

We are all investors. We invest our time, our energy, our money.

We invest every single day, as citizens, as consumers, as businesspeople. At its core, done well, investing is aligned with the same principles that govern natural systems. It involves connection, exchange, and mutual benefit: we humans invented this activity, to serve our own needs, our communities, and our planet. For any business endeavor, wise investing—of human capital, social capital, physical capital, and financial capital—is at the heart of success.

Lately, however, this primary, beneficial function of investing has become overshadowed by ever-more-extended iterations of finance. In my definition, finance consists of all of the secondary activity that's related to those initial exchanges, all of the tools and mechanics that surround the primary activity. At the beginning, these tools helped us to center on our true purpose, but more recently, they've become sources of distraction and even of detraction.

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As our tools have become more and more specialized, in finance and in business, they've taken on a life of their own. In finance, we now have funds of funds, securitizations of securitizations, and entire firms whose businesses are based on harvesting the advantage of microseconds of trading speed. In business, we have systems to manage sales funnels, systems to track daily P&L's, systems to process endless data streams. None of these developments is inherently bad, but each one has the potential to pull us further and further away from that primary, useful function of investing: flow of resources and mutually beneficial exchange. When we move deeper into the specialized mechanics of finance and business, we often end up in the realm of speculation and automation, losing sight of the primary role of investing.

The same trend is visible in many fields: my colleagues in the medical community care about healing, but seem to spend most of their time with arcane insurance details. My colleagues in the legal field care about justice, but end up counting each billable minute of the day. My colleagues in business management care about people and products, but seem to spend most of their time with spreadsheets and legal contracts.

Additionally, as risks and uncertainties have mounted in recent years, we've sought more control over our investing, in all its forms. The trouble is, driven by fear, we have focused on the wrong goals. Instead of aiming for resilient, optimized portfolios, we have sought risk-free, return-maximizing strategies that promise to sail through uncertain conditions unscathed. Or else

we've sought more safety, and protection at any cost. These approaches might sound great, but they are figments. Fiction. Our faith in mechanics has become stronger than our faith in human judgment. Our faith in individual tools has become stronger than our faith in a connected whole. Our efforts to confine risk have just rearranged it into different pieces and different places, and in some cases magnified the dangers. We desperately want control. But what we need is flexibility, adaptability, and resilience.

What is the result of our intense focus on organization, mechanization, and risk management? It many ways it is the worst of all worlds, where risk and uncertainty are increasingly hidden, but undeniably present. Where flexibility and adaptation are constrained by ever smaller investment-style boxes and ever greater layers of processing (and cost). Where our structures and systems are increasingly complicated, but without the benefits of variation and diversity. Where our tools and products are more and more numerous, but controlled by fewer and fewer entities.

We need to reengage with investing in its essential, connected form—to reintegrate our professions with the real world, instead of the world on the screen. But how? Traditional economic theory, upon which traditional investment theory and business practice relies, can be useful, but it is incomplete. These theories take a mechanical approach, and to do so they must begin with a series of disconnects. One of the first phrases that any Econ101 student learns is "ceteris paribus," "all else constant." But "all else" is never constant. Likewise, a long list of "externalities" is ignored

in all sorts of economic studies and business decisions, even when those externalities are vitally important, and not external at all. This does not make traditional economic theory useless, but, like any set of tools, we need to be conscious of its shortcomings.

Re-rooting investing is no small task. It requires a philosophical framework that is flexible enough to apply to many layers of a system, yet steady enough to apply to all sorts of shifting circumstances. It requires ideas that are aspirational, yet still easily linked to practice in the real world. It requires tools that are connected to deep truths and observable facts.

Why Biomimicry?

Biomimicry fits this bill. It is both philosophy and practice. A provocative, nuanced approach to transforming decision-making is to use nature instead of mechanical engineering as our starting point for modeling. Specifically, biomimicry provides us with a model that embodies connection and integration, a model of our natural systems that have proven to be effective, adaptive, and sustainable for 3.8 billion years. This is not a nifty new quantitative approach or a fancy consultant's pitch; the principles of biomimicry, life's principles, describe how the natural world actually functions. As educator Dayna Baumeister notes, "biomimicry is an emerging discipline of an ancient practice."

This is not the newest theory. This is our most ancient wisdom. In my own search for a more complete, reconnected approach to investing, I was fortunate to find my mentors in biomimicry, Janine Benyus and Dayna Baumeister. The visionary futurist Hazel Henderson drew us together with other biomimicry and investing enthusiasts at a small gathering in 2011, and by noon on the first day I realized that, though we were deep in discussions about all that was flawed in our current world, I was breathing more deeply. I was wide awake. I was smiling. For the first time since I'd begun working in sustainable investing, I did not feel the need to convince anyone that I was right (or righteous). Unlike some sustainability frameworks, biomimicry does not root itself in anger and blame. It begins with acknowledging the reality of connected systems, and from that springs a natural and genuine sense of responsibility, stewardship, participation, and care. While a blame-centered approach begins with liability, shame, and negativity, a responsibility-centered approach begins with agency and positivity.

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The Roots of Biomimicry Practice

In its simplest form, biomimicry is a straightforward practice. It's pausing before every creation, every decision, every design, and asking ourselves, "what would nature do here?" **WWND?**This phrase asks us to draw on the wisdom of nature before jumping to our preprogrammed, engineered default mechanisms. It opens us up to creativity and connection. The "here" adds an important nuance, reminding us that context is vital. We don't want to cut and paste convenient, random pieces of nature's guidance; we want to explore deep layers of wisdom within their appropriate context.

What nature would do is tangible; it is observable all around us. Perhaps that's why a long walk can be the best remedy for writer's block, or the best way to calm down after an anxious or angry encounter. Nature is sustainable; it is geared to optimize; it is inherently connected and regenerative. And because of all those things, it is aligned with the deepest human wisdom, whether from philosophers or spiritual leaders or indigenous communities.

In its more complete application, biomimicry asks us to **look to nature as model, mentor, and measure.** As model, nature offers lessons from 3.8 billion years of sustainability. We can use these lessons to innovate our own products and processes to be more in alignment with life's principles. As mentor, nature provides us with wisdom, not just raw materials.

And as measure, nature offers clear tests for whether any endeavor meets standards of truly long-term, full-cycle, integrated sustainability. To these three, I would also add "muse," as I have seen firsthand how much creativity can be unleashed by simply observing the wonders living all around us.

Biomimicry is also inherently a multilayered approach: the same framework can be applied to forms, processes, and entire systems. This makes it perfect for applying to a multi-dimensional area like investing, where one of our biggest challenges has been the development of tools and languages that are ultra-specific to small pieces of the field, without linking back to the whole.

Similarly, **biomimicry is scale agnostic:** it can be can applied at micro, meso, macro, and meta levels. In my work I use biomimicry to look at individual businesses, my own investment processes, products and tools, and the entire financial system. The contexts are specific and varied, but the principles are universal.

Here's What Biomimicry Is Not: Biomimicry is not an overly romanticized view of the world and its functions. Nature is not just sunshine and puppies; it is also hurricanes and vipers, droughts and rats. We can learn from the darkness of nature as well as its light. Nature demonstrates systemic principles that are often different from the ones used in human-created

systems, and natural systems also adjust to change and disruption differently (and usually better) than human-created systems. There are frequent, large disruptions and imbalances in nature, but throughout all of that, life strives to create conditions conducive to life. We can learn from these disruptions and adaptations as much as (and maybe even more than) from an ongoing healthy system.

Perhaps most important, biomimicry is not just copying nature, like the mechanical humming-birds recently developed by DARPA. It is not pasting nature into nonnatural environments, like adding bamboo flooring to a high-rise in the desert. And it is not simply employing nature as if she were a subcontractor, taking bits and pieces that are useful to us, without regard for context, process, or system. **Biomimicry focuses on embracing nature's wisdom, not extracting nature's stuff.** This starting point is one of open inquiry and curiosity—asking "how" instead of "how much.

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A New Vision

Though the systemic challenges in investing and business are numerous and multi-layered, when I step back from the detail, I see just three main fissures that run straight through to the bedrock of our systems. Repairing these three will bring us back toward the true nature of investing, toward a connected, beneficial financial ecosystem that is in service to our communities and our planet.

First, we have disconnected investing decisions from the real world. Automating analysis and trading, outsourcing expertise, and adding layers of synthesis and complication have improved efficiencies and created certain new opportunities. But most of these efficiencies are of the shallow sort, focused only on speed and immediate cost. And most of those opportunities have proven to be fleeting, looming large in the short term but fading quickly into losses over the longer term. **Reconnecting,** in all of its forms, is the first task of an engaged investor.

Second, we have narrowed our perspectives in a false and needless way. We think of investing as only what shows on our brokerage statements or balance sheets, when in reality we are investing with every action, every decision, every dollar. We consider profit and cost to be only what's shown on financial statements, forgetting that we ourselves invented accounting. Those numbers are tools, not truth. We examine data every day, every second, every microsecond, just because

we can, pulling our attention away from the months and years to come, shrinking our field of vision to exclude the most important consequences and most complete views of investment returns. This shrunken focus traps us in a mindset of extraction. Broadening our definitions to include longer term and more multidimensional measures of profit, cost, and investing is the first step to creating a **regenerative** system, not just for business, but for our entire society and our entire planet.

Finally, we have chosen to create complicated, rigid structures, instead of flexible, adaptive ones. Like the little pigs, afraid of the big bad wolf, we have built more and more defenses against the threats of our world, both real and imagined. But what happens when the threat of a big wind is replaced by a flood? We can never build complete defenses against uncertainty. And yet from stringent budgeting procedures to complicated regulations to automated data analysis, we have chosen the false security of ever-increasing structure, all the while increasing our ultimate fragility. Appreciating the need for adaptation, over all time frames, throughout all circumstances, and at every level of scale is the beginning of creating a more **resilient** system.

Fortunately, there is plenty of cause for optimism. I must admit, as I dug into examples of ventures gone awry, I was afraid that I'd find a core that was rotten, a system that was entirely lost to anyone seeking to reclaim the true nature of investing. I found just the opposite: time and time again, the kernel of true service, true need, true exchange, and true profit was alive and well.

Admittedly, it was sometimes so small or covered up or removed from its original state that it was hard to identify, but still, it was there. At the core, if we peel off enough layers, there is still something solid to be built upon.

Also, we are surrounded by abundance. We have tools and capabilities for sharing knowledge and wisdom that have never existed before. We have the ability to connect not just in superficial ways, but in deep and lasting ways across great spans of time and space and culture. We have growing understanding—both technically and emotionally. We have not just tangible resources but also far more important gifts to draw upon: the wisdom of nature as mentor, model, measure, and muse.

66 Broadening our definitions to include longer term and more multidimensional measures of profit, cost, and investing is the first step to creating a regenerative system, not just for business, but for our entire society and our entire planet. Finally, we have ourselves! Humans are a part of nature, and this is a delightful, vital truth. We also are pretty amazing and unique creatures. We have morals and ethics and the capacity for complex thought. We have tremendous capabilities that demand an equivalent level of responsibility and stewardship and engagement and care. We have compassion and empathy along with information and skill. We have the ability to choose to cooperate for the greater good.

With all of these resources, we can engage in a rebirth of creative, independent thought. We can take up our true and full responsibilities—to ourselves, to each other, to our home. We can un-box our decision making. We can reweave our loose threads of investing back into the fabric of the world.

Using nature as the ultimate decision making framework isn't romantic; it's right.

The narrowed, rigid approach we've taken served a purpose in its time, but it was a small purpose and a small window of time. This falsely linear view is an intellectually lazy one, ultimately unprofitable, and not even very interesting. With all of our resources, all of our gifts, we can do better. We have a responsibility to do better. And here is the greatest secret of all: embracing that messy multidimensional complexity is so much more rewarding. It's even more fun.

Here are the transformations needed, the steps on our path toward reclaiming the true nature of investing:

- From efficient to effective
- From synthetic to simplified
- From maximized to optimized
- From disconnected to reconnected
- From mechanical to mindful
- From static to dynamic

When we put them all together, we move our entire system:

- From fragile to resilient
- From extractive to regenerative
- From disconnected to reconnected

This is a system that's worthy of our full engagement, our full attention, our full participation, and it is ours to create, with nature as our most valued guide. This is what "fully invested" really means. **This is the true nature of investing.** §

Info



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ABOUT THE AUTHOR | Katherine Collins is Founder and CEO of Honeybee Capital, pollinating ideas that reconnect investing with the real world. Katherine has over twenty years of professional investment experience. As her interest in sustainable and regenerative finance grew, Katherine set out to re-integrate her investment philosophy with the broader world, traveling as a pilgrim and volunteer, earning her MTS degree at Harvard Divinity School, and studying the natural world and biomimicry as guides for investing in a more integrated way, beneficial to our communities and our planet.

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