

On Change

Heraclitus famously observed 2,500 years ago that change was the only constant in life. If we're striving to be consistent, principled investors, what's an intelligent approach toward the inevitability of change?

How do we maintain pliability without chasing fashion?
How do we stay resilient without becoming brittle?
Are we all just strapped to the Rota Fortunae with no recourse?

Some investment philosophers have posited that every asset class can be reframed as either long or short volatility. Said another way, are you helped or harmed by change? Whether well-articulated or not, it's quite possible every investment decision is nothing more than a bet *for* or *against* change.

Many investors know they're making explicit bets on change. Here's venture capitalist Marc Andreessen on Warren Buffett:

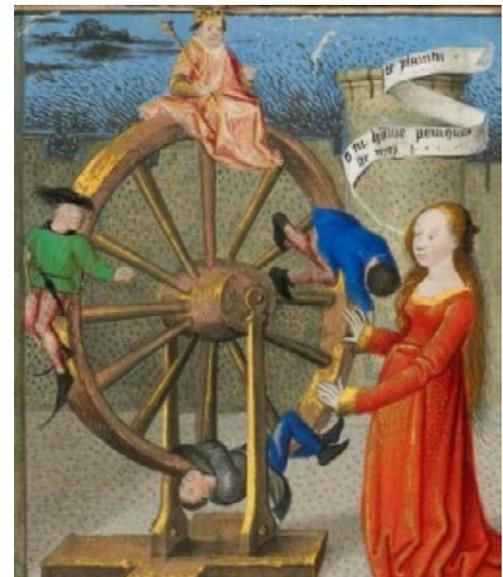
"We're wired completely opposite. Basically, he's betting against change. We're betting for change. When he makes a mistake, it is because something changed that he didn't expect. When we make a mistake, it is because something doesn't change that we thought would."

Mr. Buffett is rightly celebrated for his insights into consumer taste, with big winning bets on Coca-Cola and Gillette. Yet in 2017, he admitted, "It's getting harder, for us anyway, to anticipate consumer behavior than we would have thought twenty or thirty years ago." Sort of makes us mere mortals feel a little better.

Change doesn't just impact investors. Business people also bet for or against change. Jeff Bezos was once asked this exact question:

"You can build a business strategy around the things that are stable in time. It's impossible to imagine a future ten years from now where a customer comes up and says, 'Jeff, I love Amazon, I just wish the prices were a little higher.' Or, 'I love Amazon, I just wish you'd deliver a little slower.' Impossible. So we know the energy we put into these things today will still be paying off dividends ten years from now. When you have something you know is true, you can afford to put a lot of energy into it."

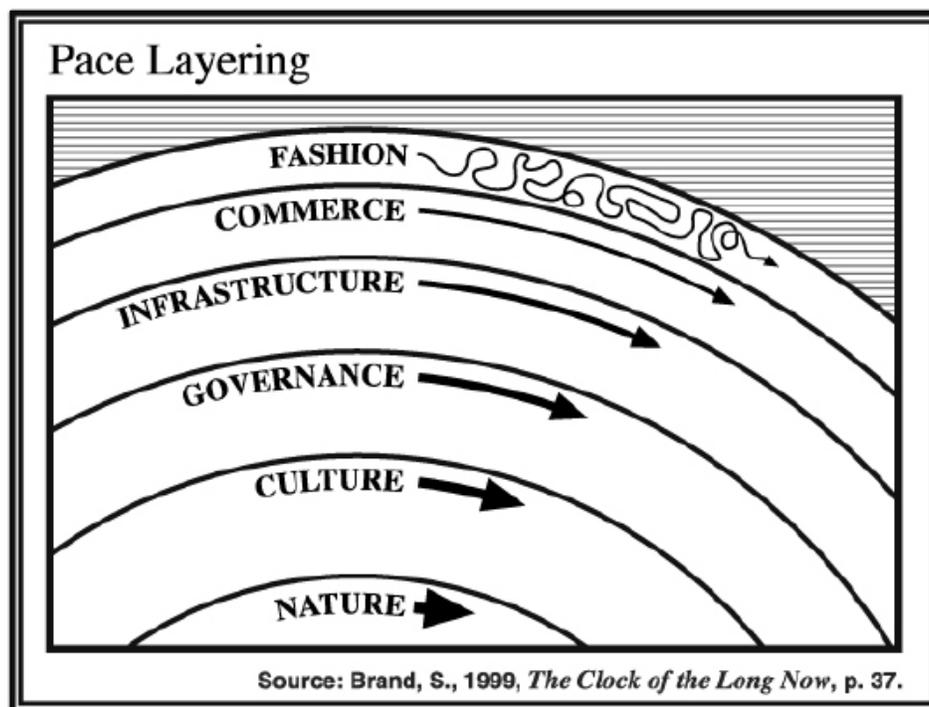
A lot of energy... and more than \$172 billion in capital expenditure in the last fifteen years.



Pace Layering

A full treatment of change might require thousands of pages. Instead, I'll share one mental construct I've found useful. Stewart Brand is an author best known for editing *The Whole Earth* catalog. He has a concept called pace layering.¹ It was born from a study of architecture and the speed to which layers of a building turn over. Specifically, from fastest to slowest: stuff (like furniture and paint), space plan (layout), services (like water and power), skin (exterior), structure (skeleton), site (land). Pace layering makes sense for architecture, yet it has surprising explanatory power for a wide range of domains.

More generally, pace layers integrate how systems can both manage change and absorb external shocks. They also explain how systems evolve with changing conditions, while maintaining resilience and continuity. Brand's naming convention from fastest to slowest: fashion, commerce, infrastructure, governance, culture, nature.



¹ Brand's [2018 article](#) is more worthy of reading than the rest of this letter, which will be my pale imitation.

“Fast learns, slow remembers. Fast proposes, slow disposes. Fast is discontinuous, slow is continuous. Fast and small instructs slow and big by accrued innovation and by occasional revolution. Slow and big controls small and fast by constraint and constancy. Fast gets all our attention, slow has all the power.”

- Stewart Brand



Unsurprisingly, Mother Nature figured this all out eons ago. Picture a majestic coniferous forest. The hierarchy in scale and time is pine needle, tree crown, patch, stand, whole forest, and biome.

The needles change annually with the seasons. The tree crowns over several years. The patch after many decades. The stand every hundred years or so. The forest over a thousand years. And the biome over tens of thousands of years.

The different layers allow the entire system to roll with the vicissitudes and stresses of crowding, parasites, weather, disease, and fire. Continuity is maintained without sacrificing adaptation.

Physicist Freeman Dyson observed pace layering in human societies:

The destiny of our species is shaped by the imperatives of survival on six distinct time scales. To survive means to compete successfully on all six time scales. But the unit of survival is different at each of the six time scales. On a time scale of years, the unit is the individual. On a time scale of decades, the unit is the family. On a time scale of centuries, the unit is the tribe or nation. On a time scale of millennia, the unit is the culture. On a time scale of tens of millennia, the unit is the species. On a time scale of eons, the unit is the whole web of life on our planet. Every human being is the product of adaptation to the demands of all six time scales. That is why conflicting loyalties are deep in our nature. In order to survive, we have needed to be loyal to ourselves, to our families, to our tribes, to our cultures, to our species, to our planet. If our psychological impulses are complicated, it is because they were shaped by complicated and conflicting demands.

Most of the interesting stuff is happening at the “intertidal zone” between the layers. The turbulence and slippage between the boundaries is where we find uncertainty, surprise, and innovation. If you’re picturing plate tectonics, you’re on the right track.

Per Brand, if commerce is allowed by governance and culture to push nature at its relatively fast commercial pace, we risk the loss of natural support from forests, fisheries, energy, and aquifers.

Any governance system which changes slower than culture and nature ends in revolution. Think of the earthquakes from the fall of the Soviet Union or the French Revolution. Perhaps China today?

As people get older, their interests drift toward the slower layers. Older people tend to lack interest in fashion, locking in clothing and hair choices from decades ago. Young people are often oblivious to sweeping changes in culture (like language or religion), but they live for fashion. Not just clothes, but social media memes and dance crazes with the life spans of a fruit fly.

“With rare exceptions, any company whose brand is a signal of “getting it” – getting a new technology, fashion, or being part of a new movement – has a generational shelf life. So no one should be surprised when previous giants cede market share to new entrants, even when the new product is inferior.”

- Morgan Housel

The job of fashion and art is to explore the space, push boundaries, and provide activation energy for commerce (think continual automobile redesigns). Occasional good ideas sift down into the deeper levels and allow the whole system to morph.

Infrastructure typically has such long payback periods, it requires the intervention of the governance layer. The commercial world doesn’t tend to think in such long time frames. Of course, this can go horribly wrong if that governmental guiding hand misallocates capital into projects that people don’t end up wanting. See: ghost cities.²

Deeper, slower moving layers turn exponential growth into “S-curves.” A rapidly dividing bacteria crashes into the resource-wall of its Petri dish. Nineteenth-century commercial robber barons were smacked by the governance layer of the Sherman Antitrust act. Amazon Prime free shipping leaned on the creaking infrastructure of the U.S. Postal Service until it was forced to invest in its own infrastructure (all those delivery vans you see driving around).

² In a [recent interview](#), economist Russell Napier predicted we’ll see a capital expenditure boom over the next five to ten years as governments step in to allocate credit and capital. Keep your eye on the possibility of a misallocation of that capital leading to eventual stagflation.

Hopefully, next time you're thinking about change, you can recall pace layers as a helpful construct to understand how successful systems change.

I'll leave the final word to Brand:

"The division of powers among the layers of civilization lets us relax about a few of our worries. We don't have to deplore technology and business changing rapidly while government controls, cultural mores, and "wisdom" change slowly. That's their job. Also, we don't have to fear destabilizing positive-feedback loops (such as the Singularity) crashing the whole system. Such disruption can usually be isolated and absorbed. The total effect of the pace layers is that they provide a many-leveled corrective, stabilizing feedback throughout the system. It is precisely in the apparent contradictions between the pace layers that civilization finds its surest health."

FSI Annual Bash

Thank you to everyone who attended the FSI Annual Bash in late September. It was great to see so many of you in person again.

As always, we're thankful to have such great partners in this wealth creation journey.

Jake