick said it will be the ability to understand which problems are worth solving. What would make my community better? What do my neighbors need? What business should exist that doesn't yet? People who can answer those questions will have all the tools they need to make change happen, whether for profit or for social good.

Joe tied this to his own faith. In the Jewish tradition, he said, people are called to repair the world. Unless we reach utopia, there will always be things to fix and people to help. The guests agreed: there's a lot of work between us and utopia.

Why this fits the Triad Math Army

I've been a generalist my whole life. I earned a Ph.D. in mathematics, taught as a professor, then went into business. I've started companies, written books, played rugby, wrestled and run cross country. I've learned a little about a lot of things, and that's what has let me see connections others missed.

The Triad Math Army is built to make generalists.

- **Practical math** gives every member the quantitative foundation that nearly every field depends on.
- **Wisdom tools** teach the habits, judgment and self-knowledge that let a person choose good problems and stick with them.
- **AI training** gives members the thousand-person team at their back.
- **The family membership** means parents, brothers and sisters all learn together. A family of generalists is a powerful thing.

Problem selection starts young

You don't have to wait until college to practice this. A teenager can ask: what problem do I see at my school, my church, my team or my town? Then they can use AI to research it, plan a solution and build something. That's exactly the kind of project I want our members doing.

In the decade of the generalist, the winners won't be the people who know the most facts. They'll be the people who see what needs doing and know how to get it done.

CHAPTER 11

Education Won't Fix Itself

Of everything said on the podcast, Nick Marwell's comments on education struck closest to home for me. He said something many people in AI don't want to hear: AI is not simply going to fix education.

He's right. And his reasons are the same reasons I built the Triad Math Army.

Learning compounds

Nick's father has spent the last 15 to 20 years working on education, so Nick has thought about this carefully. His first point was that education *compounds*, the same way money does.

His example: the best single predictor of how well a student will do in math is whether they can read at grade level by the end of third grade. That's the point where children stop learning to read and start reading to learn. A child who falls behind there falls further behind every year after.

I've seen this in math for decades. A student who doesn't master fractions struggles with algebra. A student who struggles with algebra gives up on trigonometry. And children, like most of us, lose motivation when they believe they're not good at something. The fear feeds on itself.

Computers can't hold a child's attention

Nick's second point was that, at least so far, AI is very bad at one critical thing: holding the attention of young children. In fact, computers tend to be a powerful *distraction*.

He said AI will help a great deal with parts of education, especially making sure each child learns the right thing at the right time. But it won't be a magic cure. He also said he thinks it's a mistake to design education only for children with two highly educated, wealthy parents. We have to think about *everyone's* children.

Why our public schools are falling behind

I've written a whole book about this called *Public School Math Is Destroying the USA*. My argument is that we aren't teaching students the math they need for the careers they want. We teach outdated manual techniques that no employer will ever pay anyone to do, while skipping the practical math and modern tools that professionals actually use.

AI makes that gap wider. If a machine can do the manual techniques instantly, spending years drilling them makes even less sense.

The Triad Math Army's answer

The Triad Math Army was designed around exactly the problems Nick described.

- **Break the fear first.** Tier 1 starts with a \$10 calculator. It's kinesthetic, like playing a game. Students who were afraid of math say, "That was easy." And when math is taught properly with the right content, it doesn't get much harder.
- **Short lessons, full control.** Each lesson is a tutorial video of about five to ten minutes. The student can pause, rewind and re-watch. That respects short attention spans instead of fighting them.
- **Mastery, not grades.** Pass or fail. You learn it or you don't, then you move on. No one falls further and further behind.
- **The right content.** Practical math first, then SAT preparation, then advanced math with Wolfram Alpha for students headed into science and engineering.
- **Families, not just students.** One membership covers the whole family. Parents are involved, which is what Nick's point about compounding demands.

- **AI as a tutor, used wisely.** Members learn to use Gemini to explain anything they don't understand at school. But they still have to learn the material themselves, because tests like the SAT won't let them use AI.

Nick is right that AI won't fix education by itself. People have to fix it. The Triad Math Army is my attempt to do that, one family at a time.

CHAPTER 12

Values, Faith, Family and Community

Near the end of the conversation, Joe Lonsdale raised a concern that many Americans share.

It's one thing to be wealthy, he said. But we also care about virtue, family, faith and the traditions that make us who we are. Many people worry that because AI is being built in San Francisco, where those traditions may not be as valued, a small group of people will remake the world and wash away their values.

It's a fair worry. I was glad he asked it.

The guests' surprising answer

Sholto Douglas said that, in San Francisco, they actually expect a *resurgence* of these institutions.

His reasoning was this. As work becomes less central to people's lives, and as abundance grows, the things that remain most important will be tradition, ritual, serving others, local community and the bonds between people. Those things don't become less valuable when machines do more of the work. They become more valuable.

Nick Marwell added that the pursuit of knowledge may grow in importance too. Not because you need it for a paycheck, but because learning how to think about the world, and sharing that with other people, is one of the deepest human joys. In a world where you want for nothing, he suggested, it may be one of the main things left that makes us feel part of a community.

Giving back

Joe asked whether they planned to build institutions to support these things. The guests said philanthropy is a big part of Anthropic's culture. Sholto described colleagues giving to efforts to end viral disease and to study how AI will affect workers so that society can support them. Nick spoke about his father's long work in education.

What I believe

I've lived a long life, and here is what I've learned. Money matters, but only up to a point. What gives life meaning is family, friendship, faith, service, and the joy of growing and learning.

I'm no longer motivated by money. I'm motivated by what I call *karma*: helping other people improve their lives, which somehow improves mine. I don't fully know why it works that way. It just does.

Another of my wisdom tools is *flow*: that state where you're so absorbed in something worthwhile that time disappears. I felt it playing rugby. I feel it making videos and writing books. Flow doesn't come from having things. It comes from doing things that matter.

The Triad Math Army as a community

That is why the Triad Math Army is an *army*, not just a course. It's a community. Families learn together. Members help other members. Students who join can bring friends and teammates, and they all grow together.

The wisdom tools teach the timeless lessons: good habits, honest choices, healthy living, using money well, finding flow, and helping others. Those lessons were true when I was young. They'll be just as true in the 2030s.

AI will change a great many things. It doesn't have to change what matters most.

CHAPTER 13

Looking Ahead to 2028

To close the interview, Joe Lonsdale asked his guests to imagine it was August 2028 and they were looking back. What would have to happen for them to say, "Wow, that went much faster than we expected"?

They laughed, because they already expect things to go fast. But they gave some answers worth remembering.

The insiders' predictions

Data centers in space. Sholto Douglas said one big question is how soon AI computers can be put in orbit, where there's more room and energy to grow. He said expert opinions vary widely, but if it happens sooner, everything else speeds up. He noted how lucky the timing is that SpaceX matured just as AI arrived.

Robots in homes. Sholto said he'd be watching how many humanoid robots are in American homes by 2028. His guess was early deployments, perhaps tens of thousands, doing laundry and basic cleaning. But he said it could happen faster. Once robots arrive in numbers, progress really compounds.

Data is the speed limit. Nick Marwell said the biggest brake on AI progress is how quickly we can create the right training data in each field. He said that if America launched a major effort to build labs that produce biological data, he'd expect progress sooner.

Prizes. Sholto said he wouldn't expect an AI to win a Pulitzer Prize for writing by 2028. But a Fields Medal, the highest honor in mathematics, he thought was quite possible. A Nobel Prize, he said, seems very likely before the end of the decade.

Joe also asked whether AI might someday help with even harder human problems, like building good character or supporting mental health. Sholto said those are problems he'd want humans to solve, with AI as a helper. I agree with him.

What I'll be watching

I'm a mathematician, not a fortune teller. But here's what I'll be watching for by 2028, and I invite you to watch with me:

- **Will AI tutoring be normal?** I expect more families to discover what I discovered with my grandson: a good AI tutor, used wisely, is available to every child at any hour.
- **Will the gap between the two classes of sapiens be visible?** I believe that by 2028 you'll be able to see it in hiring, in pay and in who starts new businesses.
- **Will ordinary people write books, build products and start companies with AI?** I've written many books this way. I expect thousands of others to follow.
- **Will schools adapt?** I hope so. But I'm not waiting for them.

Why the date matters

If you have a child in eighth grade today, they'll be in high school in 2028 and starting their career in the early 2030s, exactly when the guests expect the biggest changes. If you're a college student, you'll graduate right into it.

Two or three years is not much time. A student who starts the Triad Math Army now can go from the basic calculator all the way to calculus by 2028, and learn to use AI tools along the way. A student who waits will be starting from behind.

The future is coming fast. The best time to prepare is now.

CHAPTER 14

Your Action Plan — Joining the Right Class of Sapiens

The young men from Anthropic believe the 2030s can be radically better than any decade in history: cured diseases, longer lives, abundance for everyone, centuries of progress in a few years. I believe it too.

But I also believe in the two classes of sapiens. One class will learn to use augmented intelligence and ride this wave. The other will be swept along by it. This chapter is about making sure you and your family are in the first class.

Step 1: Read the free books

Go to **TMA.cool** and download free PDF copies of my books:

- *The Triad Math Army* — read this first. It takes less than an hour, and you'll understand what the army is and why it works.
- *The Golden Rule Math for All God's Children* — the math program our schools should be teaching.
- *Public School Math Is Destroying the USA* — why our current approach is failing students.

Step 2: Join the Triad Math Army, risk-free

From TMA.cool, click through to join the Triad Math Army.

- **\$27 a month, or \$297 for a year.**
- **One membership covers the whole family.** Students, brothers, sisters, parents.
- **Zero risk.** If you're not satisfied after the first month, you get your \$27 back. You'll have had a full month free.

If you're a young student without a credit card, show this book to your parents. Tell them it's risk-free and covers the whole family. That's all it takes.

Step 3: Learn the calculator

Start with Tier 1. In about two weeks, working an hour a day, five days a week, you'll learn the \$10 TI-30XA scientific calculator and review the rules of arithmetic. Most students who were afraid of math find this part easy and even fun. That first success changes everything.

Step 4: Get a free AI tutor

Watch my lesson on using **Gemini** as a math tutor. Whenever you don't understand something in your school math class, Gemini can explain it step by step, any hour of the day, for free. Just remember that you still have to learn it yourself. You can't bring Gemini into the SAT.

Step 5: Keep climbing the tiers

- **Tiers 1 and 2:** practical math for about a thousand technical careers, from welding to landscaping to carpentry.
- **Tier 3:** preparation for the SAT and college.
- **Tiers 4, 5 and 6:** deeper algebra and trigonometry, then calculus and differential equations with Wolfram Alpha, for students headed into science and engineering.

Advanced high school students can often jump straight to Tier 4.

Step 6: Use the wisdom tools

Work through the more than 30 wisdom tools with your family. Learn how habits and addictions shape your life, how to handle money, how to find flow, and how to choose actions that lead to the consequences you want.

Step 7: Learn to work with AI

As a member, you'll learn the AI skills I use every day and keep adding: using AI as a tutor, using Claude as a ghostwriter to write books, and much more as the tools improve. You'll move from asking AI questions to giving AI real work.

Step 8: Bring others with you

The Triad Math Army grows the way AI grows: exponentially. Members can share it with friends, teammates and classmates. My goal is a million members, because a million people learning this way would strengthen our economy and our society.

A final word

I'm 88 years old. I've seen a lot of change. I've never seen anything like what is coming in the next ten years.

The builders of AI are optimists, and so am I. But optimism isn't enough. Preparation is what turns a radically better decade into a radically better life.

Join us. Start this month. And let's make the 2030s the best decade your family has ever had.

— *Craig Hane, Ph.D., "Dr. Del"*

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