

# SOIL 2017

*Of Earthworms, Billionaires, AHA! Moments,  
Mythic Implications, and the Considerable  
Virtues of Bringing Our Money Back Down  
to Earth (Not All of It, of Course, but  
Enough to Matter)*

Woody Tasch

Notes Towards the  
Theory and Practice  
of Nurture Capital

*If it's true that we are what we eat,  
may it also be true  
that we are not what we tweet.*

# Contents

## Part One

### Poetically Incorrect

1

*In which a band of post-modern divinities pauses, somewhere just east of Devil's Thumb, to share a Babettes loaf, some Wondervu Cafe refritos, and a few verses about the current state of befuddlement that (faster than a speeding bullet, more powerful than the most presidential tweet, more viral than the viralest pandemic) is sweeping the globe.*

## Part Two

### Imagination

21

*In which the case is made for building local food systems, seeding nurture capital, ignoring fake news, remembering the Stay Puft Marshmallow Man, and summoning collective imagination, this side and that of the Continental Divide (and a few other divides).*

# Note to The Reader

I'm sad as hell and I'm not going to fake it anymore.

Our democracy is ebbing and carbon is flowing—into the atmosphere, that is, instead of back into the soil, where it belongs.

I'm sad as hell and I'm not going to forsake it anymore—poetry, that is.

To be sure, quirky, playful poetry is an idiosyncratic response to hundred-billion-dollar arms deals, nuclear uncertainty, a quadrillion dollars' worth of derivatives, hunger, obesity, and the invasion of every facet of life by media and markets. But, when I went looking for a meaningful response to the fakery of our current predicament, poetry is what I found.

Turns out that while you can't make this shit up and the truth is stranger than fiction, someone really did make this shit up, history is a nightmare from which we really do need to awake, and poetry may be truer than the realest news.

\* \* \* \* \*

This is a call to farms. A call to all who plant, grow, harvest, eat, hug, argue, clink, put up, squirrel away, fritter away, lay away, and otherwise regret that civility and community went *that-a-way*. A call to gather our wits—one farm at a time, one town at a time,

one county at a time, one watershed at time, one refusal to argue about politics at a time, one sleeve rolled up at a time.

Just why is it, anyway, that the economy keeps growing, military spending keeps exploding, drug prices keep soaring, the stock market keeps lifting off, but the strength of our marriages, the health of our kids, the vitality of our Main Streets, and the fertility of our soil keep going down?

My search for answers, encouraged by conversations with thousands of folks around the country, leads me to explore the boundaries between heart and mind, between finance and poetry, between fiduciary responsibility and free-range imagination.

\* \* \* \* \*

Is the sky really falling this time? It has fallen before—after the Holocaust and Hiroshima, the assassinations of JFK, RFK, and MLK, the war in Vietnam, Kent State, Watergate, Black Monday, Enron, 9/11, Shock and Awe, Bernie Madoff, the Great Recession. Now, in the second decade of the 21st century, climate change, terrorism, widening wealth inequality, and fake news are clamping down on our consciousness. We need to discover new ways to bend entropy, befuddlement, and violence towards beauty, health, and peace.

That's what bunches of us have been doing, in very small ways, since 2009, in tents, barns, theaters, performing arts centers, farmers markets, restaurants, and other gathering spots in scores of communities around the country (and a few in Canada, France, and Australia), under the loose banner of Slow Money. More than \$57 million has gone to over 600 small, organic food enterprises. Yes, we are putting a little of our money into local food systems. But what is driving us forward is something more—an impulse towards beauty, health, and peace.

There is also a more basic impulse. It's the impulse to be real neighbors, rather than fake neighbors—fake meaning our cars are parked here, our kids are in school here, we shop here, our roofs are pounded by the same hailstorms, but most of our money is doing god knows what god knows where, our political energies are swallowed up by national and international shenanigans, and our bonds as community members are wanting.

\* \* \* \* \*

As this volume was being put to bed, Richard Haass, President of the Council on Foreign Relations, stated, “We just have to face the fact that our government isn't working.” Add to this what Nobel laureate Joseph Stiglitz said a few years back, “We aren't fixing the structural problems of the economy because we don't know what the structural problems are.”

We sense that macroeconomic fixes and national political debates are not enough. We sense that what we are being fed is not healthy. We sense that our cultural compass is no longer reliable. Which is why we are all going a little bit crazy right now.

If we are going to change course, really and truly change course, we must start by standing our ground against things dumbed down, watered down, twittered down, trickled down, and hunkered down, against things overly politicized, polemicized, marginalized, externalized, rationalized, systematized, professionalized, fiscalized, intellectualized, and anti-intellectualized.

In this pursuit, I've gone Poetically Incorrect, because I harbor the suspicion that deep down, deeper down than the Ogallala Aquifer and the deepest recesses of fear, millions of us can still find the wherewithal to allow rhyme to flirt with reason in the land of the free and the home of the peaceably inclined.

W.T.

# **Sample Pages**

The book is divided into three parts: a 20-page poem, four long essays, and a photography section.

# Invocation

**Oh, gods and goddesses!** Oh, demigods and quasi-deities! Oh, ether breathers and prayer receivers, heavenly custodians of the hereafter and downward dogs of the here and now, Holy Ones and wisdom keepers, Northern seers and Southern sages, Eastern gurus and Western priests, muses and metaphysicians! Sing in us a song of life after fast food and fast money, fast information and fast technology, fast change and faster change! Bring blessed pause to all the poor, rich, bewildered peoples of these Great Accelerating Anthropocene Proceedings! Come out, come out, wherever you are! We have questions to toss into the fire: Where were you when we cultivated wheat? Where were you when the cube was Rubiked? Where were you when the arc of history turned into a Great Exponential Curve, as if there were no end? Enough already with your pantheistic laissez-faire shenanigans! Let's raise our glasses! Here's to fermentation! Here's to anything that rhymes with divine and wine and moonshine and Einstein! Here's to life after high fructose corn syrup and CAFOs and GMOs, aging plutonium nuke triggers, driverless cars and Mars missions, Dead Zones and Twilight Zones, clever phones and puzzled pheromones, and orchards full of almond trees awaiting swarms of robobees!

**Oh, earthworms!** Oh, Lumbricidae and actinomycetes and mycorrhizae, nematodes and tardigrades, dung beetles and millipedes! Oh, harbingers of fertility, humus healers and tilth tenders, myriad keepers of decomposition and microbial denizens of the soil! Where were you when making a living became making a killing? Where were you when farms became factories?

**Oh, moneylenders!** Oh, silo tenders and spice traders! Oh, stockholders, entrepreneurial spirits and economists, makers of booms and busts, exchangers of goods and services, investors and fiduciaries, Moonshot Takers and Unicorn Makers, profiteers extraordinaire and decriers of usury! Where were you when millions turned to billions and billions to trillions? Where were you when wampum turned into gold and gold into paper and paper into information and information into data and data into algorithms and algorithms into derivatives? And where will you be when Gaussian Copula Formula finally banishes Risk from all securities?

# I                      Whereabouts

## *Imagination.*

We can't all be Noam Chomsky or Ayn Rand or Wendell Berry or Bingo Pajama,<sup>1</sup> but that doesn't mean each and every one of us can't get the hint. We need a new story. Maybe even a new myth. We need to rediscover imagination.

Imagination that enables us to reckon our whereabouts in a world that is heating up and speeding up. Imagination that enables us to find our way past shallow punditry, tribal vitriol, global this and cyber that, past the hyper and the ultra and the mega. Imagination that leads us back to one another, to the places where we live, and to the land—not just the land of “*this land is your land, this land is my land,*” but also the soil itself, upon which all life depends.

## *Imagination.*

My own journey in this direction has been catalyzed over the past decade by interactions with thousands of folks in Slow Money meetings, large and small, in dozens of communities.<sup>2</sup> It felt to me, at the outset, that we would do well to listen more to farmers and poets and less to CEOs and economists. Now, I'm ready to double down.

I'll see your tweets, your big data, your Dow Jones Industrial Average, your political outrage of the day, and raise you thousands of CSAs,<sup>3</sup> millions of organic beets, and a healthy dose of literary imagination, or, more specifically, some Thomas Mann, or, more specifically than that, some Hans Castorp, the protagonist in Mann's 1924 novel *The Magic Mountain*, which evoked Europe on the eve of the First World War. Surrounded by questions of civilization and decay, disease and health, Castorp has the epiphany of all epiphanies. Lost and exhausted in an Alpine snowstorm, it comes:

*For the sake of goodness and love, man shall  
let death have no sovereignty over his thoughts.*<sup>4</sup>

1     Bingo Pajama is a character in Tom Robbins' novel *Jitterbug Perfume*. Bees live in his hair.

2     Slow Money is a movement sparked by *Inquiries into the Nature of Slow Money: Investing as if Food, Farms and Fertility Mattered* (Chelsea Green, 2008). For more, visit [www.slowmoney.org](http://www.slowmoney.org).

3     CSA stands for community supported agriculture, a program through which farm customers pre-pay for a share of the season's produce.

4     *The Magic Mountain*, Thomas Mann (Alfred A. Knopf, 1985) p. 496



Castorp found himself in a fictional blizzard; today, we are lost in a blizzard of the virtual and the fake.

Try this: Where Castorp says death, substitute terrorism or Twitter or, even... Twinkies.

*For the sake of goodness and love, man shall  
let terrorism have no sovereignty over his thoughts.*

*For the sake of goodness and love, man shall  
let Twitter have no sovereignty over his thoughts.*

*For the sake of goodness and love, man shall  
let Twinkies have no sovereignty over his thoughts.*

**Imagination.**

Summon it and see that the rancor and uncertainty of the day, which seem so unprecedented, are subject to broad arcs of history:

5 In 1776, Adam Smith's *An Inquiry into the Nature and Causes of the Wealth of Nations* put forth the concept of the invisible hand of the marketplace, whereby each individual pursuing his or her own gain contributes to the well being of all: "As every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it." (Book Four, Chapter Two)

Agricultural Revolution	10,000 years ago
Ancient Greece	2,500 years ago
Europe Colonizes New World	500 years ago
American Revolution and the Invisible Hand <sup>5</sup>	250 years ago
Industrial Revolution	150 years ago
Tech Revolution and Population Explosion	50 years ago
400 ppm Carbon in the Atmosphere	1 year ago
22,000 Dow Jones Industrial Average	2017

**Imagination.**

Summon it and see that, all the technological wizardry and wealth creation notwithstanding, we are exempt from neither the laws of gravity nor the wisdom of mythology. The ancient Greeks gave us Icarus and Pandora's Box and we are still acting these myths out. We invented cars to get horse poop off city streets and now we've got carbon in the atmosphere. We deployed nuclear weapons as a deterrent and now we face proliferation and terrorism. We developed antibiotics and now we're dealing with antibiotic-resistant superbugs. We're empowered by Twitter and Facebook but we're losing the integrity of our elections. We're chasing the dream of terraforming Mars, but we can't figure out how to stem soil erosion in Iowa, rebuild Baltimore, or save Aleppo.

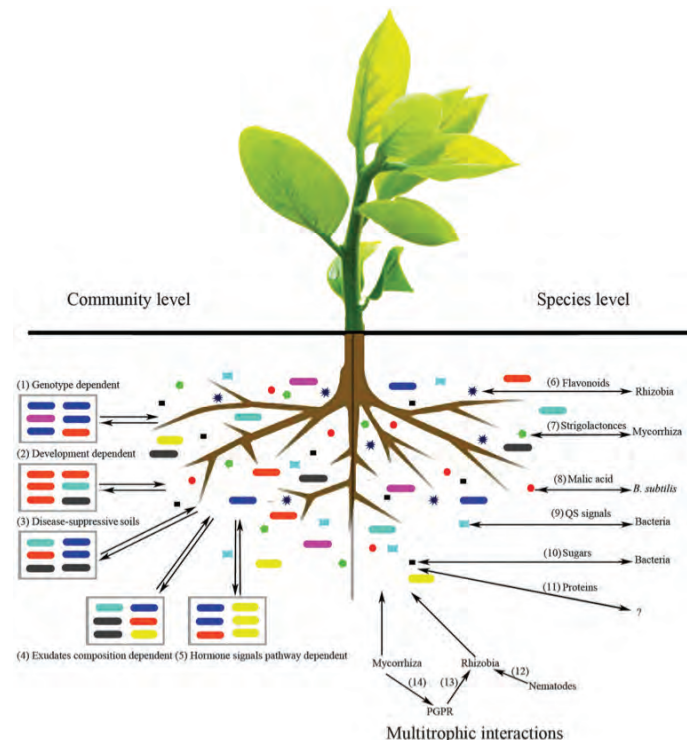
The reference to “root cells cutting deals with soil microbes” is striking. I would have imagined symbiosis to be less a process of dealing and more a process of sharing. I’m already wondering who is cornering the market on REOs (root exudate obligations), who is arbitraging PGPRs (plant growth promoting rhizobacteria), and who is buying the market of MCBs (microbial community bonds)... only to burrow my way to the *American Journal of Botany*, where researchers report, much to my surprise:

Mycorrhizal symbiotic relationships are governed by an equal exchange of nutrients and benefits for each member (Kiers et al. 2011). For example, it was observed in experiments with *Medicago truncatula* Gaertn. that as more carbon was given to the mycorrhizal partner, the mycorrhiza in turn provided the plant with more phosphorous (Kiers et al. 2011). This “fair-trade” between plant and mycorrhiza also occurs with respect to N, as then the mycorrhiza only provides the plant with N when it receives plant carbon (Fellbaum et al. 2012). In other words, both members of the relationship need to benefit.<sup>17</sup>

And if you are extremely good at burrowing through sidenotes, try this one.<sup>18</sup>

17 *Rhizosphere Interactions: Root Exudates, Microbes, and Microbial Communities*, Huang, Chaparro, Reardon, Zhang, Shen and Vivanco (*Botany*, vol. 92, 2014)

18 “Plant root exudates mediate a multitude of rhizospheric interactions: at the species level (right side of schematic), multitrophic interactions (bottom), and at the community level (left side of schematic). The rhizospheric microbial community structure changes depending upon: (1) plant genotype (Broeckling et al. 2008; Bulgarelli et al. 2012; Lundberg et al. 2012; Micallef et al. 2009a, 2009b), (2) plant developmental stage (Chaparro et al. 2013b; Inceoglu et al. 2011; Micallef et al. 2009a), (3) exposure to disease-suppressive soils (Mendes et al. 2011), (4) root exudate composition (Badri et al. 2009a, 2013a), and (5) plant hormone signaling (Carvalhais et al. 2013). Specific compounds released as root exudates mediate one-to-one, plant-microbe, or species-level interactions: (6) flavonoids act as signaling compounds to initiate symbiosis between legumes and rhizobia (Abdel-Lateif et al. 2012), (7) strigolactones stimulate mycorrhizal hyphal branching (Akiyama et al. 2005), (8) malic acid is involved in recruiting specific plant-growth-promoting rhizobacteria (PGPR) (*Bacillus subtilis*) (Rudrappa et al. 2008), (9) disruption or initiation of quorum sensing (QS) in bacteria (Gao et al. 2003), and (10) sugars and amino acids act as chemoattractants for microbes (Somers et al. 2004). The roles of (11) proteins secreted by roots and their interaction with other organisms in the rhizosphere is very limited and needs further exploration to conclusively determine the mechanisms at play (De-la-Peña et al. 2008; Mathesius 2009). Other root exudates mediate multitrophic interactions: (12) plants attract nematodes, which act as carriers of rhizobia to the roots to increase nodulation (Horiuchi et al. 2005), (13) plant-growth-promoting rhizobacteria (PGPR) and rhizobia interaction result in the increase of nodulation efficiency (Guñazú et al. 2010), and (14) PGPR interaction with mycorrhizae increase colonization efficiency (Hernandez and Chailloux 2004; Vosátka and Gryndler 1999). Different rods represent different microbial taxon. Each grey rectangle (left side) represents a distinct rhizosphere microbial community; different colored rods within each community represent the qualitative and quantitative distribution of microbes. Squares, pentagons, circles, stars, and rectangles represent different compounds released as root exudates.” (*Botany*, Huang et al.)



Words over numbers. Take the title of this book:

# SOIL 2017

Literally, a word over a number. Look closely and you'll see that they are almost reversed images of one another. Flip SOIL down, on its head, and it almost turns into 2017 (but the L makes a backwards 7). Not quite a figure/ground *trompe l'oeil*, but a curious visual serendipity, nonetheless. Vaguely Escheresque.

Graphic artist M.C. Escher gained considerable fame in the mid-twentieth century for his symmetrical designs and figure/ground images. His work is a kind of ultra-sophisticated visual primal scream, warning that we must not let the conventional way of seeing things have sovereignty over our thoughts. Escher used elements of perspective, architecture, and symmetry to integrate the possible and the impossible; staircases that lead up and down at the same time, floors that are also ceilings, planes that seem three-dimensional, patterns that merge living things and geometric forms. He joined dualities in overarching unities. You can see, at the extremes, fish and fowl and day and night as being wholly separate, yet at the center Escher's aesthetic holds them together, makes them one, suggesting an ethos of intimate connection and interdependence.

Figure meets ground meets biology meets geometry meets quantity meets quality meets here meets there meets technique meets enigma.

I was intrigued to discover the following passage from Escher's 1953 lecture to Friends of the Stedelijk Museum in Alkmaar:

It may seem paradoxical to say that there are similarities between a poetical and a commercial mind, but it is a fact that both a poet and businessman are constantly dealing with problems that are directly related to people [...] The business-like mind is sometimes described as being cold, sober, calculating, hard, but perhaps these are simply qualities that are necessary for dealing with people if one wants to achieve anything. One is always concerned with the mysterious, incalculable, dark, hidden aspects for which there is no easy formula, but which form essentially the same human element as that which inspires the poet.<sup>21</sup>



M.C. Escher, Day and Night



M.C. Escher, Encounter



M.C. Escher, Ascending and Descending

21 M.C. Escher: His Life and Complete Graphic Work, Bool, Kist, Locher, and Wierda (Harry N. Abrams, 1982) p. 73

information about whether the local dairies have dozens, hundreds, or thousands of cows, or the extent to which these cows have access to pasture. (Note: the bovine digestive system is a highly-evolved system for turning grass into protein. *Why are they feeding us all that corn?* See sidenote, opposite page.)<sup>10</sup>

The second is Stonyfield Farm, which grew out of a non-profit rural education center into the nation's leading organic yogurt company. I was fortunate enough to make an investment in Stonyfield in the 1990s, as treasurer of the Jessie Smith Noyes Foundation. Stonyfield was at tens of millions of dollars in sales back then, en route, over three decades, to almost \$400 million, its commitment to organics fundamental.

The third is Butterworks Farm, a family business that makes as much organic yogurt as it can from its 450-acre farm in northern Vermont. Butterworks imports precious few farm inputs and manages its herd of 45 Jerseys as organically, sustainably, regeneratively, and nurturally as any farming enterprise I have had the pleasure to encounter. Over the decades, Butterworks hit its limit in terms of sales, as much as can be generated from that place, roughly \$1 million a year. I'm pretty sure that Jack and Anne Lazor, the proprietors of Butterworks, don't use the term *mouthfeel*. (They don't need to. I speak from experience as a happy customer, back when I lived in their territory.)

To professional investors, a \$1 million yogurt maker doesn't even appear on the radar. It's too small, too idiosyncratic, dependent on a husband and wife team (a serious no-no in venture capital circles) and there's no exit strategy—no way to scale the business in such a fashion that it becomes easy to take public or sell to a corporate acquirer. To folks who are lucky enough to live within the distribution radius of an organic yogurt maker like Butterworks, a way to use a little of their money to become more than consumers, to become gentle partners in the enterprise, helping it to flourish while remaining small and independent, takes on an entirely different hue.

Profit-maximizing investors with an interest in food look for the next Chobani. Impact investors with an interest in organics scour the landscape for the next Stonyfield. The imagination and affection of the nurture capitalist flow to Butterworks.

But those examples are in the weeds. Let's stay out of them for the moment, lest they prevent us from enjoying more permacultural possibilities.<sup>11</sup>



Conventional industrial-scale dairy operation



Jack Lazor and a few of the Butterworks Farm bovines



Mark and Kena Guttridge  
*Ollin Farms*





Anne Cure  
Cure Organic Farm





**The Skokans**  
*Black Cat Farm &  
Black Cat Farm Table Bistro*





**John Ellis**  
*Farmer John's*

