



Tandem Intelligences

The Exciting Future of AI-Human Collaboration in Marketing... and
How to Get Ahead of the Game

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The Unstoppable Force of Progress

For thousands of years, almost everything was a work of human craftsmanship. From food production to textiles, metalwork to bookmaking, a pair of hands formed and shaped almost every item used in every single culture, aside from walking sticks, stones, and other basic implements. All of that changed with the introduction of the steam engine and power loom in the late 1700s, throwing the entire manufacturing sphere into disarray.

Although many people welcomed the dawn of the Industrial Revolution and the factory age, some did not. The Luddites, for example, were a group of English textile workers who broke into manufacturing facilities and sabotaged the equipment in a futile attempt to slow the tide of “progress”. Despite their efforts, however, more and more goods became mass-produced commodities, replacing human craftwork with standardized processes handled by intricate machines.

The skills required of workers began to shift rapidly, with more and more people becoming proficient with the operation and maintenance of machinery. Today, most manufacturing jobs have been replaced by automated systems that can perform tasks far more efficiently than any human ever could. Robots are even being designed to operate without supervision or instruction, meaning that they will soon be able to replace all but the most specialized roles within an organization.

Automated systems are also increasingly finding themselves integrated into the workplace, taking on much of the burden of administrative duties as well as performing routine physical labor. Even if you don't spend your days in a factory setting, it's likely that you've come across one of these devices at least once: self-checkout kiosks in grocery stores, vending machines in office buildings, automated toll booths on highways.

Beyond machines that simply do what they are programmed to do, our world is now being shaped by artificial intelligences, capable of going above and beyond their explicit instructions to solve problems and perform useful work. These so-called “autonomous agents” range from simple programs that learn how to carry out specific tasks (like playing chess) to complex algorithms that can predict stock market trends, identify fraudulent transactions, and even diagnose medical conditions based on data collected from patients.

As artificial intelligence becomes more sophisticated, more companies are using it to augment the capabilities of their workforce, allowing them to complete tasks faster, smarter, and better than they could manage alone.

Automation in Creative Fields

Although it may not be news to marketers to hear that computers can now handle a wide variety of physical and data-based tasks, the release of powerful intelligences capable of visual art and creative writing have sent shockwaves through the creative fields, causing some artists to question the future economic viability of human creative work.

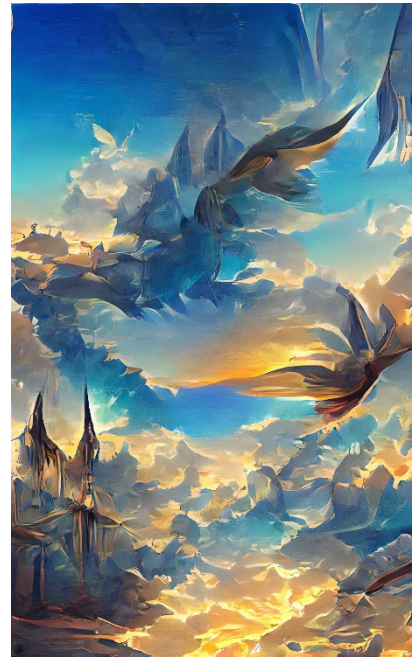
For an example of how powerful this technology already is, note that this entire book is a collaboration between a human and a language-enabled artificial intelligence*, and the pictures displayed below are examples of the level of sophistication and unorthodox style that artificial intelligences are capable of:



Prompt: “A lighthouse shining through the rain on a dark and stormy night.”



Prompt: “Mushroom people playing guitar around a campfire.”

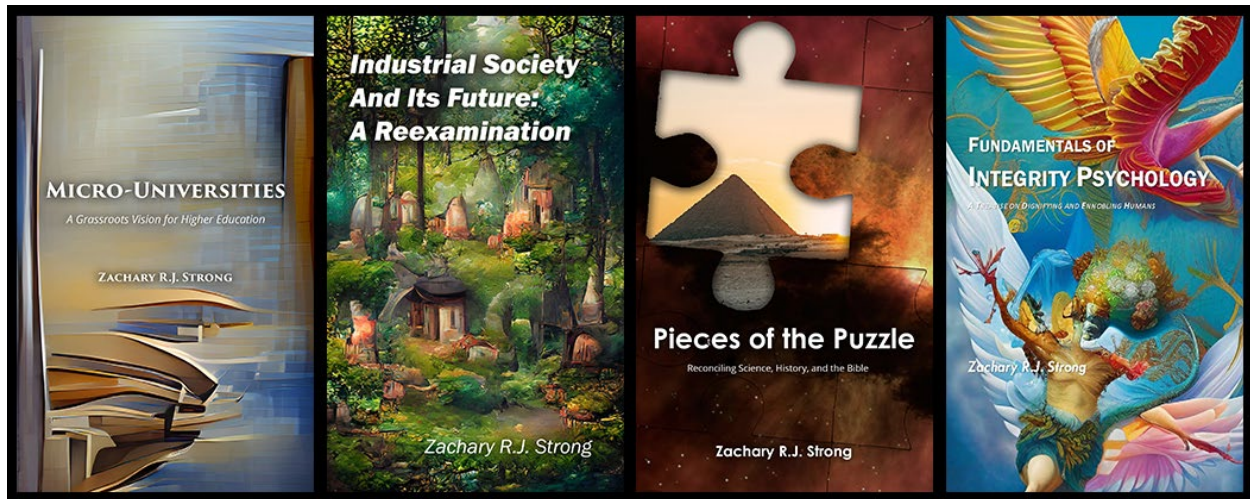


Prompt: “heaven blue sky feathers divine”

Despite the concerns of creative workers, it is very unlikely that these technologies will replace human creative labor – rather, they will augment it by creating new types of creative work, new markets for creative products, and perhaps even human-machine collaborations that yield entirely new kinds of art.

For example, whereas I used to hand-design all of my book covers, and having someone else do it would cost money, I work with the free AI “artist” called Wombo to generate covers for my books that are intricate, in a style I like, and visually distinct from other books on the market. This isn’t stealing work from anybody, since I would just default to designing my own covers – instead, Wombo is giving me a new way to design my own covers, extending my creative abilities – provided I enter the right prompt and am patient enough to iterate.

* Usually, in projects like this, I italicize or colorize the AI-generated text for transparency. However, in this case, I thought it would be more fun to let you guess which intelligence wrote what.



Sadly, I didn't write down the prompt used for "Integrity Psychology" and haven't been able to replicate that style.

Artificial Intelligence for Marketers


It's hard to imagine what we can do with these tools—but it is clear they represent the most important developments for the marketing department since the internet itself.

The key question for marketers is: How should we approach this? First, we should take stock of the technology we already have and how artificial intelligence can interface with it. Then, we should examine the kinds of work that can be automated or augmented by artificial intelligence and rethink everyone's job description accordingly.

For example, CRM and Marketing Automation technology already allow marketing departments to set up intricate email chains for their prospects, keep track of cross-channel behavior data, and store information on individual consumers. Artificial intelligence, given its vast processing capabilities and ability to learn from data, is an ideal evolution in the marketing automation trend, and will be able to create and schedule communication stacks based on behavioral signals – with little to no oversight from marketers!

The only question is where human insight and human creative labor are added into the mix. There may come a point when machines become more efficient at creating content than people, however it is likely the case that only humans will end up having the ability to generate truly novel works. That is to say, if you need three blog posts a week, an artificial intelligence will be able to help you create content of this quality, giving you more time to focus on researching high-value thought leadership pieces. And, if you're only posting one blog post a week, the extra help from the artificial intelligence might help you double your content output.

Finally, machine intelligences are incredibly adept at collecting, sorting, processing, and summarizing data, making them ideal for many research tasks – and leaving marketers more time to build



strategies and conduct “small data” research[†] based on AI-generated insights. Additionally, given the fact that this entire document is a mixture of machine-generated and human-written content, it is not unreasonable to assume that marketers will soon have easy access to systems that can write entire email messages from banks of pre-written content and generated text, alleviating a great deal of work from email marketers while allowing for customer-level personalization based on known preferences for tone, buyer needs, and other salient prospect attributes.

Tandem Intelligences

Kevin Kelly, the founding editor of WIRED, the progenitor of the popular “1,000 True Fans” concept, and one of the leading thinkers of the digital era, is surprisingly optimistic about artificial intelligence compared to his contemporaries. He believes that artificial intelligences merely represent a different kind of intelligence with different capabilities, kind of like how a squirrel can remember the location of every nut in their stash, while a human can solve a partial differential equation[‡].

He also argues that humans will be able to learn new skills by watching an AI perform them. For example, the unorthodox playstyle of AlphaGo triggered a series of innovations in the game of Go, an unprecedented development in the millennia-long history of the game. On a more practical level, if you're not good enough at math, you could watch an AI do calculations over and over again until you reach proficiency. Or, as is being done here, have a machine lend a hand with writing.

What Kelly is predicting, and what seems to be the most likely future, is an age of human-machine collaboration, where humans bring original insights, anomalous problems, and novel concepts to a machine, which helps them build out the details of the work or find solutions. For content marketers, especially those involved in writing content, having the computer automatically fill in your blog posts with relevant statistics and quotes would shave a great deal of time off the research process, in addition to the artificial intelligence sharing the burden of writing copy.

One of the founders of media theory, Marshall McLuhan, observed that media and technology functions as an extension of the human body and mind. Cuneiform writing, for example, gave the ancient Mesopotamians the ability to remember details of transactions and taxation, setting the psycho-material foundation for the age of empires.

Today's technologies are no less significant than those early innovations. As we are witnessing almost daily, it has the power to change how the marketing department operates. In particular, what is being demonstrated with this document is what I call a **tandem intelligence**, or *a pair of human-machine intelligences working together to accomplish a common goal that each would struggle to complete alone*. For example, this document took perhaps three hours to write and illustrate once the idea was fully formed in the human brain – the writing process was a breeze with the help of the artificial intelligence, which filled in the spaces between original human thinking with some comments of its own.

[†] Lindstrom, M., “Small Data: The Tiny Clues That Uncover Huge Trends”, Picador (2016)

[‡] For More: <https://www.wired.com/2017/04/the-myth-of-a-superhuman-ai/>



Marketing Skills of the Future

As has been said in different ways by different people, we first shape our tools, which then shape us in turn. The same is true for artificial intelligence, which will privilege some marketing skills over others. As a result, it will be important for you to stay ahead of the game by learning the skills that will be valuable in the future – and will deliver tremendous value if deployed today.

Although there are many skills to learn, we'll focus on three of the most important. They are strategic thinking, asking insightful questions, and “whispering” to artificial intelligences to coax them into providing useful results.

Skill #1: Strategic Thinking

In its simplest form, a strategy is an understanding of one's current state, an understanding of the desired future state, and a general course of action to get from current state to desired state. Note that this differs slightly from common use of the word “strategy” among marketers, which is often expanded to include specific tactics as well.

A key element of strategic thinking is using data and research to generate *insights*, which are, simply defined, an understanding of an aspect of the consumer's mindset or behavior that can be leveraged to drive attention, interest, and economic action. Given that a skilled strategist working in tandem with artificial intelligences will be able to process incredible amounts of data, including things like sentiment analysis of large sets of social media posts, it becomes clear that the people who are able to synthesize data and draw meaningful conclusions – insights – from it will be in high demand in the future.


Not all insights have to be industry-defining. It could be something as simple as realizing that pictures with faces perform better on social media, or that a certain kind of company Twitter post is twice as likely to generate positive sentiment in the comments.

Note: I am planning a free university-level program on strategic forecasting, which will include trends research, techniques in professional futurology, and strategy development. Please email me if you are interested in this so I know to prioritize it – my email is on the last page.

Skill #2: Asking Insightful Questions

Although this argument is a little scientific, the fact remains that artificial intelligences like ChatGPT, Wombo, and NovelAI have only been around for a couple of years, and even then are limited to performing specific types of tasks. On the other hand, humans have an entire species history hardwired into their brains, and for that reason will always have a complex and unique set of evolutionarily-defined concerns that are the result of “computations” over many generations. This means that, much like in *Hitchhiker's Guide to the Galaxy*, artificial intelligences can help us find answers, but asking questions relevant to human needs is up to us.

Some of the best questions to ask are variations on single words – “Why? How? What?”. Sometimes, any one of these words will suffice. A useful technique is to ask why something is happening between three and five times, drilling down to the very essence of a behavior or piece of consumer



data. Additionally, good research questions – at least in the opening stages of the process – are open-ended and allow for multiple kinds of answers. A favorite of IDEO, a leader in innovation consulting, are questions beginning with “How might we...?”.

“A good question is not concerned with a correct answer. A good question cannot be answered immediately. A good question challenges existing answers. A good question is one you badly want answered once you hear it, but had no inkling you cared before it was asked. A good question creates new territory of thinking. A good question reframes its own answers. A good question is the seed of innovation in science, technology, art, politics, and business. A good question is a probe, a what-if scenario. A good question skirts on the edge of what is known and not known, neither silly nor obvious. A good question cannot be predicted. A good question will be the sign of an educated mind. A good question is one that generates many other good questions. A good question may be the last job a machine will learn to do. A good question is what humans are for.” (Kevin Kelly, “The Inevitable”)

Skill #3: AI Whispering

As one might imagine, working with a powerful-but-naïve intelligence can sometimes be like playing Russian Roulette with a cannon. Previous attempts at language-enabled intelligences, especially those open to real-time interaction through Twitter, usually end with the machine absorbing bigoted and obscene content, then spewing that back out into the public sphere to the chagrin of companies like Microsoft.

The good news is that technology has already advanced to the point where fine-tuned control of the output is possible. For marketers, this means the ability to write about business-to-business topics in the style of luminaries like Marshall McLuhan, Jane Austen, or Jules Verne. Furthermore, NovelAI has mechanisms for plain-language instructions that guide the artificial intelligence on its way to producing intelligible content.

In a 2022 article about creative machinery, Kevin Kelly either coined or popularized the term “AI whispering”, which refers to the art of coaxing an artificial intelligence to produce an output within the desired parameters. From experience, this requires an element of experimentation and iteration beyond what creatives are typically used to. With artificial intelligence, a complex image can be generated in ten seconds, and a set of thirty images generated, sorted by suitability, and stored in ten minutes. In terms of text generation, it is usually the case that I set up the AI with a half-finished paragraph or incomplete thought, and then give it three to five tries to find a viable angle.

The back-and-forth dynamic between the human and machine is not unlike a dance, and offers a similar level of captivating challenge to the creative. Particularly with written content, the machine sometimes offers unexpected angles or metaphors that would never have occurred to the human, making it an interesting extension of the creative capacities of the writer.

How to Get Started

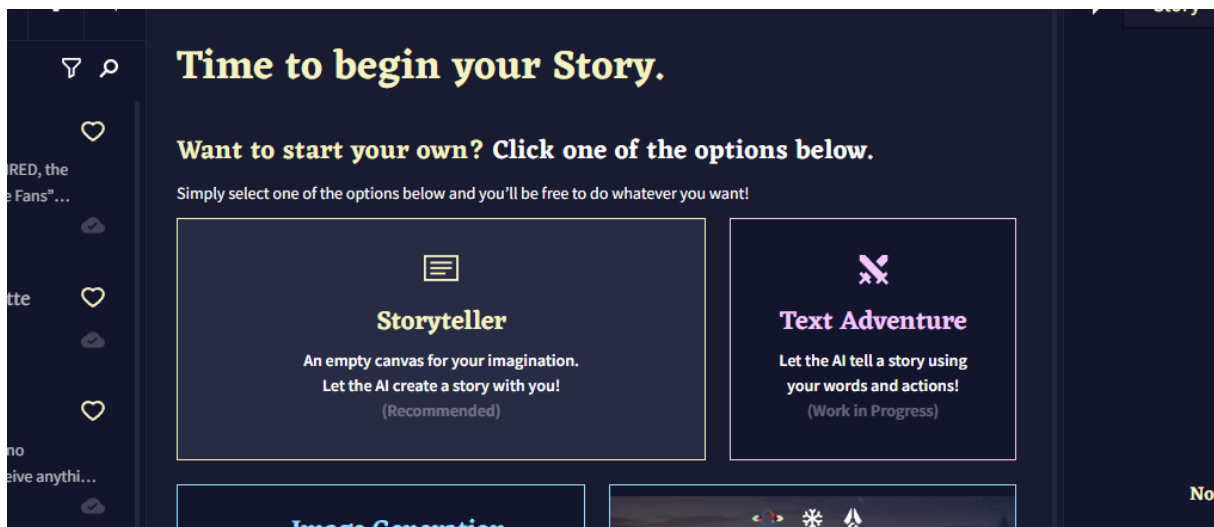
If you are a content writer, the good news is that a company called **NovelAI** has recently launched, and they seem to have solid data policies and copyright rules (your work is yours, and encrypted). There is no economic benefit for this recommendation – it is simply an excellent tool that can produce quality nonfiction content.

Step 1: NovelAI Membership

Go to NovelAI.net and choose a membership level – for new users or people skeptical of the value for their context, their recommended tier offers solid value.

Step 2: Open a New Story

Once you open up the NovelAI interface, there will likely be a tutorial – make sure to take it, since there are a lot of buttons and knobs in the NovelAI interface that must be learned.



Once you familiarize yourself with the general interface, you can begin to get used to the settings and how they function.

Step 3: Initialize Settings

There are a number of settings available to you in NovelAI, which are pictured to the side and explained briefly below.

AI Model

- Don't touch this.

AI Module

- There are a number of preset modules available that filter the AI's output through the voices and styles of famous writers. At the moment, only fiction writers are available, although I find that Jules Verne is a useful setting for tech.

Config Preset

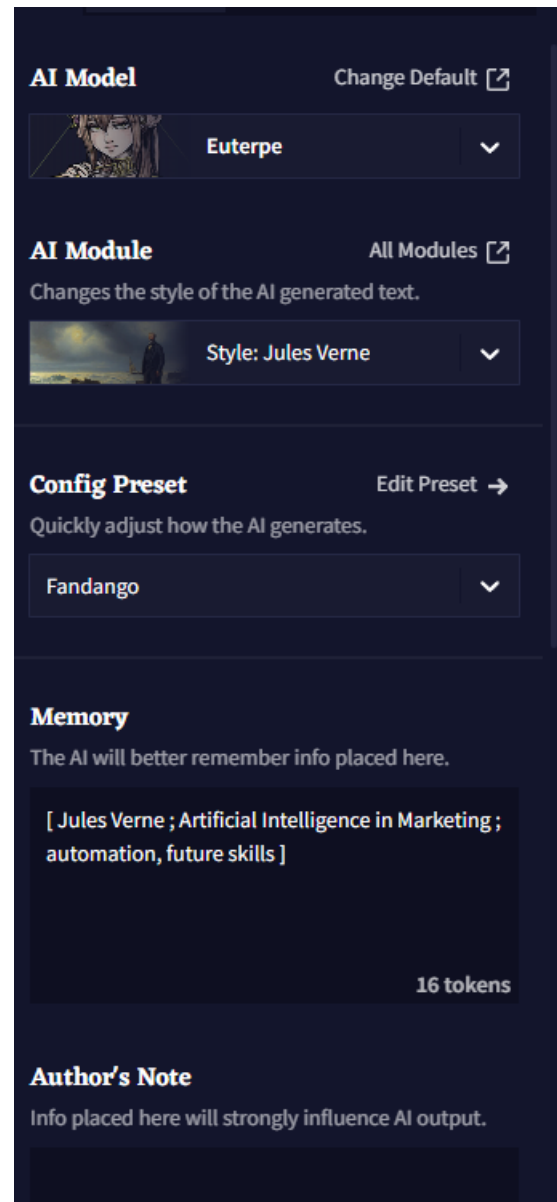
- This is another filter that the AI runs its output through, mostly for word choice and some elements of style. Most heavy NovelAI users recommend "Ace of Spades", although I have had good experience with Fandango as well.

Memory

- This is a space for plain-language instructions to the AI, as well as a powerful built-in command that allows you to specify style, topic, and focus.
- [Author ; Title ; Tags ; Genre] is the command, and the spaces are important. If the AI has access to the author's writing, it can emulate their style, while Title and Tags allow you to focus the AI's output and prevent random tangents. Genre is mostly used in fiction applications, although I've found success with "article" or "essay" to specify nonfiction. Note – you don't necessarily need "Genre".

Author's Note

- This is described as a "sledgehammer" by NovelAI power users, and is rarely used because of the dramatic effect it has on your output. However, I have found it extremely useful to give the AI specific instructions about a type of output I am looking for, and then deleting the Author's Note once that specific instruction is achieved.
- Examples of possible commands include "Use real Steve Jobs quotes", "Use and explain real statistics", and other simple instructions that will drive a well-defined output.



Step #4: Write, whisper, iterate!

Make sure to keep a logbook of instruction sets that work well.

Sample Outputs

A Blog Article About Email Marketing

- **AI Module:** Jules Verne
- **Config Preset:** Fandango
- **Memory**
 - [Kevin Kelly ; Innovations in Email Marketing ; email marketing, content marketing]
 - An article about cutting-edge techniques that email marketers use to drive revenue.
- **Author's Note:** (none)

It's amazing to think that email has been around since 1971 — over 40 years! And yet people don't seem to have tired of it and there are many new innovations happening in email marketing every year. There are many companies now offering to manage your email marketing for you, such as Constant Contact or MailChimp. However, if you want to do it yourself, and you have the time, MailChimp offers some very useful free tools.

Mecha-Rand on Aesthetics

- **AI Module:** No Module
- **Config Preset:** Moonlit Chronicler
- **Memory:** [Ayn Rand ; The Degeneracy of Modern Art ; objectivism, aesthetics, art, postmodernism]

Note: Bolded text is my prompt to get it started.

Contemporary art has been reduced to mindless regurgitation and empty exhortations of virtues. It is no longer even art in the sense of reflecting reality or conveying a message. Instead it is an endless succession of shallow, meaningless, trivialities, which are neither created nor interpreted by any human being. They are simply created and then imposed on the public.

This process is not only corrupting our culture; it is also a direct assault on reason itself. Modern art, with its insistence on subjectivity, is an assault on objectivity.

Modern art is a betrayal of all that we hold dear. It is a betrayal of the dignity of man and of his capacity for self-realization. The deformed children of modern art are the artists themselves. They have no dignity; they are victims of their own debased, confused, and perverse aesthetic values.

It is not surprising that contemporary art should be so destructive of its creators. If one's aesthetic standards are utterly subjective, if one lives in a world where nothing is real, there can be no such thing as an artist who creates according to objective standards. To create according to objective standards means to be able to perceive the truth about oneself and the universe. It means to be able to recognize reality.

For More Information...

NovelAI.net

"The Inevitable: Understanding the 12 Technological Forces That Will Shape Our Future", Kevin Kelly

"Understanding Media: The Extensions of Man", Marshall McLuhan

"Picture Limitless Creativity at Your Fingertips", WIRED (2022)

"You're Just Not That Strategic: Seven Objections You'll Have to Overcome to Get to the Top", Bridget Frey

"The Future of the Professions: How Technology Will Transform the Work of Human Experts", Susskind²

"Small Data: The Tiny Clues That Uncover Huge Trends", Martin Lindstrom



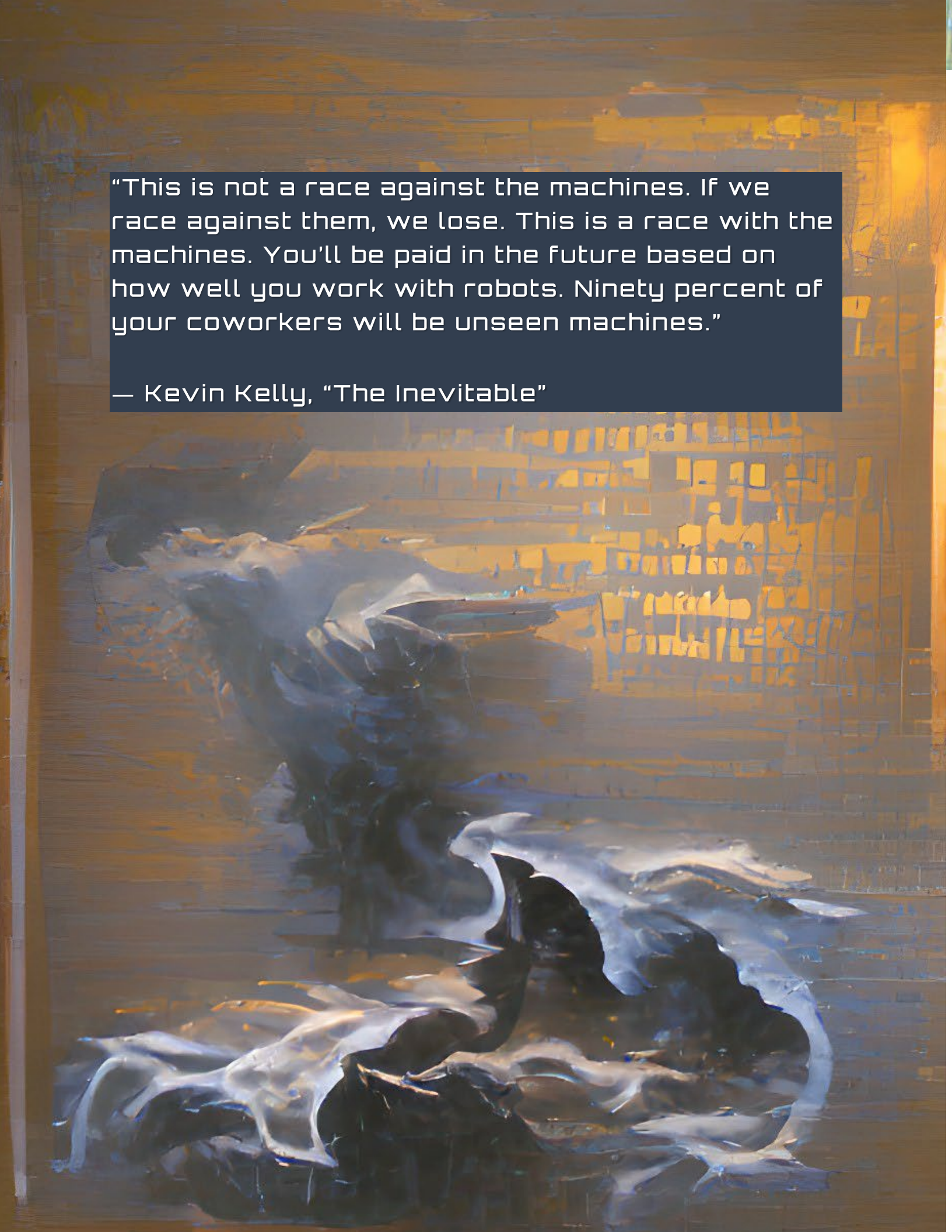
About Zachary R.J. Strong

Descended from the lowland tribes of Scotland and heir to a rich blue-collar heritage, Zachary R.J. Strong is a scholar, author, futurist, artist, and mystic born and raised in the industrial Canadian city of Hamilton, Ontario.

Versed in a kaleidoscope of fields and perhaps the only person to ever graduate from McMaster University with a combined degree in engineering physics, commerce, and mathematics, Zachary dances happily and comfortably at the intersection of science, history, art, philosophy, media ecology, and spirituality. He has written multiple papers and books on topics including higher education reform, expert intuition, adult development, critical thinking, the Egyptian dynastic chronology, flaws and corruption in psychology, and the Industrial Revolution.

In his professional life as a marketer, consultant, and entrepreneur, Zachary has contributed to the design and launch of the Nix Pro™, an award-winning colour measurement device, as well as the design and launch of the RQ Relationship Intelligence™ assessment, a relationship-building skills tool used in major corporations. As an educator, speaker, and facilitator, he has accumulated over ten years of experience in K-12, postsecondary, and corporate environments, including keynote presentations at the Canadian Conference on Student Leadership.

- **Website:** zacharystrong.net
- **Email:** zachary@zacharystrong.net

An abstract painting with a warm, golden-brown color palette. In the background, there is a faint, impressionistic depiction of a cityscape with buildings and windows. The foreground is dominated by dark, swirling, and textured brushstrokes in shades of blue, black, and white, creating a sense of movement and depth. A semi-transparent dark blue rectangle is overlaid on the upper left portion of the painting, containing white text.

“This is not a race against the machines. If we race against them, we lose. This is a race with the machines. You’ll be paid in the future based on how well you work with robots. Ninety percent of your coworkers will be unseen machines.”

— Kevin Kelly, “The Inevitable”