THE PRINCIPLES OF ECONOMICS & EVOLUTION III

In Search of Evolutionarily Stable Central Banking & Alternative Investment Strategies†

A PHD DISSERTATION PRÉCIS

1 June 2010
(revised 21 August 2010, final draft 1 December 2010)

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† The salient feature of [this] financial crisis is that it was not caused by some external shock like OPEC raising the price of oil or a particular country or financial institution defaulting. The crisis was generated by the financial system itself. This fact – that the defect was inherent in the system – contradicts the prevailing theory, which holds that financial markets tend toward equilibrium and that deviations from the equilibrium either occur in a random manner or are caused by some sudden external event to which markets have difficulty adjusting. The severity and amplitude of the crisis provides convincing evidence that there is something fundamentally wrong with this prevailing theory and with the approach to market regulation that has gone with it. To understand what has happened, and what should be done to avoid such a catastrophic crisis in the future, will require a new way of thinking about how markets work.
– George Soros, *Statement before the U.S. House of Representatives Committee on Oversight and Government Reform,* 13 November 2008

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EPIGRAPH

It is perhaps significant that Keynes hated to be addressed as "professor" (he never had that title). He was not primarily a scholar. He was a great amateur in many fields of knowledge and the arts; he had all the gifts of a great politician and a political pamphleteer; and he knew that "the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is generally understood. Indeed the world is ruled by little else" (*General Theory*, p 338). And as he had a mind capable of recasting, in the intervals of his other occupations, the body of current economic theory, he more than any of his compeers had come to affect current thought. Whether it was he who was right or wrong, only the future will show. There are some who fear that if Lenin's statement is correct that the best way to destroy the capitalist system is to debauch the currency, of which Keynes himself has reminded us (p 273), it will be largely due to Keynes's influence if this prescription is followed....

Perhaps the explanation of much that is puzzling about Keynes's mind lies in the supreme confidence he had acquired in his power to play on public opinion as a supreme master plays on his instrument. He loved to pose in the role of a Cassandra whose warnings were not listened to. But, in fact, his early success in swinging round public opinion about the peace treaties had given him probably even an exaggerated estimate of his powers. I shall never forget one occasion – I believe the last time that I met him – when he startled me by an uncommonly frank expression of this. It was early in 1946, shortly after he had returned from the strenuous and exhausting negotiations in Washington on the British loan. Earlier in the evening he had fascinated the company by a detailed account of the American market for Elizabethan books which in any other man would have given the impression that he had devoted most of his time in the United States to that subject. Later a turn in the conversation made me ask him whether he was not concerned about what some of his disciples were making of his theories. After a not very complimentary remark about the persons concerned, he proceeded to reassure me by explaining that those ideas had been badly needed at the time he had launched them. He continued by indicating that I need not be alarmed; if they should ever become dangerous I could rely upon him again quickly to swing round public opinion – and he indicated by a quick movement of his hand how rapidly that would be done. But three months later he was dead.

– F.A. von Hayek, *Review of R. F. Harrod's 'The Life of John Maynard Keynes'*, 1952

ABSTRACT

This précis explores the problem of systemic threats to the global financial markets. The researches outlined, summarized, and contextualized herein analyze systemic risks from three illuminating vantage points:

1). Through the eyes of a central banker.
2). Through the eyes of a portfolio manager.
3). From the perspective of three key finance centre stakeholders: *a*) hedge fund owners, *b*) hedge fund investors, and *c*) hedge fund regulators.[†]

Although these researches are complex and exhaustive, they are, by and large, informed by Sir Karl Popper's (1959) solution to David Hume's (1739) problem of induction, and an original solution to the most fundamental, long-standing, open problem in economics: a unified theory of value (Funk 2010a).[$]

[†] Are hedge funds engaged in activities that can destabilize financial markets and cause widespread dislocation throughout the industry? This concern was first brought to public awareness in August 1998 when the default of Russian government debt triggered a global "flight to quality" that caught many hedge funds by surprise. One of the most significant players in this market, LTCM [Long Term Capital Management], lost most of its multi-billion-dollar capital base in a matter of weeks. Ultimately, LTCM was bailed out by a consortium organized by the Federal Reserve Bank of New York because its collapse might have set off a chain reaction of failures of other major financial institutions.

The possibility of a "domino effect" in the hedge-fund industry is one of the most important revelations to have come out of the LTCM debacle.

Prior to August 1998, vulnerabilities in the global financial system involved stock market crashes, bank runs, and hyperinflation—otherwise known as "systemic risk"—were largely the province of central bankers and finance ministers. Such events were rare but generally well understood, as in the case of the Asian Crisis of 1997 in which over-leveraged financial institutions and weak corporate governance led to a series of currency devaluations, stock market crashes, and defaults in Korea, Thailand, Indonesia and other Asian countries. However, with the collapse of LTCM, a new source of systemic risk was born: the hedge fund. Given how little is known about these unregulated entities, a natural reaction to August 1998 is to regulate them. However, the specific information about LTCM's activities that might have helped regulators and investors to avoid the stunning losses of 1998—the fund's leverage, the number of credit lines available to the fund, the vulnerability of those credit lines during extreme market conditions, and the degree to which other funds had similar positions—is currently not required of registered investment advisers.

Apart from the costs and benefits of requiring hedge funds to register, it is clear that a different approach is needed to address the larger issue of systemic risk posed by hedge funds (Getmansky, Lo & Mei 2004, p 29).

[$] In economics the most fundamental… central problem is the theory of value. The theory of value must explain how the comparative values of different goods and services are established. Until that problem is solved, it is not possible to analyse for scientific purposes what will be produced and in what quantities, how the resources will be employed in producing the menu of outputs, and how the resources will be valued. Without a theory of value the economist can have no theory of international trade nor possibly a theory of money (Stigler 1982, p 61 ; *cf.* Weiser 1893).

§I – OVERVIEW

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Thesis

THE PRINCIPLES OF ECONOMICS & EVOLUTION III:
In Search of Evolutionarily Stable Central Banking & Alternative Investment Strategies
Volume I – In Search of Evolutionarily Stable Central Bank Strategy
Volume II – In Search of Evolutionarily Stable Alternative Investment Strategy
Volume III – In Search of Evolutionarily Stable Global Finance Centres: A Comparative Island Study

Submission Details

Presented to the Senate, Board, & PhD Sub-Committee
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Research Undertaking

Full-time.

Expected Completion Date

1 June 2012[†]

Style

Modified APA (consistent with the authors previous publications); *Perpetua* type.

[†] Leftschetz's… philosophy of graduate… education had its roots in the great German and French research universities. The main idea was to plunge students, as quickly as possible, into their own research, and to produce an acceptable dissertation quickly.… Lefschetz wasn't aiming for perfectly polished diamonds and indeed regarded too much polish… as antithetical to… creativity. The goal was not erudition…, but turning out men who could make original and important discoveries (Nasar 1998. p 60).

§II – PREFACE

In September of 2000 a PBS journalist asked Paul A. Volcker about the subject of his senior thesis:

> VOLCKER: The subject of my senior thesis was postwar Federal Reserve policy, "postwar" meaning post-World War II, written in 1948 or 1949.
>
> INTERVIEWER: And did you ever dream that you'd actually end up running a bank?
>
> VOLCKER: No, I don't think I was that ambitious at that time. In fact, the thesis was rather critical of the Federal Reserve.
>
> INTERVIEWER: And when you were chairman, did you ever dust off your thesis?
>
> VOLCKER: No, I should have. I was just reading recently a history of monetary policy thought in the United States, which reminded me of my thesis. I'm going to pull out my thesis and see what it said.

And thus we begin by dusting-off Volcker's thesis to see what it said…

On 7 January 1949, Volcker submitted *The Problems of Federal Reserve Policy Since World War II* to the Department of Economics at Princeton University; his preface began as follows:

> The purpose of this study has been to describe the role of the Federal Reserve System in regulating the expansion of credit since the end of World War II. The part that a central bank may play in preventing economic fluctuations has been the subject of a considerable amount of discussion. Many persons feel that the mechanisms for monetary control contained in the Federal Reserve System could be a powerful instrument in the effort to achieve long run prosperity. However, in studying the developments of the past thirty years we find that the United States has not been free from violent cyclical disturbances of an economic character…. The monetary authorities have failed to prevent this unhealthy development, and a large amount of criticism has been directed at the Board of Governors of the Federal Reserve System. It is my hope that the problems which faced the Board of Governors during the last three years and the analysis of the policy actions undertaken… will bring to light some of the reasons why the Federal Reserve System has apparently failed in that function which many theorists have assigned to it (Volcker 1949).

Volcker's preface is remarkable in several regards, not the least of which is that the "problem situation" sketched therein remains wholly unsolved; moreover this problem situation is just as – *if not far more* – fitting to the extraordinary "expansion of credit" since 1949, and the continuing failure of the Federal Reserve System to prevent the "violent disturbances" and "unhealthy developments".

Of course Volcker's preface becomes even more remarkable in light of the fact that he went on to become (and remains, remarkably) one of the most influential bankers in U.S. History – an influential leader who conducted the ill-fated monetarist experiments under Carter (Greider 1987) and persuaded Nixon to dismantle the gold standard that had stabilized global markets for 300 years prior to the Bretton Woods accord (Lewis 2007).

Naturally, Volcker has not acted alone – influential theorists from Plato to Keynes cleared the popular philosophical path he has followed. Furthermore, countless charismatic and influential bankers and politicians continue to follow in their footsteps today. But we shall suggest and illuminate the road less followed.

That is the hypothesis tabled in our first Volume, *In Search of Evolutionarily Stable Central Bank Strategy*, a creative treatise which describes an entrenched, systemic global dilemma as *The Problem of Keynesian Economics*.

Our conjectures and refutations are complex and the theoretical rivers runs deep throughout our entire dissertation. Nothing is taken for granted, no stones are left unturned, and no *a priori* arguments are accepted without scrutiny. Our explorations embrace the true nature of *The Problem of Induction* (Hume 1739), the problem which, beginning with Plato (Popper 1945), has plagued and eluded wise men throughout the ages (Popper 1959 ; Hayek 1960), and continues to mislead millions yet today (Popper 1999). And, in the light of this major obstacle, not only do we begin to recognize that if we wish to begin to sufficiently explore the requirements for truly "long run prosperity", then we may conclude that "three years since World War II" does not offer a sufficient time series for meaningful exploration, and that the fifty plus years since 1949 doesn't represent a sufficient window either.

In fact, we may also conclude that the three hundred years since the adoption of the now-discarded gold-standard is not even enough (Funk 2010a, 2010b, 2010c). As Ray Dalio, founder and CEO of the world's largest hedge fund, duly noted, "the greatest mistake in investing is exaggerating the importance of, and extrapolating, what's happened lately" (Dalio & Elliott 2006, p 5).

Our efforts to grasp the true nature of global financial catastrophes (and how to avoid them) will include reflections upon how *all* catastrophes have – and have not – been avoided in the past. Moreover, we will consider what deficiencies and obstacles we may need to overcome, and what "new way of thinking about how markets work" (see footnote on cover page) may be required in our necessarily never-ending quest to ensure financial stability, economic prosperity, and, ultimately, long-term human survival. So, with this noble quest and the spirit of the "struggle for life" (Darwin 1859) alive, let's travel back in time and introduce the philosophical founding father of the dissertation at hand, to a priestly thesis and invaluable lesson borne of catastrophe in Halifax harbour…

On the morning of December 6, 1917, a bright, windless day, a French freighter called the *Mont Blanc* began to slowly pull out of the Halifax harbor in Nova Scotia. At the time, Halifax was one of the busiest ports in the British Empire. There was a war on in Europe, and the harbor groaned with the churn of ships, men, and weapons. The *Mont Blanc* was headed for France that day, carrying over twenty-five hundred tons of explosives, including TNT. While passing through a narrow channel in the harbor, a larger ship, the *Imo* from Belgium, accidentally rammed the bow of the *Mont Blanc*.

The collision itself was not catastrophic. The Imo sailed on, in fact. But the crew of the Mont Blanc knew that their ship was a floating time bomb. They tried to put out the fire, but not for very long. Then they scrambled into lifeboats and paddled for shore. For a few heartbreaking moments, the *Mont Blanc* drifted in the harbor. It brushed up against the pier, setting it on fire. Children gathered to watch the spectacle.

Many of the worst disasters in history started quite modestly. Once accident led to another, until a fault line opened up in a civilization. About twenty minutes after the collision, the *Mont Blanc* exploded, sending black rain, iron, fire, and wind whipsawing through the city. It was the largest bomb explosion on record. The blast shattered windows sixty miles away. Glass blinded some one thousand people. Next, a tidal wave caused by the explosion swamped the shore. Then fire began to creep across the city. In the harbor, a black column of fire and smoke turned into a hovering white mushroom cloud. Survivors fell to their knees, convinced that they had seen a German zeppelin in the sky.

At the moment of the explosion, an Anglican priest and scholar named Samuel Henry Prince happened to be eating breakfast at a restaurant near the port. He ran to help, opening up his church as a triage station. It was, strangely enough, Prince's second disaster in five years. He had responded to another local cataclysm in 1912, when a luxury cruise liner called the *Titanic* had sunk some five hundred miles off the coast of Halifax. Back then, Prince had performed burials at sea in the frigid waters.

Prince was the kind of man who marvelled at things others preferred not to think about. On the awful day of the explosion, he was astounded by what he saw. Prince watched men and women endure crude sidewalk operations without obvious pain. How as one young soldier able to work the entire day with one of his eyes knocked out? Some people experienced hallucinations. Why did parents fail to recognize their own children at the hospital – and especially, at the morgue? Small details nagged at Prince. On the morning of the explosion, why was the very first relief station set up by a troupe of actors, of all people?

That night, a blizzard hit Halifax, the epic's final act. By the time the catastrophe had rippled out across the land, 1,963 people would be dead. In silent film footage taken after the blast, Halifax looks like it was hit by a nuclear weapon. Houses, train terminals, and churches lie like pick-up sticks on the snow-covered ground. Sleighs are piled high with corpses. “Here were to be found in one dread assembling the combined horrors of war, earthquake, fire, flood, famine and storm – a combination for the first time in the records of human disaster,” Prince would write. Later, scientists developing the atomic bomb would study the Halifax explosion to see how such a blast travels across land and sea.

After helping rebuild Halifax, Prince moved to New York City to study sociology. For his PhD dissertation at Columbia University, he constructed the Halifax explosion. *Catastrophe and Social Change*, published in 1920, was the first systematic analysis of human behaviour in a disaster. “Life becomes like molten metal,” he wrote. “Old customs crumble, and instability rules.”

What makes Prince's work so engaging is his optimism. Despite his funereal obsessions, he saw disasters as opportunities – not just, as he put it, “a series of vicissitudes mercifully ending one day in final cataclysm.”…

> After Prince's death, the field of human behaviour in disasters would languish. Then with the onset of the cold war and a new host of anxieties about how the masses might respond to nuclear attacks, it would come back to life. After the fall of communism, it would stagnate again – until the terrorist attacks of September 11, 2001. Prince seemed to anticipate the temptation for people to avert their eyes. "This little volume on Halifax is offered as a beginning," he wrote. Don't let it be the end, he pleaded. "Knowledge will grow scientific only after the most faithful examination of many catastrophes" (Ripley 2008, p v-vii).

Like Father Prince (1920), we will not avert our eyes, and we shall remain faithful to maintaining a highly-principled, realistic, evolutionary worldview at all times (*cf.* Dalio 2010 ; Wallace & Darwin 1858 ; Darwin 1859 ; Dobzhansky 1964 ; Hayek 1974 ; Popper 1999 ; Sokal 2008).

Our dissertation endeavours to place another stone upon the foundation that Father Prince began in 1920.

But this shall be no easy task. Indeed, the temptation to take refuge in teleological comforts (Funk 2009a) and "Alice in Wonderland" worldviews.† Preliminary researches suggest that the tendency to avert our eyes from the most significant risks to the global financial markets is so great that we have not even begun to consider the most central, systemic, existential risks insofar as economic prosperity, financial stability, and long-term human survival are concerned (*cf.* Funk 2010a, 2010b, 2009a, 2009d, 2008).

Take, for example, "Stress Tests," those highly fashionable, Alice-in-Wonderland-like safety-checks that serve up plentiful prosaic platitudes and enough foolish fodder for an endless supply of media sound-bytes:

> Banks and government officials charged with overseeing banking systems try to answer these types of questions by performing stress tests—subjecting banks to "unlikely but plausible" scenarios designed to determine whether an institution has enough net wealth—capital—to weather the impact of such adverse developments.
>
> Stress tests of banking systems in Europe in 2010 and the United States in 2009 have generated considerable interest given the impact of the global crisis on the health of the financial system as a whole.
>
> Stress tests are meant to find weak spots in the banking system at an early stage, and to guide preventive actions by banks and those charged with their oversight.
>
> Stress test results depend on how pessimistic the scenarios' assumptions are, and should be interpreted in light of the assumptions made.
>
> In the wake of the 2008 failure of investment bank Lehman Brothers, and of the worst global financial and economic crisis in 80 years, those who design stress tests are taking a long, hard look at what constitutes "unlikely but plausible" scenarios (IMF 2010).

† Counselor of the Department of State Eliot Cohen and CSIS Director Jim Judd in Ottawa on July 2 discussed threats posed by violent Islamist groups in Canada, and recent developments in Pakistan and Afghanistan. (CSIS is Canada's lead agency for national security intelligence.) Director Judd ascribed an "Alice in Wonderland" worldview to Canadians and their courts, whose judges have tied CSIS "in knots," making it ever more difficult to detect and prevent terror attacks in Canada and abroad. The situation, he commented, left government security agencies on the defensive and losing public support for their effort to protect Canada and its allies (Cohen 2010).

However, as Bertrand Russell once remarked, "In all affairs it's a healthy thing now and then to hang a question mark on the things you have long taken for granted," and thus it appears perhaps we should radically reconsider what we have, to date, considered "unlikely but plausible" scenarios. Given the human penchant for teleological thinking (Funk 2009a), the potential for catastrophe is far greater than contemporary theorists have imagined (*cf.* Funk 2010c, 2009d, 2008) – and the consequences of failing to recognize this potential is much more grave than most care to imagine.

However, following in the footsteps of fearless explorers, dedicated scholars, and relentless problem-solvers throughout the ages (Renatus 390 ; Smith 1776 ; Malthus 1798 ; Wallace 1855 ; Darwin 1859 ; Wieser 1893 ; Roosevelt 1900 ; Frost 1916 ; Prince 1920 ; Neumann & Morgenstern 1944 ; Nash 1950 ; Popper 1959 ; Hayek 1974 ; Stigler 1982 ; Maynard Smith 1982 ; Falzon & Gardener 1999 ; Mayr 2001a ; Shiller 2000 ; Taleb 2001 ; Lewis 2007 ; Sokal 2008 ; Soros 2008 ; Kanipe 2009 ; Cassar 2010 ; Cohen 2010 ; Hoenig 2010 ; Loeb 2010a ; Bass 2009, 2010 ; Dalio 2010 ; Hreinsson, Gunnarson & Benediktsdóttir 2010 ; Fielding 2010), we must try to imagine (*cf.* Funk 2009b, pp 21-22).

§III – INTRODUCTION

The roots for this PhD undertaking sprouted from a single seed on 26 October, 2009, and a fruitful discussion developed and evolved over the past year (*cf.* Funk 2010b, pp 54-67).

This précis – borne of these most natural origins – serves as a constitution – a blueprint – which shall serve as a faithful guide for a ground-breaking dissertation, a timely and highly original exploration of the problem of systemic risks within the global financial markets.

The research conducted and presented therein will explore these risks in three distinct, stand-alone volumes (yet which unite as a cohesive, comprehensive discourse), from three different vantage points:

1) Through the eyes of a central bank advisor.
2) Through the eyes of an alternative investment portfolio manager.
3) From the perspective of three different finance centre stakeholders: *a*) hedge fund managers, *b*) hedge fund investors, and *c*) hedge fund regulators.

Our subject is complex, our approach is unique, and our methods are unfashionable, but we are able to proceed rapidly and hit the ground running – *in media res,* so to speak – as this dissertation is erected upon foundational works – prequels of sorts, which are unified and summarized in: *The Principles of Economics & Evolution I: A Survival Guide for the Inhabitants of Small Islands, including the Inhabitants of the Small Island of Earth* (Funk 2010c). This treatise offers an excellent introduction to the "problem situation" at hand, our methods. It also offers an excellent introduction to analytical tools we shall employ (including game-theory and evolutionary theory), the problem of long-term human survival on Earth, and, moreover, it highlights the extraordinary and unprecedented level of international cooperation required in order for long-term economic prosperity, financial stability, and human survival to ultimately be achieved.

Furthermore, as emphasized in the **ABSTRACT**, there is a singular, unifying theory, a core finding which catalyzes and synthesizes all three volumes, informs strategy, and guides our way throughout, a distillation which serves as a 3-page abstract for this entire dissertation: *Truly Non-Cooperative Games: A Unified Theory* (Funk 2010a).

Following upon the heels of this unconventional 3-page abstract, stylistically speaking, necessity suggests the remainder of our proposed dissertation shall be rendered two-parts conventional (Volumes II-III), one part unconventional (Volume I).

We'll begin by exploring the curiously unconventional style of Volume I…

§IV – CENTRAL BANK STRATEGY

Volume I, *In Search of Evolutionarily Stable Central Bank Strategy*, explores a deeply entrenched, systemic problem which may have begun with Keynes:

> Banking, and money, became central to Volcker. It was in that lone banking course he'd taken at Princeton with Frederick Lutz, an Austrian who had left his country as Nazis were gaining strength, where a lifelong interest in banking was ignited. Whatever it was that caught his interest, the seeds were planted by Luzt, as well as by Oskar Morganstern [*sic.*], a Princeton professor who was a pioneer in game theory. At Harvard Volcker studied money and banking and public finance under Alvin Hansen, a proponent of Keynesian theories of government stimulation of economies and an adviser in the creation of the Social Security system (Treaster 2004, pp 177-108).

In brief, this chapter embraces a difficult challenge by exploring and constructing, complex, persuasive – even passionate – theoretical development. Briefly, this discourse concludes that, in light of *The Problem of Keynesian Economics,* persistent problem-solvers such as F.A. Von Hayek (1952, 1060, 1995), Federal Reserve Bank of Kansas City's Thomas M. Hoenig (2008, 2009, 2010), Bank of Canada Governor Mark Carney, hedge fund managers Daniel S. Loeb (2010a), Kyle Bass (2009, 2010) Ben Funk, and countless concerned individuals around the world (*e.g.* https://files.me.com/mattfunk/as3wab) are struggling to correct this problem.

Alas, however, this volume also concludes that Federal Reserve Chairman Ben Bernacke, U.S. Treasury Secretary Tim Geither, the remainder of the FOMC, President Barack Obama, and countless others do not even recognize this problem.

As previously noted, two-thirds of this dissertation – Volumes II-III – are, stylistically speaking, in keeping with more conventional dissertation approaches, but Volume I is an exception.

And, in keeping with the intimate, personal, and highly opinionated style of this volume, I will introduce this discourse with my most recent personal communique to Professor Falzon:

From: Matt Funk
Sent: 18 November 2010 14:24
To: Joseph Falzon
Subject: PhD Proposal

Greetings from PEI, Professor Falzon.
How are things with you? What's new on Malta?

I recently connected with Ben in New York [of which, more to follow in **§V**]; he was *en route* to Malta – naturally I thought of you.

I've been making steady progress on my proposal – but, as I promised not to lean too heavily upon your time, I've waited until I had substantial news to report before sending along an update.

Briefly, I finished a rough draft of my précis on June 1st, reflected, revised, and updated on August 21st; and, although my précis covers the three arenas (within three distinct volumes) we discussed at length, in light of the fact that findings from the first volume inform and direct the researches of the second two volumes, I recognized that I needed to research and make considerable progress on *Volume I* before I was able to propose the second two volumes in sufficient detail.

Thus, I'm pleased to report that I am making final revisions and will send along the précis and a first draft of the entire first volume of my PhD dissertation in the next few days!

If you're interested in turning a few pages of my Masters thesis [Funk 2010c], it offers an interesting prelude and methodological introduction to my proposed dissertation, which I sketch on pages 44-47.

I hope all is very well with you, Joe, I'll follow up with my proposal (précis) very soon!

Very best wishes, Matt

As noted above, I have indeed produced a first draft of Volume I (Funk 2010b), which I summarized in the dialogue copied below:

From: Matt Funk
Sent: Monday, September 27, 2010 04:43 PM
To: Mark Carney
Subject: On the true beauty of gold

Dear Mark,
I thought you may appreciate this copy of *The Principles of Economics & Evolution II: In Search of Evolutionarily Stable Banking, Finance, & Alternative Investment Strategy* (Funk 2010b).

From: Mark Carney
To: Matt Funk
Sent: Tuesday, September 28, 2010 9:15 AM
Subject: On the true beauty of gold

Dear Matt,
Thanks for sending this. I will read it with interest.

From: Matt Funk
To: Mark Carney
Sent: Friday, October 01, 2010 3:39 AM
Subject: On the true beauty of gold...

Dear Mark,

Since that treatise does not offer an *Abstract*, and since it seems I may be preaching to the choir (a choir consisting of members such as yourself and Thomas Hoenig), I'll summarize with three key points:

#1) This paper forwards the argument that, typically, the U.S. Federal Reserve's unique constitutional arrangement confers "evolutionary stability", to borrow an illuminating game-theoretical concept from John Maynard Smith (1982); that is, to say, that the Fed's independent nature and long-term orientation serve it well…

> When the governors discussed the question, Volcker conceded that, legally, they could refuse Carter's request. But, the chairman asked, do you really want to go against the President?
>
> Wallich was the only one who did. "It's not an easy thing to vote against a President's wishes," Wallich said. "But what are we appointed for? Why are we given these long terms in office? Presumably, it is so that not only the present but the past and the future have some weight in our decisions. In the end, it may be helpful to remind the President that it's not only his present concerns that matter." Wallich voted no (Greider1987).

Although there have indeed been times when Presidents have wielded influence over the Fed (and vice-versa, it seems Volcker convinced both Nixon and Carter to do a few things they wouldn't have done if they were able to grasp the implications and imagine the consequences), this paper argues that the near-perfect alignment and high level of cooperation between the current President, Reserve Chairman, and Treasury Secretary may be unprecedented; as a funny economist recently mused, "In the race to the bottom in the game of currency devaluation, the U.S. continues to pull ahead." Indeed, with the exception of Hoenig, all other FOMC members appear committed to helping this misinformed team win the devaluation race, too. But again, I believe I'm preaching to the choir here, so I will move on.

#2) My second point relates to the "true beauty" and "evolutionary stability" of gold, and I do believe you may find a few original arguments of interest. As detailed in a forthcoming, publication, *On the Origin of Mass Extinctions: Darwin's Nontrivial Error* (Funk 2009a), the bad news is that, no matter how wise, prudent, and conservative we may be – perhaps with one exception – all currencies and all economies are games of musical chairs which, alas, eventually all come to an end. However, presuming the end-game does not result in human extinction, historically, gold has been (and is poised to remain) an exception to this rule. Naturally I was relieved to discover that a report that the BOC had sold off all of its bullion was either outdated or inaccurate (I note from the 23 September 2010 report current reserves stand at $141MM CAD), but, if it is true that the BOC sold-off 30MM ounces in the 1980s, as a scholar and perpetual problem-solver, I would be very keen to review any publications which may detail the logic and theory which culminated in the implementation of this strategy. I might also note that I know of at least one savvy and wise fund manager with about $105MM USD in bullion, a position nearly as substantial as our entire national gold reserves. But in any case, given the considerable problems associated with #1 and #2, my conclusion is that gold is not even remotely over-valued at $1,300 USD/ounce.

The only other macroprudential solution appears to be to increase capital requirements, which of course is a very unpopular measure (but a dose of preventative medicine that the Chinese appear to be quite willing to take). And, if this measure is not taken, as time moves forward, it just becomes more and more necessary (and increasingly difficult to implement). Despite the popular faith in "stress-tests", the only "patient" these tests are able to treat are ghosts, all buried in the distant past (*i.e.*, *The Problem of Induction*). And all of this is, of course, merely an unfortunate consequence of living in an expanding universe of unknown and unknowable dimensions. As Steven Hawking observed, "chaos increases as time moves forward, because that's the direction in which we measure time." Despite our best efforts – and in accordance with the laws of physics – volatility and periods of instability *will* increase as time moves forward. Thus, as I see it, building gold reserves and increasing capital requirements may be the two best bets the modern central banker may make.

#3). The third and final argument is by far my most original and speculative, but it may also represent the theoretical development which may interest you most. Although a few theorists have advanced arguments in favour of OPEC and other oil producing nations (including Canada, naturally) pricing oil in terms of gold instead of USD (in order to protect proceeds from *The Problem of Keynesian Economics*, *i.e.*, currency devaluation), to my knowledge, I may be the first to promote this strategy for the sake of long-term stability in the global financial markets. I trust you may find this unusual conjecture intriguing, for, I submit, it would, essentially, promote prudent, gold-standard-like monetary policies. In other words, it would incentivize all players to play the game as if they were all operating on a gold standard.

In any case, since the first draft of this chapter is complete (Funk 2010b), I'll let it speak for itself, but I will close this chapter by noting that support for the unfashionable findings, conclusions, and central thesis presented in this volume have been gaining momentum, including a choir of influential backers, such as Robert Zoellick. Despite gold's bad reputation as barbaric relic (which we'll explore in **§V**), bubbling sentiments and niche broadcasts seem to suggest this viewpoint may be changing:

> Writing in the *Financial Times*, Robert Zoellick, the bank's president since 2007, says a successor is needed to what he calls the "Bretton Woods II" system of floating currencies that has held since the Bretton Woods fixed exchange rate regime broke down in 1971.
>
> Mr Zoellick, a former US Treasury official, calls for a system that "is likely to need to involve the dollar, the euro, the yen, the pound and a renminbi that moves towards internationalisation and then an open capital account". He adds: "The system should also consider employing gold as an international reference point of market expectations about inflation, deflation and future currency values."
>
> His views reflect disquiet with the international system, where persistent Chinese intervention to hold down the renminbi is blamed by the US and others for contributing to global current account imbalances and creating capital markets distortions.
>
> This week's meeting of government heads in South Korea is likely to see yet more exchange rate conflict. A US plan for countries to sign up to current account targets has run into widespread opposition.
>
> Wolfgang Schäuble, Germany's finance minister, has raised the temperature by describing the US economic model as being in "deep crisis" and criticizing the US Federal Reserve's decision to pump an extra $600bn into financial markets. "It is not consistent when the Americans accuse the Chinese of exchange rate manipulation and then steer the dollar exchange rate artificially lower with the help of their [central bank's] printing press."…
>
> "The scope of the changes since 1971 certainly matches those between 1945 and 1971 that prompted the shift from Bretton Woods I to II," Mr Zoellick writes. "Although textbooks may view gold as the old money, markets are using gold as an alternative monetary asset today" (Beattie 2010).

§V – ALTERNATIVE INVESTMENT STRATEGY

Volume II*, In Search of Evolutionarily Stable Alternative Investment Strategy,* sets sail over perilous seas of thought in search of "evolutionarily stable" (Maynard Smith 1982) alternative investment strategy.

Although this chapter is concerned with what is traditionally referred to as "hedge fund" strategy, as Ray Dalio, founder and CEO of the world's largest hedge fund remarked, "I don't like it when people call me a hedge fund manager because I don't know exactly what a hedge fund is" (2006). Thus we must explore this telling observation at the outset by carefully and concretely defining what a hedge fund is, what it once was, what it could be, and, perhaps most importantly, what it should be.

Although this volume is not as stylish nor as creative as our first, it is perhaps unusual in that, on one hand, it is a purely theoretical quest for a solution to this problem; on the other hand, it also attempts to serve as a practical blueprint to practice what it preaches: namely, to *derive* and *deploy* an evolutionarily stable (that is, theoretically unbeatable), global-macro portfolio investment strategy (note reverse chronological order):[†]

From: Matt Funk
Date: December 1, 2010 6:05:00 PM AST
To:Vik Gokuldas
Cc: Simon Langdon
Subject: Global Macro

Greetings Vik,

Simon kindly pointed me in your direction – if you're intrigued by the strategy outlined below and introduced in the attached, I'd love to discuss this with you.

Thanks!

From: Matt Funk
Date: December 1, 2010 5:25:06 PM AST
To: Simon Langdon
Subject: Global Macro

Thanks Simon! I really appreciate the referral – I'll get in touch with Vik.

[†] Global macro managers carry long and short positions in any of the world's major capital or derivative markets. These positions reflect their views on overall market direction as influenced by major economic trends and/or events. The portfolios of these funds can include stocks, bonds, currencies, and commodities in the form of cash or derivatives instruments. Most funds invest globally in both developed and emerging markets (Getmansky, Lo & Mei 2004, p 34).

On Dec 1, 2010, at 5:10 PM, Simon Langdon wrote:

Matt,

Discretionary global macro is simply a strategy style we do not dabble in, let alone home grow talent.

So I am afraid it is not a fit for us. But if this is something you want to pursue, reach out to my friends at HITE/ ISAM capital in NYC – Vik is the man there: vik.gokuldas@isam.com – (212) 561-1217.

Tell him Simon sent you.

All the best, S

From: Matt Funk
Sent:Wednesday, December 01, 2010 3:56 PM
To: Simon Langdon
Subject: Global Macro

I've been reflecting upon my time in New York (see letter to Ray Dalio, copied below), and I've been reviewing the website copy regarding your discretionary trading program as well ("Schonfeld's trading talent consists of both experienced traders from a variety of Wall Street firms to home-grown talent who are the product of Schonfeld's unique training program").

I don't know how interested you may be in "home-growing" an unconventional candidate such as me, but I'm quite interested in Schonfeld – I also happen to believe that my approach to risk and liquidity may be especially appealing to a Family Office with a truly long-term perspective [*cf.* **APPENDIX II**].

The global-macro strategy I have in mind is focused and founded upon four strong pillars: In essence, for the past several years I've working on theoretical developments which have culminated in the identification of the three most "evolutionarily stable" asset classes, which serve as three of these four pillars: (1) reserve currencies, (2) gold bullion, and (3) assets correlated to agricultural production and water resources. The curious six page letter copied below introduces, contextualizes, and offers insights, illuminations, and theoretical support for this conjecture.

But I'd love to sit down with you sometime and elaborate upon my researches into reserve currencies and sketch the sturdy fourth pillar as well – it wouldn't take much time, and I'm able to do so with two circles on a single sheet of paper.

If this sounds interesting to you, please drop me a line. I'd be happy to head back down to New York, and I'm available by phone or email anytime.

Hope your holidays are off to a great start!

Best wishes,

Matt

In any case, that's a contextual overview of this volume's objective, but we have more concrete details to consider at this juncture as well.

The following letter to Ray Dalio presents a summary and outline of this evolving and ongoing search for evolutionarily stable alternative investment strategy…

MATT FUNK

Hotel Palomar – 505 North State Street – Chicago – Illinois – U.S.A.

> [Do not] believe anything that I suggest! Please do not believe a word! I know that that is asking too much, as I will speak only the truth, as well as I can. But I warn you: I know nothing, or almost nothing. We all know nothing or almost nothing. I conjecture that that is a basic fact of life. We know nothing, we can only conjecture: we guess.
>
> – Sir Karl Popper, *All life is Problem Solving,* 1999

TO: Ray Dalio
Bridgewater Associates, Inc.
One Glendinning Place
Westport, CT 06880
U.S.A.

CC: Dan Loeb
Third Point LLC
390 Park Avenue
New York, NY 10022
U.S.A.

RE: Thanksgiving

25 November 2010

Dear Ray,

I'm writing to inform you that you've made another mistake.

Your error (which relates to logical implications which follow from your 13th principle)[†] occurred to me a few days ago, after receiving a generous reply from Dan Loeb.[$]

But as an economist and evolutionary theorist, your *Principles* appeal to me at every level. Although I have not discovered any references to the influence of Karl Popper's (1999) central thesis, your *Principles* appear to be in line with Popper's thinking about correction-of-error through open criticism. Indeed, it appears that Bridgewater may represent the kind of problem-solving community that may be interested in several problems to which I have devoted years of research. Furthermore, as noted in my previous correspondence [**APPENDIX II**], I am, by-and-large, in agreement with all of your *Principles*, thus I'll save most of this debate for another holiday.

[†] Don't forward an email that was sent to you in private to other people not included on the original message unless you have the original sender's permission (Dalio 2010, p 58).

[$] *From: Daniel Loeb*
Date: November 20, 2010 10:31:17 AM AST
To: Matt Funk
Re: Thanksgiving [see **APPENDIX I**]
Great email…love the part of the text on socialism experiment.

But in the meantime, you may wish to reflect upon the following three brief examples in consideration of my conjecture that principle 13 presents counter-productive limitations and obstructions to principles 52, 60, 140, and 276. Example #1: Consider the nontrivial educational value of Dan Loeb's famed, seminal, and widely broadcast email exchange with Alan Lewis (*cf.* McGrath 2005), which you may find within the pages of a Halloween letter to Dan (*cf.* Funk 2010c); as a fellow hunter with an apparent preference for the relative insularity of Belle Haven and a perpetual "fear of messing up" (O'Keefe 2009), you may find the entire contents of this tasty Halloween treat worthwhile. Example #2: If you should happen to decide that this curious Thanksgiving communique may be useful to others, you need not waste any of time (or mine, for that matter) by requesting my permission to pass it along with any criticisms or words of agreement you may feel fit.[†] As a famous copyright and First Amendment attorney recently attested to uncommon beauty of our constitution and copyright laws:

> The most important privilege, from a [problem-solver's] point of view, is truth. If your remarks hurt someone's reputation, but your remarks are true, you are absolutely privileged. An absolute privilege cannot be lost through bad faith or abuse. So even if you maliciously defame another person, you will be privileged if the statement is true. Truth is an absolute privilege because [American] society values truth more than a person's [privacy or] reputation (Litwak 2010).

Example #3: Although Litwak (2010) highlights highlights the extraordinary educational value of the "fair use" provision in U.S. copyright law, the "radical transparency" granted by Sweden's "fair use" laws trump all others (*cf.* Cohen 2010).

Presently, however, I will bring a more pressing problem-solving possibility to your attention: your observations about the heavy, largely unrecognized (*i.e.*, Jensen, Yechiely, & Rotenberg 2006), and thus inherently dangerous correlations between most fund strategies and beta is consistent with my researches into Popper's solution to Hume's problem of induction. In short, I have conceptualize (and, moreover propose to help develop and launch with you at Bridgewater) the most *evolutionarily stable* fund the alternative investment community has ever seen. This concept represents a long conversation, but Funk (2010c, pp 44-47) offers a good introduction.

[†] The theory… [the author] has sketched [in this letter]… accounts to his own understanding…, but whether it will have the same effect upon others must be left to the judgment of his readers. If he should succeed in drawing the attention of more able men to what he conceives to be the principal difficulty in… society and should, in consequence, see this difficulty removed, even in theory, he will gladly retract his present opinions and rejoice in a conviction of his error (Malthus 1798).

For now, however, briefly, over the past decade I have developed several original solutions and re-discovered a few long-forgotten truths (*e.g.,* Funk 2009c), but perhaps my most significant theoretical development is a solution to the most long-standing, fundamental, open problem in economics: a unified economic & evolutionary theory of value. In short, this solution offers a unique competitive advantage, informing a highly original global, macro-driven valuation strategy. Funk (2010a) distills this theory in 3-pages, outlining my insights into systemic risks and asset valuation.

The implications which follow from this dissertation are vast and interrelated, but are especially useful when it comes to evaluating the three most *evolutionarily stable* asset classes: agricultural land (*i.e.*, farmlands, rangelands, and wildlife production systems), reserve currencies, and gold bullion (also see Dichev & Yu 2009).

Adam Smith said almost everything that needs to be said regarding the "stable" nature of farmland in 1776,[†] Funk (2008) corroborated (*reductio ad absurdum*) his strong conjecture, and an insightful article from yesterday's *Globe and Mail* (Waldie & Leeder 2010) added yet more testimony. For brevity's sake, I'll save my analysis of special reserve currencies for another occasion, and thus I will confine the remainder of this discussion to a few dimly seen and misunderstood aspects of gold.

Jeremy Grantham once quipped,

> I hate gold. It does not pay a dividend, it has no value, and you can't work out what it should or shouldn't be worth. It is the last refuge of the desperate (Blumen 2010).

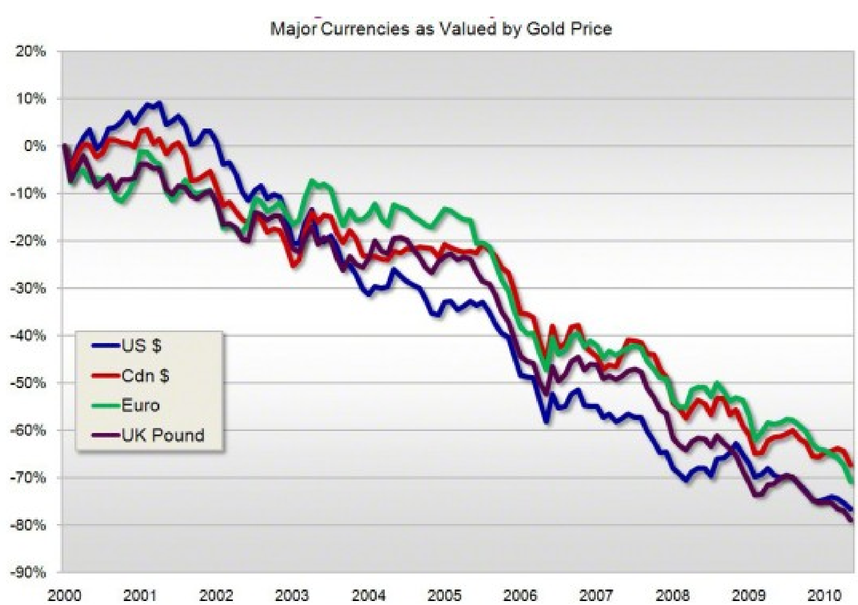
A few weeks ago I collected anecdotal evidence that this viewpoint is not that uncommon: I recently enjoyed an informative trip to New York, where I had several fortunate and enlightening encounters: When George Michelakis (Gladstone Partners) was informed that I had a few interesting ideas about gold, he dismissed me as "another gold retard" (though I spent a fascinating hour suggesting otherwise, the verdict is still out – but he did follow up to request my researches). Simon Langdon (Schonfeld) appeared to listen with genuine interest, but

[†] The unstable and perishable nature of stock and credit, however, render them unfit to be trusted to as the principal funds of that sure, steady, and permanent revenue which can alone give security and dignity… The government of no great nation that was advanced beyond the shepherd state seems ever to have derived the greater part of its public revenue from such sources.

Land is a fund of a more stable and permanent nature (Smith 1776).

perhaps hinted likewise by relating that he "knew another gold-bug back in the 70's". David Dix (AMP Capital) listened very graciously over the course of several discussions throughout the week, but didn't tip his hand one way or the other. However, there was one remarkable exception to the bearish gold sentiments noted above: To borrow a poetic phrase from Mr Loeb, "I was tipping back a few pints" with Perennial Capital's Jay Cassidy, Chris Whitney (whom happen to hail from Weston and Westport, respectively), and their chief economist, a razor-sharp Brooklyn-raised, Princeton man named Will. Although I didn't have the opportunity to discuss this matter with Jay or Chris, Will followed my long story intently and paid me a great compliment at the end, "How long do you think it will be before people know what you know?"

In any case, to make a very long story short, I know that Granthan is wrong: Gold is not the last refuge of the desperate, rather, it is the very first refuge of the wise. If you'd like to follow this thread, I detailed the true value of gold in one long argument, a spirited letter to President Obama (Funk 2010b), which I summarized in **§IV –** I also revisited this the theme in regards to QEII: https://files.me.com/mattfunk/as3wab. Although Funk (2010b) is indeed one long argument, here's a snapshot of a related reserve currency issue this letter explores at great length:



In closing, I will also relate how my unified theory of value and my rare rare combination of "common sense, character, and creativity" (Dalio 2006) enabled me to recognize the error to which I referred in my previous correspondence [**APPENDIX II**]. As you noted…

> Since I believe that a big common mistake that caused many investors problems in 2008 was not having a broad enough perspective, I believe that one of the most important lessons for those who did badly in 2008 is to have a "timeless and universal investment" perspective, which means to broaden your perspective to understand what happened in long ago times (*e.g.*, in the 1930s) (Dalio 2008).

However, as I had remarked [**APPENDIX II**], if you wish to develop a timeless and universal perspective, you must broaden your perspective to understand what happened much, much prior to the 1930s, a perspective I outlined and highlighted in a recent publication (Funk 2009a). Once armed with this perspective – a truly evolutionary worldview – I believe a number of inter-related errors may also come to your attention, including your valuation of gold. Consider this 2009 interview excerpt:

> *Barron's*: Are you a fan of gold?
> *Dalio*: Yes.
> *Barron's*: Have you always been?
> *Dalio*: No. Gold is horrible sometimes and great other times. But like any other asset class, everybody always should have a piece of it in their portfolio (Dalio & Ward 2009).

But that is not true.

Gold has *always* been great – and, theoretically speaking, it always will.

Your mistake, as noted, is that looking back to the 1930s is not far enough – as you know well, "the greatest mistake in investing is exaggerating the importance of, and extrapolating, what's happened lately" (Dalio & Elliott 2006, p 5). But gazing back over the past 2,700 years of human civilization – beginning with the first "white gold" coin, minted and issued King Alyattes in Sardis, Lydia, *c.* 600 BC† – begins to offer a better perspective and more reliable conclusions.

† [See image on cover]: The lion was the heraldic animal of the Mernmads, the royal dynasty of Lydia; it was seen as the earthly representative of the sun god. Thus it is highly probable that this coin is of Lydian origin.... Judging from the large number of such coins that have survived, they must have been part of a quite sizeable issue, extending over a prolonged period which, although it cannot be dated precisely, most probably fell within the reign of King Alyattes. This specimen is a one third stater struck according to a weight system common in Asia Minor which is known as the Babylonian or Milesian standard of coinage. This denomination in particular seems to have been well suited for use as a medium of exchange in trade, and thus popular, for it has survived in greater numbers than the whole staters, for example (Conzett 2010).

In fact, the further we cast our gaze back in time, and the further we project into the future, the more valuable gold becomes in the present! Although unraveling this long yarn takes time, I hope that we may have the fortune to discuss these weighty matters and great opportunities soon.

My approach to risk and liquidity is unusual, my island-based (Funk 2009b) researches are unconventional, and the path I've followed has been rather uncommon. Naturally, I have much to learn. But I have just as much to offer. To echo a poetic truth a great scholar discovered in the backwoods, not far from Fairfield County, "Two roads diverged in a wood, and I—I took the one less traveled by. And that has made all the difference" (Frost 1916).

And, by the way, if you're curious, the first pure gold coins – the first truly reliable monetary storage vessels for value – were issued by King Alyattes' successor, Croesus.[†]

Happy Thanksgiving,

Matt Funk[$]

[†] Herodotus… gave account that the Lydians had been the first to mint their coins from… "white gold" [(electrum)], a natural alloy of gold and silver [see cover image].

These early coins [(*c.* 600 BC)] could not be allotted with a definite value, however, because the percentage of gold and silver in electrum changed. Therefore King Croesus of Lydia [(*c.* 550 BC)] decided… to have his coins henceforth minted either from gold or silver.…

This light 1/3 stater [pictured above] is part of the regular coin issues of King Croesus. Like all this king's coins it depicts a roaring lion fiercely attacking a bull (Conzett 2010).

[$] The writer's object in putting forward his views in the present imperfect manner is to submit them to the test of other minds, and to be made aware of all the facts supposed to be inconsistent with them. As his hypothesis is one which claims acceptance solely as explaining and connecting facts which exist in nature, he expects facts alone to be brought to disprove it; not *à-priori* arguments against its probability (Wallace 1885, p 191).

§VI – GLOBAL FINANCE CENTRES: A COMPARATIVE ISLAND STUDY

Since Volume III, *In Search of Evolutionarily Stable Global Finance Centres: A Comparative Island Study,*† may be of greatest interest, the most use, and thus the most importance to the University of Malta's Department of Banking, Faculty of Economics, and perhaps even the government and people of Malta at large, this is the volume for which I have the least to say at this stage, as I would like to hereby solicit any and all input and guidance from Professors Falzon, Gauci, the Senate, Board, PhD Sub-Committee, government stakeholders, Malta Financial Services Authority (MFSA) members, investors, and/or members of the finance community may wish to offer. In other words, I seek to discover how this comparative research endeavour may be of most use and greatest value to the University, the government, the people of Malta, and other key stakeholders.

Briefly, however, as with the previous two volumes, this final chapter explores the problem of systemic risks and financial shocks. The first volume explored this problem through the eyes of a central banker, the second volume explored this problem through the eyes of a hedge fund manager, and, this, our final volume, explores this problem from the vantage point of three inter-related and inter-connected finance centre stakeholders (managers, investors, and regulators). For now, I will merely close with a snapshot of the essence of this Volume by reiterating a remark from a fruitful discussion with Professor Falzon:

> As Ben and I were discussing the global hedge fund communities, he noted that, today, Gulf and Mexican investors "won't touch" Cayman Island funds, but they are comfortable investing in funds domiciled in Malta? Why? This distinction begs for thorough exploration – as it is critical for Malta to thoroughly understand as much as can be known about this revealed preference and to endeavour to preserve and build upon theses strengths (Funk 2010b, p 65).

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† For Humboldt, 'the unity of nature' meant the interrelation of all…sciences….

Instead of trying to pigeonhole the natural world into prescribed classifications, Kant had argued, scientists should work to discover the underlying scientific principles at work, since only those general tenets could fully explain the myriad natural phenomena…. Humboldt agreed with Kant that a different approach to science was needed, one that could account for the harmony of nature…The scientific community, despite prodigious discoveries, seemed to have forgotten the Greek vision of nature as an integrated whole…. 'Rather than discover new, isolated facts I preferred linking already known ones together,' Humboldt later wrote. Science could only advance 'by bringing together all the phenomena and creations which the earth has to offer. In this great sequence of cause and effect, nothing can be considered in isolation.' It is in this underlying connectedness that the genuine mysteries of nature would be found.

This was the deeper truth that Humboldt planned to lay bare… For only through travel, despite its accompanying risks, could a naturalist make the diverse observations necessary to advance science beyond dogma and conjecture. Although nature operated as a cohesive system, the world was also organized into distinct regions whose unique character was the result of all the interlocking forces at work in that particular place. To uncover the unity of nature, one must study the various regions of the world, comparing and contrasting the natural processes at work in each.

The scientist, in other words, must become an explorer (Helferich 2004, pp 23-27).

§VII – AFTERWORD: A SUDDEN CHANCE FOR PERMANENT SOCIAL CHANGE

I would simply like to take a moment to reflect back upon our **ABSTRACT** and consider a closing remark by our dissertation's founding father: Father Prince (*cf.* **§II**).

Although our researches are complex and exhaustive, they are, simply, informed by Sir Karl Popper's (1959) solution to David Hume's (1739) *Problem of Induction,* and an original solution to the most fundamental, long-standing, open problem in economics: namely, a unified of value (Funk 2010a).

But a of course theoretical solutions – even when they've withstood tests of refutations – are neither always accepted nor applied. Have the harsh lessons from the most recent financial crisis – which, by many metrics, is not even over yet – *been learned*? Has this brief window in time opened wide enough for change to come in?

> When our habits are settled and running smoothly they most resemble the instincts of animals. And the great part of our life is lived in the region of habit. The habits like the instincts are safe and serviceable.
>
> They have been tried and are associated with a feeling of security. There consequently grows up in the folk mind a determined resistance to change … a state of rapid and constant change implies loss of settled habits and disorganization. As a result, all societies view change with suspicion, and the attempt to revise certain habits is even viewed as immorality.
>
> But when there comes the shattering of the matrix of custom by catastrophe, then mores are broken up and scattered right and left. Fluidity is accomplished at a stroke. There comes a sudden chance for permanent social change. Social changes follow both minor and major disasters. The destruction of a mill may change the economic outlook of a village. The loss of a bridge may result in an entirely different school system for an isolated community ; a cloud-burst may move a town. Great visitations, like the Chicago fire or the San Francisco earthquake, reveal these social processes in larger and more legible scale (Prince 1920, p 20).

Perhaps all we're able to say at this juncture is this: Only time will tell.

The author would like to dedicate these closing lines to an extraordinary gentleman and scholar: Professor Joseph Falzon. This Précis would not have been remotely possible without his great patience, perfect guidance, unflagging support. Thank you!

APPENDIX I – A THANKSGIVNG CELEBRATION WITH DANIEL S. LOEB

From: Matt Funk
Date: Friday, November 19, 2010 5:49 PM
To: Daniel Loeb
Subject: Thanksgiving

The Pilgrims' Thanksgiving feast of 1621 in the Plymouth Plantation is now referred to as the original meal that later began the holiday of thanks; however, for British New England, some historians point out that the Popham Colony in Maine conducted a Thanksgiving service in 1607. Other celebrations in the early colonial period even called the day after the fall harvest was complete "Thanksgiving." Actually, the holiday of thanks wasn't a surprising occurrence, but a part of their agrarian culture; in fact, many Native Americans held similar celebrations. They deemed the full moon nearest the autumnal equinox to be the "Harvest Moon." The next full moon, which generally occurs in October, was called the "Hunters Moon." On clear nights the period of darkness between sunset and moonrise is also shorter near the equinox; as a result, the light reflected from the full moon rising just after sunset was said to help farmers working to bring in their crops, and, in the case of the Hunter's Moon, to help hunters see deer after twilight.

These two celebrations came together in 1621 at Plymouth Plantation in large part because of Squanto, a Patuxet Native American. Much like Pocahontas, Squanto taught the pilgrims how to catch eel and grow corn and served as an interpreter. (Squanto had learned English while enslaved in Europe.) Squanto negotiated with the Wampanoag chief, Massasoit, and got him to give food to the starving Pilgrims during their first winter. Because of Squanto's help, the feast now referred to as the first Thanksgiving was held in early October in 1621 and was celebrated by 53 Pilgrims, along with the Native American chief Massasoit and 90 members of his tribe.

Squanto, however, soon fell out of favor with Massasoit. At one point, the pilgrims even assembled an armed force to free Squanto from a hostile tribe. They freed Squanto, but he didn't live long afterwards. Many historians believe that Squanto was poisoned, likely by the Wampanoag. He was buried in Plymouth Plantation's cemetery.

Three accounts of the Plymouth Plantation's Thanksgiving feast survive: *Of Plymouth Plantation* by William Bradford; *Mourt's Relation*, which was probably written by Edward Winslow; and *New England's Memorial* penned by Captain Nathaniel Morton. The celebration lasted three days and featured a feast that included ducks, geese, wild turkeys, fish caught by the colonists and five deer killed by the Wampanoag.

Bradford noted that "besides waterfowl there was great store of wild turkeys, of which [we] took many." (Today, thanks to conservation efforts by American hunters, wild turkeys, which had been reduced to about 30,000 nationwide in the 1920s, now number about 7 million and can be hunted in every state except Alaska.)

Winslow described the Plymouth Plantation's Thanksgiving feast this way: "Our harvest being gotten in, our governor sent four men on fowling, that so we might after a special manner rejoice together after we had gathered the fruits of our labor. They four in one day killed as much fowl as, with a little help beside, served the company almost a week. At which time, amongst other recreations, we exercised our arms, many of the Indians coming amongst us, and among the rest their greatest king Massasoit, with some ninety men, whom for three days we entertained and feasted, and they went out and killed five deer, which we brought to the plantation and bestowed on our governor."

Afterwards, festivals of Thanksgiving were observed sporadically in the colonies. But in 1789, Elias Boudinot, a member of the U.S. House of Representatives from Massachusetts, moved that a day of Thanksgiving be held to thank God for giving the American people the prudence to create a constitution that safeguarded freedom. A congressional committee approved the motion and informed President George Washington. On Oct. 3, 1789, Washington proclaimed "a day of public thanksgiving and prayer" on Thursday, the 26th of November. But Thanksgiving faded away for decades after President James Madison proclaimed a day of Thanksgiving in 1815.

Most of the credit for the permanent establishment of a Thanksgiving holiday goes to Sarah Josepha Hale. She was the editor of *Ladies Magazine*. She argued for the return of Thanksgiving in articles and by lobbying politicians. After years of crusading, she swayed President Abraham Lincoln. On Oct. 3, 1863, Lincoln proclaimed a national Thanksgiving Day be observed every year on the fourth Thursday of November.

Other than such historical details, what has been lost in time is that the Pilgrims were in peril in part because they'd tried communal farming. During their first 2½ years the Pilgrims at Plymouth Plantation didn't own private property. Food was grown by the townspeople and distributed equally. Communism ruled. Naturally, some residents began sleeping in, sure someone else would till the field.

So, according to Bradford, "The experience that was had in this common course and condition, tried sundry years and that amongst godly and sober men, may well evince the vanity of that conceit of Plato's and other ancients applauded by some of later times; that the taking away of property and bringing in community into a commonwealth would make them happy and flourishing; as if they were wiser than God. For this community (so far as it was) was found to breed much confusion and discontent and retard much employment that would have been to their benefit."

By 1623, after cinching down their square belt buckles, Plymouth Plantation's leaders tried the American path to prosperity. They allotted private property to each family and declared that if residents didn't work, they wouldn't eat. Productivity immediately increased.

Again, according to William Bradford in his account, "So they began to think how they might raise as much corn as they could, and obtain a better crop than they had done, that they might not still thus languish in misery. At length, after much debate of things, the Governor … gave way that they should set corn every man for his own particular, and in that regard trust to themselves….

And so assigned to every family a parcel of land, according to the proportion of the number, for that end…. This had very good success, for it made all hands industrious, so as much more corn was planted than otherwise would have been by any means the Governor or any other could use, and saved him a great deal of trouble, and gave far better content. The women now went willingly into the field, and took their little ones with them to set corn; which before would allege weakness and inability; whom to have compelled would have been thought great tyranny and oppression."

Such is the gritty true story of how an American holiday of thanks led to times of plenty, and even to the capitalistically augmented Bread Basket of the world (Minter 2010, pp 16-17).

From: Daniel Loeb
Date: November 20, 2010 10:31:17 AM AST
To: Matt Funk
Subject: Thanksgiving

Great email…love the part of the text on socialism experiment.

From: Daniel Loeb
Date: November 20, 2010 1:41:34 PM AST
To: Matt Funk
Subject: Thanksgiving: time to thank God for Constitution and Capitalism

I took the liberty of elaborating on your email…

From: Daniel Loeb
Date: Sat Nov 20 08:30:41 2010
To: Kyle Bass
Subject: Thanksgiving: time to thank God for Constitution and Capitalism

Whether you are a believer or not, and despite travesties like the Medal of Freedom being awarded to a union goon, the nation is bigger than our current leadership. This is a great time to reflect upon the constitution, and the unique gift of capitalism and ideals of freedom which will endure the challenges of the past couple of years. Let us hope that the recent election will inspire members of both parties to remember these ideals, to remember the long-forgotten values of thrift and responsibility espoused by Ben Franklin and our founders and to start working on getting the country back on the right track.

DL [cf. Loeb 2009, 2010a, 2010b]

> In 1789, Elias Boudinot, a member of the U.S. House of Representatives from Massachusetts, moved that a day of Thanksgiving be held to thank God for giving the American people the prudence to create a constitution that safeguarded freedom. A congressional committee approved the motion and informed President George Washington. On Oct. 3, 1789, Washington proclaimed "a day of public thanksgiving and prayer" on Thursday, the 26th of November.
> [*Later in the paper...*]
> Other than such historical details, what has been lost in time is that the Pilgrims were in peril in part because they'd tried communal farming. During their first 2. years the Pilgrims at Plymouth Plantation didn't own private property. Food was grown by the townspeople and distributed equally. Communism ruled. Naturally, some residents began sleeping in, sure someone else would till the field. So, according to Bradford, "The experience that was had in this common course and condition, tried sundry years and that amongst godly and sober men, may well evince the vanity of that conceit of Plato's and other ancients applauded by some of later times; that the taking away of property and bringing in community into a commonwealth would make them happy and flourishing; as if they were wiser than God. For this community (so far as it was) was found to breed much confusion and discontent and retard much employment that would have been to their benefit."
>
> By 1623, after cinching down their square belt buckles, Plymouth Plantation's leaders tried the American path to prosperity. They allotted private property to each family and declared that if residents didn't work, they wouldn't eat. Productivity immediately increased.

From: Kyle Bass
Sent: Saturday, November 20, 2010 10:14 AM
To: Undisclosed Recipients
Cc: Daniel Loeb
Subject: Thanksgiving: time to thank God for Constitution and Capitalism

This is a great piece from Mr. Loeb. Please make sure it is read by everyone at Hayman.

KB

J. Kyle Bass [*cf.* Bass 2007, 2009, 2010]
Hayman Advisors, L.P.
2101 Cedar Springs Road, Suite 1400
Dallas, Texas 75201

From: Matt Funk
Date: November 20, 2010 1:54:17 PM AST
To: Daniel Loeb
Subject: Thanksgiving: time to thank God for Constitution and Capitalism

Beautiful, Dan – thought you'd appreciate that… very glad to see you did!

And thanks for spreading the word, I'm honoured.

From: Matt Funk
Date: November 24, 2010 12:39:42 PM AST
To: Dan Loeb
Subject: PS

Heading to Chicago this afternoon, but wanted to send along a copy of this letter [see pages 19-24] and my best Thanksgiving wishes before heading to the airport. I was disappointed that we didn't have the opportunity to discuss the contents of this letter while I was in NYC – perhaps another time?

In any case, I'm as hungry as those square belt buckled, Plymouth Plantation pilgrims on the path to American prosperity, and I'm as blood-thirsty as King Kamehameha [*cf.* Funk 2009c].

I'm sure there must be an extraordinary opportunity for us to explore.

Bidding you Godspeed,

Matt

APPENDIX II – ON TIMELESS & UNIVERSAL INVESTMENT PERSPECTIVES

MATT FUNK

17 Olde Brighton Lane – Charlottetown – Prince Edward Island – Canada – C1A-OA7

TO: Ray Dalio **29 October 2010**

Bridgewater Associates, Inc.
One Glendinning Place
Westport, Connecticut, 06880
The United States of America

VIA FACSIMILE: +1 (203) 291-7300

Sir:

I am writing to inform you that you have made a great mistake.

Although I must emphasize the magnitude of your error, it seems you may cherish this criticism. Furthermore, I believe you may be so impressed by my solution that you will feel compelled to invite me to join your team at Bridgewater.

But in any case, the nature of your error occurred to me as I reviewed your 2008 investor letter, wherein you had noted:

> Since I believe that a big common mistake that caused many investors problems in 2008 was not having a broad enough perspective, I believe that one of the most important lessons for those who did badly in 2008 is to have a "timeless and universal investment" perspective, which means to broaden your perspective to understand what happened in long ago times (e.g., in the 1930s).

In brief, if you truly wish to develop a truly timeless and universal investment perspective, you must broaden your perspective to understand what happened much, much prior to the 1930's. Although this understanding may require a rather long conversation, you may find that I poured the foundation for this understanding in a forthcoming publication: *On the Origin of Mass Extinctions: Darwin's Nontrivial Error* (Funk 2009a)

I would appreciate the opportunity to discuss and highlight the logical implications which follow from this recent discovery, especially as they illuminate both unseen risks and unrecognized opportunities for you and Bridgewater.

I might also briefly note that it is no coincidence that my two latest dissertations were titled *The Principles of Economics & Evolution I* (Funk 2010c) and *The Principles of Economics & Evolution II* (Funk 2010b) – it seems we share much in common when it comes to "principles".

In fact, I am confident that the following game-theoretical development (which begins to outline the solution to the problem sketched in the publication linked above) clearly demonstrates that I do indeed embrace 276 of your 277, awe-inspiring principles, and that the revolutionary discovery detailed above was the direct result of reflecting upon and correcting what may be the most humiliating error I have committed to date: *On the Truly Noncooperative Game of Life on Earth: In Search of the Unity of Nature & Evolutionary Stable Strategy* (Funk 2008)

I will follow-up with a call to your office next week to see if you would like to meet to discuss this problem and my proposed solution.

Yours very truly,

Matt Funk

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