



2021 YEAR-END LETTER



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“How far that little candle throws his beams! So shines a good deed in a weary world.”

William Shakespeare, *The Merchant of Venice*

“No one lights a lamp in order to hide it behind the door: the purpose of light is to create more light, to open people's eyes, to reveal the marvels around.”

Paulo Coelho

“There are two ways of spreading light; to be the candle or the mirror that reflects it.”

Edith Wharton

EAST COAST



ASSET MANAGEMENT

To: East Coast Asset Management Partners
From: Christopher M. Begg, CFA - CEO and Chief Investment Officer
Date: March 14, 2022
Re: 2021 Year-End Letter - Surfing Light Waves

In our year-end letter, *Surfing Light Waves*, we will update you on our portfolio and share some commentary to contextualize the current investment climate. We will also share some perspectives as told through the laws of physics that help shine a light on our core principles and research process – collectively the rein and rudder of everything we do here at East Coast.

East Coast Update

Our primary objectives and deliberate approach remain unchanged. Specifically, we are exclusively focused on achieving:

1. *superior absolute returns* while,
2. *mitigating risk* – not defined or measured in relation to volatility but in protecting against permanent losses of capital, over a
3. *long duration* – defined in decades

We have always thought about our portfolio internally as a *holding company* of exceptional businesses that we own in their entirety. Precision of language is very important to us in clarifying this vision and most importantly our thought process and approach. A *holding company* aligns our language with our mission of compounding capital by *partnering* with these global enterprises and their builder operators over the long-term. We increasingly view our role as one of *builder partners* allowing these enterprises to manifest their full potential. At times we do this passively by remaining silent as part of a stable long-term shareholder base. Other times we may take a more proactive approach by encouraging behaviors that will drive more resilience in the business and better long-term outcomes for all counterparties. A long-term aligned owner base is a *superpower* for an exceptional business, liberating the management team's finite time to focus on building enduring value versus communicating short-term results. Exceptional businesses and the builder operators that steward them need to be protected at times against the short-term whims of a myopic marketplace. In this letter and going forward we will also refer to our portfolio as the Partners Holding Company ("Partners Hold Co." or "Hold Co.").

As is our standard practice, our partner reporting and historical performance will be sent under separate cover.

We currently own eight businesses in the Partners Hold Co. We had a productive year with two new businesses coming into the portfolio. Both squarely fit the mold of what we are searching for – companies with wide and expanding moats, secular tailwinds, and management teams aligned with our economic interest. Short term clouds temporarily obscuring the full light of future cash flows provided us the opportunity to acquire both businesses at attractive expected IRRs. With sub \$3 billion market capitalizations, both companies are in the early stages of their

compounding life cycle. While both companies' customer bases and cash flow streams are diversified around the world, one is listed domestically and the other internationally. As always, our investment universe remains unconstrained by geography and market capitalization. We look forward to sharing more details on these holdings in conversations and in communications to follow.

More recently, market volatility has increased significantly as investors digest a meaningful increase in inflation. The Consumer Price Index increased to 7.5% for the 12-month period ending January 31, 2022, the fastest pace since 1982. Suddenly the narrative that interest rates may stay at generational lows has been turned on its head. The 10-year treasury has nearly quadrupled from 0.55% to approximately 2% over the last 9 months. As the saying goes, "we will see who is swimming naked when the tide goes out."

Businesses priced and evaluated on a multiple to revenues (versus the present value of future cash flows) is a pattern of delusion that we have seen before, and are sure to see again. Over the last few years, there have been unrealistic expectations built into forecasts that we felt would eventually require a reckoning; the market is now experiencing some of the valuation unwinding and we feel it is quite healthy.

As I write this to you, geopolitical unrest has increased rapidly with Russia invading Ukraine. These events are always devastating for their effect on human lives and our hearts ache for those affected directly. We always hope diplomatic solutions will eventually win over tyranny. As these macro events play out, they are generally followed by volatility and thus opportunity for the investor with a prepared mind. It is common for investors to extrapolate short-term tensions into infinity. While we are cognizant and thoughtful about shorter term risks, we do our best to maintain our mindset of owning a business in its entirety through business cycles and macro events. This perspective keeps our focus on the long-term allowing us to ride out these periods of volatility as we know underlying business value has changed very little.

A Few Lessons from Physics

Below we have borrowed a few lessons from physics to highlight our philosophy and process. Over time, we have found that the most useful lessons are those that exist universally across all systems and become fractally present in our own. Our objective is to attempt to see the world – Sub Specie Aeternitatis – in the aspect of eternity. Toward this end, there is no data set more universal than that of physics.

Relativity – An Investor's Evolution Toward *Absolute* Truths

How fast are you moving? It comes down to understanding your frame of reference. If you were observing me writing this letter on earth from the newly launched James Webb Telescope in a fixed location in space, you would see me whizzing around the earth's axis at 1,000 miles per hour. If you were watching me from the vantage point of the sun, you would conclude that I was traveling at 66,000 miles per hour. Galileo was one of the first to scientifically measure and write up these concepts of relativity. Galilean Relativity reigned for the better part of 400 years until Einstein came along in 1905 and advanced the ideas further toward the truth. From the early age of 16, Einstein conjured up his famous thought experiment on what would happen if he caught up to a light wave – as if he was *Surfing Light Waves*. He pondered, "how would the light wave appear if I was travelling at the same speed? Would it appear to stand still?"

“...a paradox upon which I had already hit at the age of sixteen: If I pursue a beam of light with the velocity c (velocity of light in a vacuum), I should observe such a beam of light as an electromagnetic field at rest though spatially oscillating. There seems to be no such thing, however, neither on the basis of experience nor according to Maxwell's equations. From the very beginning it appeared to me intuitively clear that, judged from the standpoint of such an observer, everything would have to happen according to the same laws as for an observer who, relative to the earth, was at rest. For how should the first observer know or be able to determine, that he is in a state of fast uniform motion? One sees in this paradox the germ of the special relativity theory is already contained.”

Autobiographical Notes – Albert Einstein

In 1905, Einstein turned the physics world upside down with his paper on Special Relativity that concluded that time is malleable, space is curved, and the speed of light is constant. This was an incredible stroke of genius and imagination. From this fundamental understanding of physics, so many more truths would unfold (including his famous equation $E = MC^2$). While this celebrated insight continues to be one of the most significant breakthroughs in science, Einstein knew immediately that it was not a *universal* theory as Special Relativity only worked for inertial states, meaning bodies in a steady state of motion (or standing still) and it did not consider the effects gravity had on movement. It took Einstein ten arduous years to figure this out and in 1915 he published his paper on General Relativity, which included non-inertial states, meaning bodies that were accelerating or decelerating, and included the effects of gravity.

The evolution in understanding Relativity remains one of the most useful models to understanding human behavior. “How fast are we moving?” will eternally be both a physical and metaphysical question. As humans (and all biological species) we are deeply wired to observe our surroundings and measure our speed against others. You could say it is the root of all greed, envy, and fear and drives the gears of survival and distinction in our evolution. Therefore, understanding relativity is exponentially useful in observing the behavior of markets. Today this model is particularly useful considering the most recent outsized swings in stock prices.

One of the most important sentences that an investor needs to imprint in their mind is the following: *an investment is worth the present value of all future cash flows.*

From time to time, investors forget this timeless truth and lose sight of a reference point that emphasizes long-term compounded returns over short-term results. This is equivalent to going back in time to the days of Galileo, and measuring how they are moving in relation to other investors. When you see your neighbor moving a little faster than you it often serves as a motivator to mimic those short-term behaviors in an attempt to match speed. Like asking someone on a moving train how fast the book they are reading is moving versus the individual viewing it from the track's edge, we do not often see the reference point when we are part of the system versus seeing it from the outside looking in. With no reference point, investors find themselves at the whim of moving targets.

“Eppur si muove” ~ “And yet it moves”

Galileo Galilei

We have sought to advance our own behavior toward a greater truth beyond Galileo, as Einstein taught us, and this is of Special Relativity. The insight of Special Relativity is understanding that the constancy of the *speed of light* is the consistent importance we place on measuring all *present and future free cash flows*. Toward measuring the speed of light (free cash flow), we spend a disproportionate amount of time understanding why a business's competitive advantage is

sustainable so that they will be able to maintain and grow these free cash flows over the years and decades to come.

Just as Special Relativity was not a complete theory in physics – how do we also incorporate the equivalent gravity or non-inertial speeds as applied to investing? **Gravity in investing is, and always will be, interest rates.** Interest rates and terminal multiples are two sides of the same coin. Both are reflexive to the opportunity cost of what a dollar can grow at a perceived risk-free rate of return and what a proper premium to that return should be given the quality of the business. We use multiples to free cash flow in our long-term models and have remained disciplined to not adjust our multiples to reflect the sentiment of shorter time scales. Our Theory of General Relativity also looks at the non-inertial states of motion - asking the question, “what happens when growth accelerates and, more importantly, decelerates?”

While not surprised, given past market cycles, we have watched closely as many market participants have grown increasingly comfortable valuing companies based on exorbitant multiples of revenues. We have seen this movie before and do not expect it to end well. An extended period of low interest rates has made capital cheap and undoubtedly contributed to stretched valuations. We view many of these valuations as irrational and have remained disciplined in our approach.

Over the past few months, a sharp realization of investors to the realities of Special and General Relativity has come to light. As a result, many long duration equities have fallen in excess of 50%. What happened? Investors began to consider the truth of gravity – higher interest rates and non-inertial speeds – growth rates that were likely influenced from a pull forward of demand (due to the pandemic) have decelerated and are no longer increasing at exponential rates. This appears to have spilled over across the entire technology sector including businesses with robust cash flow streams and strong moats. As always, our eyes are open and our pursuit of potential opportunities remains relentless.

Superconductivity – Lessons from Frictionless Flow

Superconductivity is a set of physical properties observed in certain materials where electrical resistance vanishes and magnetic flux fields are expelled from the material. The magic of superconductivity defies all laws of physics that we experience every day in the physical world. Unlike an ordinary metallic conductor, whose resistance decreases gradually as its temperature is lowered down to near absolute zero, a superconductor has a critical temperature below which the resistance drops abruptly to zero. Superconductivity was discovered in 1911 by Heike Kamerlingh Onnes, who was studying the resistance of solid mercury at cryogenic temperatures using liquid helium as a refrigerant. At the temperature of 4.2 kelvin (-452 Fahrenheit), he observed that the resistance abruptly disappeared.

Over the 50 years that followed Onnes’s discovery, two key insights into understanding why and how this frictionless flow of electrons could sustain movement forever were formed. These two insights were the *Meissner Effect* and the existence of *Cooper Pairs*.

The Meissner effect is the *expulsion of a magnetic field* from a superconductor during its transition to the superconducting state when it is cooled below the critical temperature. This expulsion will repel a nearby magnet. If you are familiar with Maglev trains that operate in Japan, you have observed that this magical effect is powerful enough to float a train. The Large Hadron Collider at CERN and MRI machines also harness this superconducting superpower.

The other attribute that gives rise to a flow of electrons in a metal with zero resistance is what is called a Cooper Pair. A Cooper Pair is when *electrons pair together* below the metal's critical temperature. This happens due to the positive ions that make up the latticework of the metal. This attraction distorts the ion lattice, moving the ions slightly toward the electron, increasing the positive charge density of the lattice in the vicinity. This positive charge attracts other electrons. At long distances this attraction between electrons, due to the displaced ions, overcomes the electrons normal repulsion and causes them to *pair up*. An electron in a metal *normally* behaves as a free particle, moving about at will, bouncing off one another in incessant collisions attending to their own agendas. This is the reason objects often feel warm when plugged in.

We believe all systems that thrive enjoy a disproportionate amount of frictionless flow. When we think of the two attributes of a Superconductor (Meissner Effect and Cooper Pair) we also see those attributes in the approach we have architected to build the strongest foundation for the East Coast Partners Hold Co. objective of producing superior returns over a long duration.

Meissner Effect in Practice – *Core Principles*

The Meissner Effect removes most everything from a system that is not core to the task at hand. In a superconductor, only a few core magnetic fields remain – this is called flux-pinning. **Exceptional businesses engage in flux-pinning, removing all magnetic fields that do not serve the core and essence of the organization¹.** Toward this end at East Coast, we too look to expel all magnetic fields of polarity and frictions beyond our core principles. The following core principles remain our guiding lights and our flux-pinned objectives. Our goal is to *invert* the general tendency of creating entropy as an organization grows and be more intentional about improving our process and calibrating our focus.

Research Focused - Do What We Love

Time is our most finite and valuable resource, so we want to ensure we spend it wisely doing what we love. When someone is doing what they love, their craft begins to resemble art and this is the canvas we have chosen to paint in our lifetime. We are passionate about learning and understanding what differentiates great from merely good businesses. We have carefully structured our firm so we can spend the vast majority of our time on research. Our process is simple and straight forward - approach every investment from the perspective of a private investor purchasing the entire company. Upon identifying what we define as a superior business, we perform comprehensive research to build conviction around the durability of its moat. We track and closely follow these companies to opportunistically deploy capital when they are undervalued.

“Art is the act of triggering deep memories of what it means to be fully human.”

~

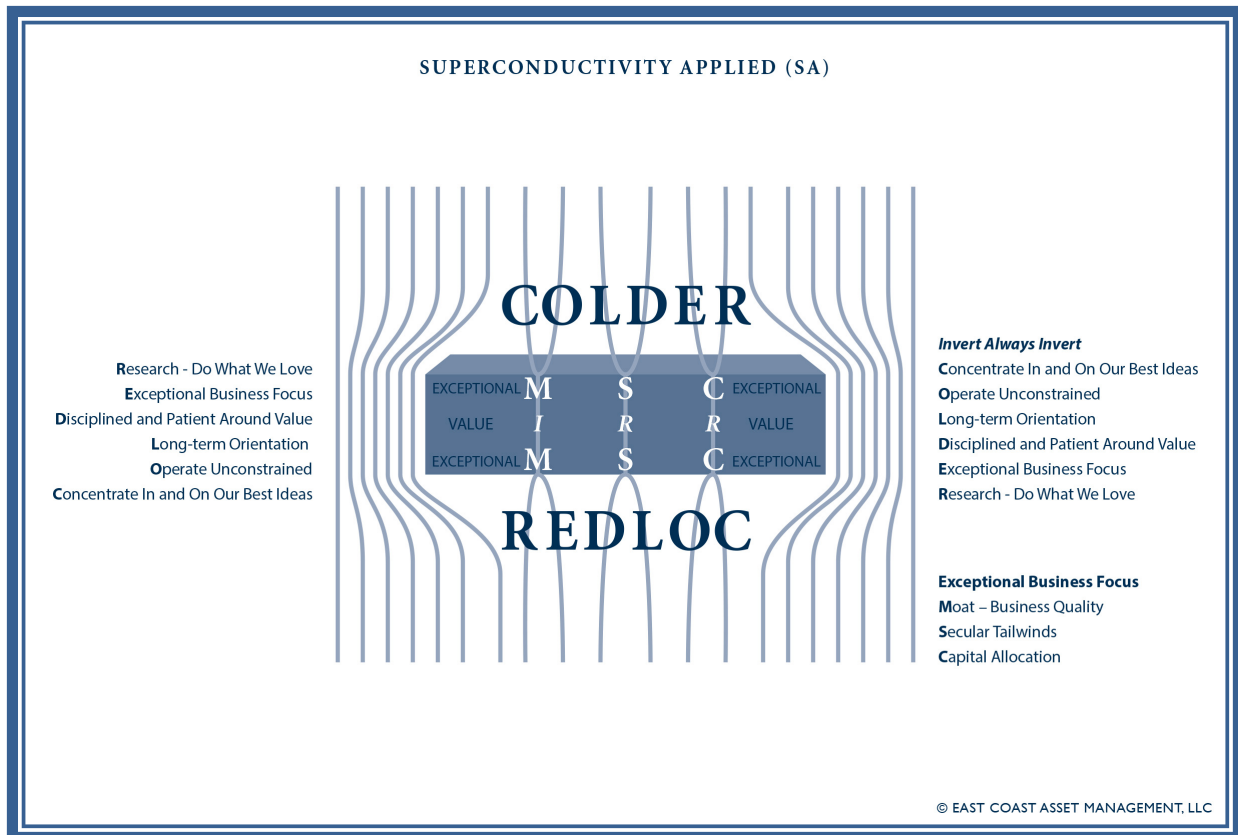
“To be human is to become visible while carrying what is hidden as a gift to others.”

David Whyte

¹ While very few businesses sustain a superconductor state, the relative difference of the persistent intention (compared to the normal path of entropy), when compounded over time, distinguishes the extraordinary from the average.

Exceptional Businesses

We characterize exceptional businesses as those that we believe enjoy competitive advantages, enabling them to earn high returns on invested capital. Said differently, these businesses have figured out how to do something *cheaper, better, and faster* for the benefit of customers. The goal is to leverage these strengths to build a sustainable business model that improves over time. Ideally, we are looking for the presence of owner-operators with an outsider orientation that share our long-term time horizon.



Disciplined and Patient Around Value

Great businesses are typically priced to reflect their quality, so we must be disciplined with what we are willing to pay. Our goal is to wait patiently until the businesses we want to own meet our strict valuation threshold. We spend a significant amount of intellectual energy understanding future cash flows and if they will be sustainable in a world that is inherently biased to compete them away.

Long-Term Perspective and Orientation

Our long-term focus differentiates us and creates opportunity where most market participants are increasingly focused on immediate gratification. Attempting to forecast and profit from short-term swings in individual stocks is extremely difficult and outside our preferred circle of competence. It is important that we leverage our long-term horizon to identify opportunities to intelligently deploy and safely compound our capital.

Operate Unconstrained

We have purposefully avoided defining our investment universe by industry, sector, size, or geography. We simply want to find businesses we can understand and value. We remain

disciplined and recognize that we should take a pass on businesses operating in industries undergoing constant or rapid change with less predictable cash flows. Businesses with demonstrated advantages and increasing returns on investment, through varied economic environments, have more predictable future cash flows and earn our attention.

Concentrate On and In Our Best Ideas

Intelligent diversification is important, but a widely diversified portfolio alone will not ensure success and will likely limit it. It is our experience, over two decades of managing money, that the types of businesses we want to own are infrequently available at attractive valuations. When presented with the opportunity to purchase a company that we consider to be a great compounder, at a reasonable price, we want to make sure we have meaningful exposure. We will never expand the businesses in our Hold Co. for the sake of meeting some preset diversification target. Over time, we have learned we are better off owning more of our best ideas.

Cooper Pairs in Practice – *Partnerships*

The principle of Cooper Pairs resonates with us when we think about the power of partnerships. The *joys of compounding* is not just a financial scorecard at the end of a long investment career but the enjoyment we experience by *pairing up* in flow with exceptional people – our team, our partners, and our network. The mechanism of Cooper Pairs in a superconductor benefits from the positively spring-loaded latticework. This is consistent with our experience of contributing and receiving high utility feedback from our network of owner operators, business builders, builder partners, global leaders, students, and experts in specialized fields. The frictionless flow that has emerged from our network has been a powerful source of truth when seeking fundamental insights into our most important questions.

While listening to a talk a few years ago by theoretical physicist David Tong, I was fascinated to learn that the formula used to mathematically explain a superconductor is the same general formula for understanding the Higgs Field and Higgs Boson. The Higgs Field is the mechanism by which all mass in the universe was manifested. David described that for some reason in a superconductor, circumstances conspire to give the normally massless photon a mass. For those *enlightened* businesses and systems, the fact that frictionless flow is the result of an *intrinsic light* makes good sense to us. ***Light² is massive in a superconductor.*** What a wonderful truth.

Fine Structure Constant – The Power of Alpha

Many of you likely remember learning in school about the model of the atom. This model shows the electrons orbiting the nucleus consisting of protons and neutrons – similar to the structure of our solar system. Niels Bohr produced this important work in 1913 helping frame how electrons and photons work in atoms. This year is the 100th anniversary of Niels Bohr being awarded the Nobel Prize in Physics in 1922 for his “services in the investigation of the structure of atoms and of the radiation emanating from them.”

While Bohr’s model was simple and useful, it did not tell the whole story. In 1916, Arnold Sommerfeld extended the Bohr model to include the *fine spectral lines* present in the atomic

² Years ago, in thinking about a collection of words that seemed to have no opposite and if fully embodied would produce joy, abundance and frictionless flow were the following - *Love, Integrity, Gratitude, Humility, Trust and Simplicity*. These words are truly at the heart of great partnerships and a purpose-built life. We endeavor to embody them daily.

structure and relativistic dependence of mass on velocity. He introduced the term “Alpha” for the fine-structure constant in 1916. The first physical interpretation of the fine-structure constant α was as the ratio of the velocity of the electron in the first circular orbit of the relativistic Bohr atom to the speed of light in the vacuum. Going back to our discussion on Relativity – said another way – how fast the electron is moving relative to the speed of light.

We believe that our ability to see the layers beneath the Bohr model view of the investment universe and businesses has allowed us to generate Alpha³. Succeeding in generating superior absolute returns, “and subsequently future alpha”, will come from our ability to see not just the *coarse-grained lines*, but the *fine spectral lines* - the deeper layers that are not readily visible.

As Sommerfeld probed further into the truths of how the atomic structure was constructed, he found that the Fine Structure Constant was not just informing us about the true architecture of the atom but sharing with us something much more fundamental. Alpha, the Fine Structure Constant, is a foundational physical constant which has several physical interpretations. A couple noteworthy interpretations include:

- Alpha quantifies the strength of the electromagnetic interaction between elementary charged particles.
- In quantum electrodynamics, Alpha is directly related to the coupling constant determining the interaction between electrons and photons.
- Alpha determines the *probability that an electron will radiate (emit) or absorb a photon*.

As we probe into understanding a business and more specifically our universe of exceptional businesses, we expand our mental models and build pattern recognition around *fundamental* insights that recur again and again. Historically, all of our alpha generating compounders have been the result of seeing the fine spectral lines not readily visible in a coarse-grained world. These *fine spectral lines*, or layers, all add up to create a differentiated, holistic view of a business and the universe.

Physicists have often been in awe of the Fine Structure Constant – a dimensionless quantity, meaning it is a pure number and does not have units attached to it like the speed of light. As a dimensionless quantity, Alpha has a numerical value of approximately 1/137, and is independent of the system of units used.

*“There is a most profound and beautiful question associated with the observed coupling constant, e – the amplitude for a real electron to emit or absorb a real photon. It is a simple number that has been experimentally determined to be close to 0.08542455. (My physicist friends won't recognize this number, because they like to remember it as the inverse of its square: about 137.03597 with an uncertainty of about 2 in the last decimal place. It has been a mystery ever since it was discovered more than fifty years ago, and **all good theoretical physicists put this number up on their wall and worry about it.**)*

Immediately you would like to know where this number for a coupling comes from: is it related to π or perhaps to the base of natural logarithms? Nobody knows. It's one of the greatest damn mysteries of physics: a magic number that comes to us with no understanding by humans. You might say the “hand of God” wrote that number, and “we don't know how He pushed His pencil.”

³ We view our primary objective is to provide superior absolute returns over a long period of time. Alpha (our ability to generate excess returns over the MSCI World Index), if we continue to be successful, should be a material and meaningful attribute of our absolute return focus.

We know what kind of a dance to do experimentally to measure this number very accurately, but we don't know what kind of dance to do on the computer to make this number come out – without putting it in secretly!”

Richard P. Feynman

I wrote **137** on my whiteboard when I read the above Feynman quote years ago and I have long been intrigued with the mystery of this number and the range of its domain. The symbol of **137** is a reminder of how much we do not know and our quest to ask deeper and more insightful questions. Questions that might converge to an answer and others that may diverge to a paradox. What are the fine spectral lines that we have not considered? Are we coarse-graining (like the Bohr model) our understanding, or have we identified the deeper layers that tell the whole story (like the Sommerfeld model)? Are we considering that which is truly fundamental and therefore insightful?

When thinking about this mysterious and important number - **137** stands out as mapping quite succinctly and beautifully to the *layers* of our process.

1 – an important focus of our work is to determine the **I** - the **IRR**. This is the truth to be revealed for every investment opportunity. This is an elusive task that has no finish line and is best described as a probabilistic hologram that is changing in real time by factors such as competition, growth prospects, valuation, and capital allocation. Assuming all the companies in our Grove of Titans (“Grove”) shared equivalent and sustainable competitive positions (yes, a big stretch!), we would simply allocate more capital to the highest IRR businesses in our universe.

3 – the three most important attributes we evaluate in assessing the *dynamic quality* of an exceptional business include the **Moat**, **Secular Tailwinds**, and **Capital Allocation** acumen of the management team.

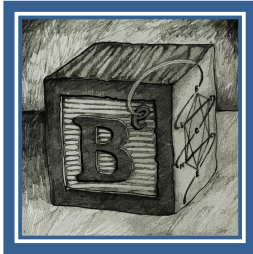
7 – the letters in the word **ESSENCE** which are the *fine spectral lines* that drive three key aspects of a business’s ability to achieve and sustain excellence – the **Essence of Moat** – specifically its sustainability, the **Essence of Win-Win** – its relationship with all counterparties of business, the **Essence of the Perpetual Flywheel** – that drives the growth of the business. Below we discuss how these layers are part of a bigger intra-cultural ecosystem of an organization. These are cultivated and curated in our Grove of Titans.

137 is Eternally Present in the Grove

In spending time thinking about 137 and our Grove, I was delighted to learn an interesting connection to why most of our plants in the universe display their green appearance. Chlorophyll is the natural compound present in green plants that is essential in photosynthesis allowing plants to absorb *energy from light*. The spectrum of light that chlorophyll prefers to absorb is blue light and subsequently red light. It has difficulty absorbing green light which gets reflected off cell walls which is why we see green. Chlorophyll has 137 atoms in its essential compound that gives life to everything on earth – $C_{55}H_{72}O_5N_4Mg$. Thus, our Grove of Titans and all the worldly groves celebrate the auspicious value of 137^4 every day.

⁴ Another connection I will mention is that 137 degrees is the *Golden Angle* which is the optimum angle that a plant has evolved to capture light. Phyllotactic patterns are some of the most conspicuous in nature. To create these patterns, plants must control the divergence angle between the appearance of

The Three Essences and The Grove of Titans



The Grove of Titans is a reference to our universe of exceptional and *enlightened* businesses. We are always seeking gradients of fundamental understanding to reveal the holographic IRR of each business in the Grove and thus its prospective return from the current price. Tending to, expanding, and nurturing this Grove is our most important work. Some businesses in our Grove are magnificent towering redwoods while others are seedlings whose progress we are following closely – our Grove is a beautiful ecosystem of potential.

The forest ecosystem is a wonderful model for observing the interconnected nature of a holistic system. A singular change produces a cascading series of effects on the ecosystem. There are 7 layers of a Forest's ecosystem; rhizosphere (roots and mycelium network), soil floor, herbaceous layer, shrub layer, understory, canopy (overstory), and the vertical/climber layer.⁵

In our process, the Essence of Moat, the Essence of Win-Win, and the Essence of the Perpetual Flywheel contain a 7-layer gradient that combine uniquely for each business to create a leaping emergent effect on how an enterprise sustains competitive strengths over a long period of time. We are looking for the *Three Essences* to drive the persistent, incremental progress, and therefore relevance and growth, in the businesses that make up our Grove of Titans universe. No company will have all of them, but this framing allows for us to weigh each business's qualitative and quantitative attributes dynamically.



*"Look for it, and it can't be seen.
Listen for it, and it can't be heard.
Grasp for it, and it can't be caught.
These three cannot be further described,
so we treat them as The One."*

Lao Tzu – Tao Te Ching

successive organs, sometimes to within a fraction of a degree. The most common angle is the Fibonacci or golden angle, and its prevalence has led to the hypothesis that it has been ***selected by evolution as optimal for plants with respect to some fitness benefits, such as light capture***. If you were to proportion a circle to equate to a similar Golden Ratio you would get a lesser angle of 137 degrees to the larger angle of 222 degrees.

⁵ I once hiked into the forest in the predawn morning to climb up into the overstory of a great Carboncillo Tree (one of Titans of Central America). We set the early intention to experience the Costa Rican jungle as it transitioned from darkness to *light*. We fumbled around with carabiners, ropes, and tree climbing gear illuminated only with headlamps as we set our objective to ascend to the top of the canopy 200 feet above. As I climbed, I could feel the jungle coming alive as fauna announced their presence and that of our intrusion. I was deliberately trying to sense each layer of the forest as we ascended. When we got to the canopy and the first photons of sun greeted us over the horizon you could hear the birds welcome the day with song and in sight as a hummingbird vibrated-by to sample the nectar of a newly emerged flower of our Carboncillo host. *Nature is most alive and most open to teaching in the forest grove.*

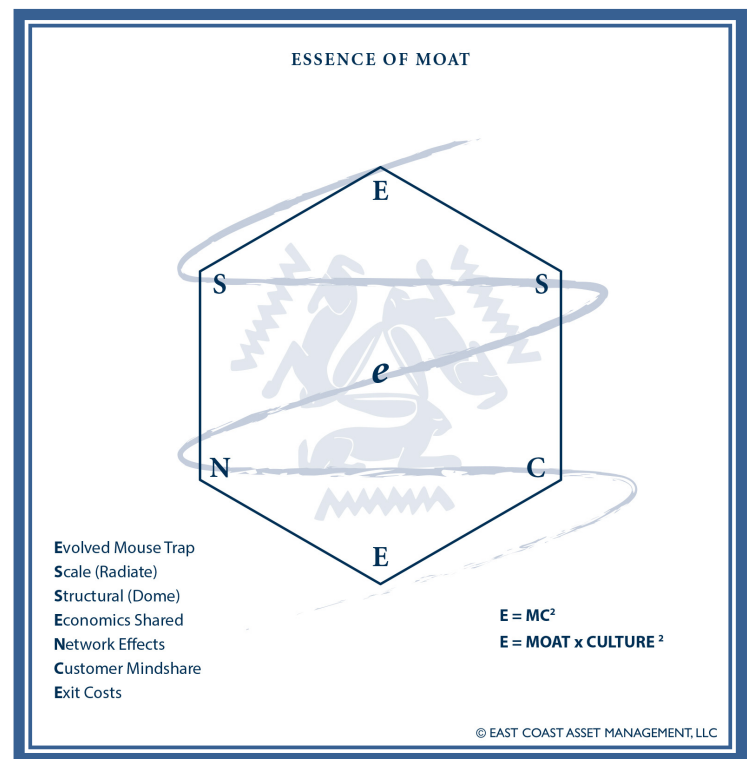
Essence of Moat

There are 7 layers of a business's moat that we have identified as material to its sustainable advantage. One of the most important areas of our research is understanding the spectral lines of these layers and how they harmonize together. The more layers a business has the more resilient we believe it is against competitive threats. This also has the effect of increasing our conviction around the sustainability of a company's free cash flow.

1. **Evolved Mouse Trap** – Building a better mouse trap means doing something cheaper, better, and faster than the competition. When you reduce entropy, you increase information and value in a system.

These advantages, when earned, can last for long durations. However, if these advantages aren't leveraged via scale and other efficiencies a more innovative competitor may come along, inevitably gain traction and steal market share. We look for businesses that have a culture of continuous improvement and recognition that high ROIC industries will always attract potential competitors. This is one of the most important layers we look for.

2. **Scale Advantages** – are often an important attribute of a competitively advantaged business. We look for businesses *radiating* scale advantages in the following areas: research and development, advertising and marketing, distribution and logistics, information and data, architecture of their systems (i.e. Danaher Business Systems), trust (trust scales, as you grow and reduce search cost, you build trust with all counterparties including regulators (i.e. Heico)), executive compensation (many of our long-term compounders are run by owner operators who hold material amounts of equity and are paid very little cash compensation), and suppliers (where large purchasers/buyers can create win-win agreements with suppliers that benefits both parties – lower costs and more seamless integration).
3. **Structural Advantages** – Structural advantages are often present in industries where it makes more sense for fewer firms to operate. Natural monopolies, rational duopolies, exclusive rights (which may result from a patent or government body approval) and Switzerland of X give rise to these structural advantages. Switzerland of X is a term we use to describe a business that has earned a valued position of being a neutral party that helps to connect several other players. A recent example of this is Snowflake, which operates as a *Switzerland of the Data Cloud* on top of the three public clouds of AWS, Microsoft, and Google.
4. **Economics Shared** – is one of the most insightful advantages we have studied. We view this as one of the longest shelf-life advantages a business can earn. As a business scales and radiates light in the 8 areas listed above, do they return those advantages to customers in the form of lower prices, or in the form of more services and features of the product?



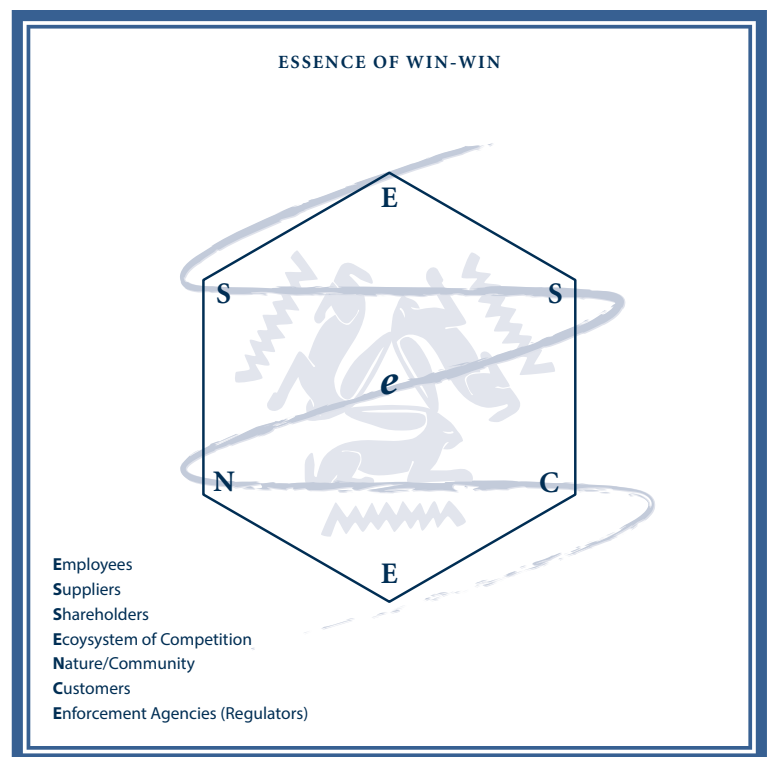
Both further distance the business from their competition to create a productivity loop that widens its moat. Costco is an excellent example of economics shared.

5. **Network Effects** – are exhibited when the next node of the network increases the benefit of the exchange for all parties. We talk a lot about the pools of liquidity where a business that enjoys network effects exponentially manifests itself. We often use the analogy of a snowball rolling downhill to describe network effects. The snowball is getting bigger, faster, and stronger as it gains momentum. MasterCard is an excellent example of a business that enjoys strong network effects.
6. **Customer Mindshare** – Earning a majority share of the mindset of your customers has enormous benefits in lowering customer acquisition costs. In some cases, companies have earned such strong recognition that they have become synonymous with an activity. For example, when we search on the internet – we “Google” it. We look for companies that are effective at growing their customer mindshare in a myriad of cost-effective ways.
7. **Exit Costs** – This layer is often described as high switching costs that make a product or service sticky. Software is an example of something that can be very costly to switch away from once you have embedded it into the fabric of an organization.

Essence of Win-Win

The only relationship that is enduring through time is win-win. Any business that has a *win-lose* relationship with a single counterparty in their ecosystem is unsustainable through time. It may take years for this *win-lose* relationship to play out, but it will inevitably lead to its undoing and ultimate failure. Some of these *win-lose* relationships can be quite unintentional and are the technical debt of a static system that has not or cannot evolve with the changing world. The following are the seven relationship layers of a business.

1. **Employees** – Employers must continuously evolve their value proposition for the changing complex needs of their employees beyond just compensation. Purposeful work for a company making the world a better place has vaulted to the top of employees’ needs and wants. The world has changed dramatically because of the lifestyles forced on us through this pandemic. Employees have experienced a taste of more autonomy in their working geographies. Employers are also able to hire from far afield to fill key roles, especially when looking for the competitive and critical roles of data scientists and software engineers (*as every company is now a technology and a data company*). We are increasingly looking at a business’s DEI (diversity, equity, and inclusion) policies for potential blind spots.

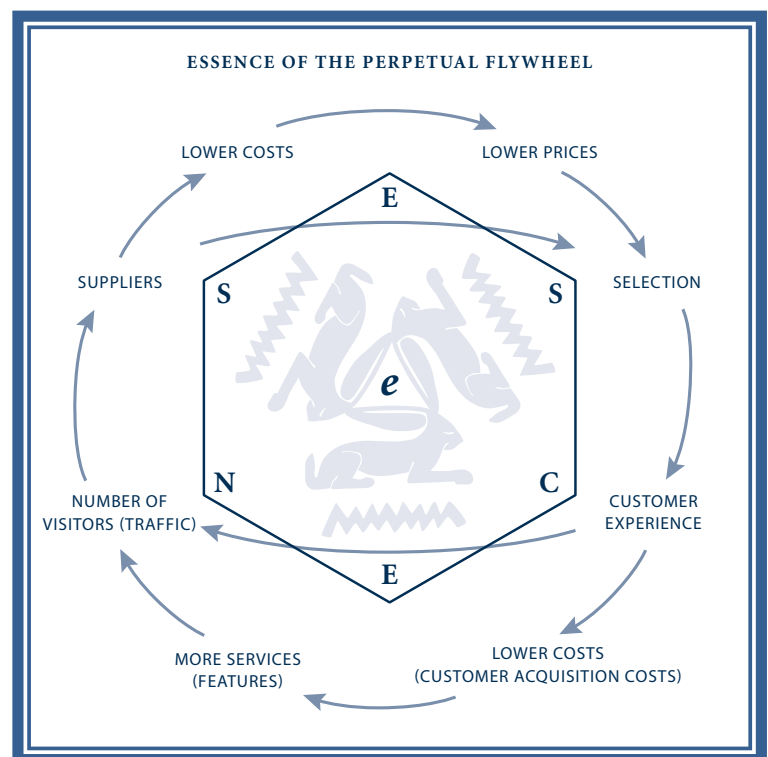


2. **Suppliers** – True partnerships with suppliers are a force multiplier.
3. **Shareholders** – As noted above, we highly value a management team with a proven record of capital allocation prudence and skill. We look for significant skin in the game where we can measure the team’s economic downside to ensure alignment with ours. Governance – the G in ESG is an important factor as we evaluate a business’s longevity.
4. **Ecosystem of Competition** – This one might seem a bit counterintuitive. Why do we want to be in a win-win relationship with our competitors? Industries that have proven to be disappointing investment opportunities often exhibit Win-Lose, Lose-Win and Lose-Lose behaviors fomenting irrational competition that hurts the entire industry. This behavior has been prevalent in the airline industry since its inception. We prefer to invest in industries that are playing the infinite game and are not looking at finite, short-term wins that could compromise long-term success. We prefer looking for businesses and industries that play without finish lines.
5. **Nature and Community** – Environmental win-win is a cornerstone of any investment we deem *sustainable* through time. We applaud the actions taken to date by so many businesses, but we as a society are not doing enough nor are we moving fast enough. More urgency, importance, transparency, leadership, and dialogue will continue to be encouraged.
6. **Customers** – While this seems obvious – competitively entrenched businesses can sometimes forget the importance of their relationships with customers when they become overly obsessed with short-term profitability. For example, this may manifest itself in a business with exceptional pricing power taking a large one-time price increase as opposed to a more responsible and long-term focused annual increase that is less likely to garner as much attention (from customers or potential regulators).
7. **Enforcement Agencies and Regulators** – We have always believed it makes good sense to look through the eyes of the regulators. We prefer businesses that share a proactive approach to the challenges of regulating against bad actors.

Essence of The Perpetual Flywheel

One of the most impressive artifacts memorializing the purpose-built vision of an exceptional founder was the back of the napkin picture of a flywheel that Jeff Bezos drew to map out how Amazon would grow over time. We have modified that perpetual flywheel to make it universal for *most* businesses.

1. **Customer Experience** – Any effective flywheel should begin and



end with the customer in asking the question of “how do we continually delight the customer?”

2. **Number of Visitors/Traffic** – If we do that constantly, we will increase the amount of visitors/traffic to our business.
3. **Suppliers** – If we have the liquidity of the most traffic, we will deserve the right to have more suppliers and better terms.
4. **Selection** – Choices around selection and number of supplier relationships are important inputs to drive convenience and lower prices for your customers.
5. **Economics of Scale – Top Down** – As we scale, we will be able to *radiate light* in the way of economic benefits that we can return to customer. The first is as we lower our costs, we may be able to lower our prices.
6. **Economics of Scale – Bottom Up** – The second way we can *radiate light* is as we lower our customer acquisition costs, we can add more services and features to our product or service.

Rain, Steam and Speed – Clouds and Light Waves

Exceptional companies are more often than not exceptionally priced. This is why the Grove is such an apt metaphor for the universe of these wonderful businesses. Most of the time we are observing, nurturing, planting, pruning, and sitting quietly in contemplation, hoping to eventually get the opportunity to bring one into our Partners Hold Co.

As we think about the opportunities that short term clouds often present, I would like to turn our attention back to the electron. It was Schrodinger and Heisenberg who picked up where Bohr and Sommerfeld left off and helped us further understand the behavior of the electron. What we learned is that the electron cannot be precisely located to a point in space but exists in regions around the nucleus where it can *probabilistically* be found. This was famously written down as Heisenberg’s Uncertainty Principle and explained that there is a fundamental limit to the accuracy of position and momentum of a particle from initial conditions.



Rain, Steam and Speed – The Great Western Railway – William Turner

*“Don’t turn away. Keep your gaze on the bandaged place. That’s where the **light** enters you.”*

Rumi

In investing, you pay a full valuation for short-term clarity of position and momentum. Therefore, we are consistently looking to venture where short-term clouds⁶ are present in a business or industry as a source of opportunity. We then assess the *probability* of when, if, and to what extreme these clouds will dissipate. You will generally not see us allocating new capital to opportunities beneath blue skies. The cloudy place is always where the light enters our Hold Co.

“The truth isn’t always a blinding light. Sometimes it’s a deep and dazzling darkness, that illuminates – and burns – just as surely.”

Albert Einstein

There are many paintings that I love but one that continues to inspire is Turner’s *Rain, Steam and Speed* at the National Gallery in London. This picture was painted in 1844 and depicts a train emerging from the rain clouds and steam of its engines racing down the tracks toward us and crossing a bridge. Turner managed to paint dynamic speed in a static picture.

When in London, I will often sit with this painting for the first moments after the museum opens, when Room 36 remains quiet as visitors flood the earlier galleries. The image is imprinted in my memory and reminds me that *change* is something to embrace and not to abhor with nostalgia of a bygone era. It also reminds me to inquire about what we have labeled or categorized in our thinking that may be forcing us to become static. The leading edge of dynamic quality should be wordless and ineffable. It is emerging in time and emerging from a cloud of possibility and probability. What we are looking to align ourselves with are those inevitabilities that align with how the world works – when cheaper, better, and faster is steaming down the tracks being led by Nature.

If you look carefully on the tracks of *Rain, Steam and Speed* you will find that Turner painted a hare running down the tracks. I have always interpreted that inclusion of the hare as the true message of the painting – that Nature is and always will be the leading edge of dynamic quality.

You have seen the *hare over the wave* symbol throughout this letter. I found this symbol when looking through Egyptian hieroglyphs and for years I have taken it to be my own. The early Egyptians used this symbol to represent W in their phonetic alphabet named after Wenet “The Swift One” the hare goddess. The hare goddess was celebrated as the one who brought the flooding of the Nile every year and renewed their crops. The hare over the wave means the *essence of life*, a symbol of swiftness of movement and mind, and perhaps most importantly, renewal.



With rebirth and renewal there is always death. Not only as investors, but also as part of our daily lives, I believe we need to always ask - what old ideas are we willing to let go of today? What old ideas, habits, patterns will we welcome death for? What behaviors and actions are not serving our mind and our soul? What mental models are simply coarse-grained and do not peer into the world of the fine spectral lines to see what is truly fundamental? What filters have we constructed and honed so that we can make fast decisions (memorialized to be instinctive at the expense of probabilistic/rational) and are blocking a world of novelty that is emerging around us today?

⁶ These clouds are generally short to medium term in nature and obscure the quality of the core business. When a short-term challenge arises, the market’s immediate impetus is to sell or devalue the security. When clouds are present, a common refrain from investors is that they will revisit the business when the clouds have dispersed. We will also hear the common rebuttal that without a short-term catalyst “a stock is dead money.” Both sentiments are always music to our ears.

The *hare over the wave* symbol speaks to me for all these reasons of renewal. From our earlier discussion, the hare also appears to be *surfing a light wave*. The light wave is a universal constant of those things invariant through time. A reminder that time is what you make of it. If you travel at light speed, time dilates in that present moment and joy fills curved space. The constancy and invariance of love, integrity, gratitude, humility, trust, and simplicity are those guiding principles that operate outside of any duality. We look to this year and the future with such reverence for being able to surf these light waves in the Partners Hold Co., tending to our Grove, nurturing relationships that enrich us with our current and future partners and in all of our friends who have come along on this journey with us. To all of you, we are incredibly grateful and humbled daily.

I have shared a personal meditation titled *Origin Stories* in the epilogue and an interesting background story on Arnold Sommerfeld titled *Testament to Great Teachers*.

*"It took you so many years to credit the **miracle light**, though it always faithfully made its difficult way toward you. It took you so long to see the way understanding rises from the very center of your own body, everyday and luminous, from **arriving waves** of what only seems like the ordinary."*

David Whyte

Firm Updates

We have had no changes to our investment and operations team over the last year.

ECAM Award 2021: The ECAM Award is given annually to a charity whose mission is deliberate, simple, and relevant to where our support can translate to compounding benefits. We are delighted to announce that the ECAM Award for 2021 has been given to Ocean Alliance. Ocean Alliance's mission is to protect whales and their ocean environment through research, scientific collaboration, public education, and the arts. Founder, Dr. Roger Payne, and CEO Dr. Iain Kerr are both recognized as ocean elders, leaders in their efforts to save the ocean. MacArthur Genius Award winner Dr. Payne is widely considered the father of modern whale biology. His discovery in the 1960s that humpback whales sing songs was crucial in the success of the global *Save the Whale* movement. Dr. Kerr is known as a pioneering proponent of the role of technology in marine science, as well as an eternal source of ocean optimism. Ocean Alliance is headquartered in Gloucester, Massachusetts only minutes from our headquarters in Essex. We have long admired their global reach and willingness to reimagine a better planet and to lead by example in saving these most sacred of creatures.

*"To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour."*

William Blake

We look forward to meeting and talking with you soon. We greatly value your support and trust.

On behalf of the firm,



Christopher M. Begg, CFA

Epilogue - *Origin Stories*

On this past Christmas morning, I woke up early to watch the launch of the world's newest telescope – the James Webb Space Telescope - JWST. This telescope will take over the Hubble as the world's most powerful telescope. This launch is the culmination of decades of research and development and billions of dollars of investment. This will give us the capability to see galaxies, planets, solar systems, supermassive black holes, and supernovas like we have never seen before. We will also be able to *see further into the light* that continues to radiate from the early moments of the universe 13.7 billion years ago (there is 137 again). As I write this, the JWST, with its stunningly beautiful 18 hexagon mirror segments, cooled to a superconducting state to eliminate any heat interference of the equipment to the final image, has been deployed and is in stable orbit at the second Lagrange point (L2) – its new home 1 million miles from earth and are now receiving their first photons.



Toward seeing things [Sub Specie Aeternitatis](#), I find it invaluable to see things from the standpoint of their origin stories; to play the movie forward or to begin at the end of the road and follow the thread all the way back to the beginning. I am so excited to see and hear what we will learn from this new hexagonal perspective in the months and years to come.

In a similar light, I want to share a meditation I conceived and have found useful toward seeing the layers of reality and reimagining whole-systems thinking.

Draw an imaginary box around the space in which you are currently sitting. With the help of an agent, which we will refer to as Maxwell's Daemon⁷, you can sort the entire space's constituent parts by birthdate. Each cluster of matter is organized perfectly in front of you. Look at all the items in front of you and do the following: ***in order of the youngest to oldest, begin to deliberately and methodically remove each item from your box.*** Start by removing your phone, your laptop, your coffee mug, the art on your wall, your books, and the chair you are sitting in.

You will reach a point where you have removed all things that were created in your lifetime and eventually in the span of human evolution. Now things begin to get more interesting, and we fully need the assistance of Maxwell's Daemon to pick up the slack as his AI level capabilities far surpass our own. We begin to follow a thread through all the data sets. We remove 3.7 billion years of biology that still exists in our space⁸. You will then arrive at things in the box that belong to chemistry – compounds, molecules; some that were born a couple hundred thousand years after the origin of the universe.

Now we arrive at the fields of physical reality. We know from quantum field theory that fields are layered on top of each other, interacting to create the reality we experience in the universe. Maxwell's Daemon might know the exact order but from what we know today, many of the fields of reality just burst onto the scene in the early seconds of the big bang. So, we will begin to remove these fields one by one and all of their particles that are in our now imaginary room. You can look

⁷ A word-play on Maxwell's demon but using the Roman original reference to Daemon which means a *genius*.

⁸ I have an ammonite that went extinct 66mm year ago. The species originated 140mm years old, so my ammonite has a born-on date that tends to take the prize in my imaginary room.

at a chart of the Standard Model of physics and see all of these fields and particles and remove them deliberately and intentionally one by one; neutrinos, dark matter, the electromagnetic field and its force mediating particle – the photon, all electrons, the weak forces mediated by the W and Z boson, all particles related to the strong force such as quarks including the force mediating particle – gluons, then we remove the star of the show – the Higgs field that gives mass to all particles and all Higgs bosons that may exist in our imaginary box. We have methodically removed each quantum field and *building block* of everything we have theorized and discovered in physical matter. At this point, I find this Arthur Conan Doyle quote below to be the perfect portal to our final destination:

“Once you eliminate the impossible, whatever remains, however improbable, must be the truth.”

As you sit in this space, ask yourself, what do you feel, see, sense, hear, and intuit? Sit deeply in this space. Anytime you sense something you removed – remind yourself you removed that. You have removed light so whatever light you see is not emanating from the electromagnetic spectrum. What remains in the room is something much deeper, interconnected, and primordial. You have arrived at the source and source code of all that is, all there ever was, and all that will ever be. This source code, likely brilliantly simple, and when played out to the *e* to the *n*th iteration, will give you the universe we are experiencing today. The space that you and Maxwell occupy is truly the *essence of life*. You have reached perfect light speed. This ineffable space can best be expressed in human terms as *Love*. A space of interconnected oneness. A space of *Invisible Light*.

“You will begin to touch heaven, Jonathan, in the moment that you touch perfect speed. And that isn't flying a thousand miles an hour, or a million, or flying at the speed of light. Because any number is a limit, and perfection doesn't have limits. Perfect speed, my son, is being there.”

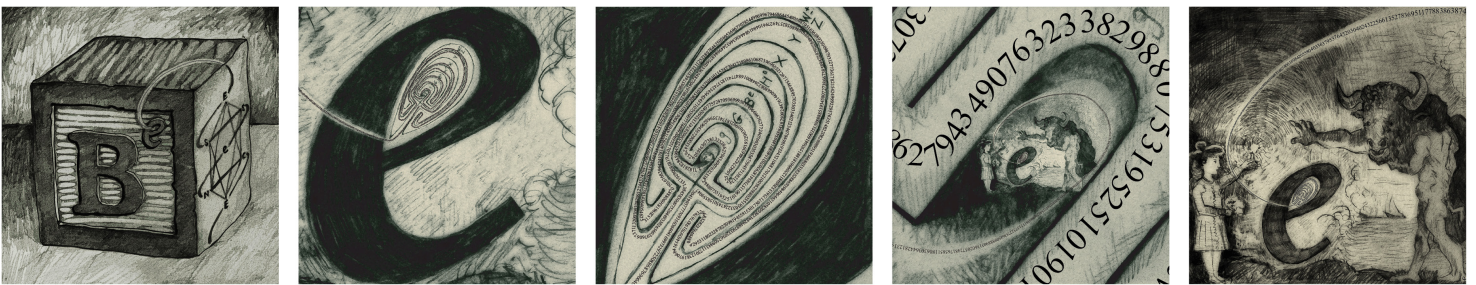
Jonathan Livingston Seagull – Richard Bach

You can think of this path of walking through each layer as going deeper and deeper into a labyrinth. With each layer, we get closer to the source and, at some point, we remove all obstructions that are blocking and filtering the light within all of us. Childlike innocence returns ~ minotaur silenced ~ to B^e. Sometimes you must go to the end of the road to know where to begin. Sometimes you must go to the beginning to truly know there is no end.

*“Light
Light*

The visible reminder of Invisible Light.”

T.S. Eliot



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Appendix

A Testament to Great Teachers - Arnold Sommerfeld

Many of you may have never heard of Arnold Sommerfeld (1868 – 1951) as I had not until I started to read about the Fine Structure Constant. He was ten years younger than Max Planck, a little over ten years older than Albert Einstein, and was part of a brilliant generation of German physicists. Even with his spectacular successes in explaining the fine structure constant and other important scientific contributions, he never received a Nobel prize.

He is however the physicist with the most nominations for the Nobel Prize in Physics, specifically 84 between 1917 and 1951. One fact I find more noteworthy is that he is the physicist with the highest number of doctoral students who were awarded a Nobel prize, namely four (Werner Heisenberg, Wolfgang Pauli, Peter Debye, and Hans Bethe). In fact, 21 of his doctoral students made important contributions in their fields of specialization, and three of his postgraduate students also won the Nobel Prize (Linus Pauling, Isidor Rabi, and Max von Laue).

Not only was Sommerfeld a great physicist but as Max Born said, his skills included the “discovery and development of talent” and Albert Einstein lauded that *“What I especially admire about you is the way, at a stamp of your foot, a great number of talented young theorists spring up out of the ground.”* Michael Eckert, in his biography on Sommerfeld rightly concludes that: *“Planck was the authority, Einstein the genius and Sommerfeld the teacher.”*

“Just as one candle lights another and can light thousands of other candles, so one heart illuminates another heart and can illuminate thousands of other hearts.”

Leo Tolstoy

I have so much gratitude to all the teachers in the world, all of whom graciously share what they have learned. Ben Graham, Warren Buffett, Charlie Munger and Peter Kaufman are a few of my role models in this regard. I have learned a great deal from them and I have experienced that the joy of *Surfing Light Waves* is developing talent along the way and giving back everything you have learned with an abundantly open heart. As I ponder this ideal and the story of Sommerfeld it strikes me that ~ ***teachers seldom have their name on anything but their signatures are on everything.***

The paradox of the humility of great leadership in sharing wisdom with the next generation is best expressed by Lao Tzu:

“A leader is best when people barely know he exists, when his work is done, his aim fulfilled, they will say: we did it ourselves.”



Arnold Sommerfeld and Niels Bohr