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TFG Saratoga Springs

**SHARING OWNERSHIP OF THE FUTURE,
And BUILDING IT TOO**

Thanks for having me back for my periodic encounter with the Timber Framers Guild. It's wonderful to be here, but it's always a bit scary to talk to all of you. It's not because you're intimidating – quite the opposite – and it's not only because I know so many of you so well. It's because the intelligence gathered in this room is so startling. I always wonder, to myself, “What can I possibly tell them?” I've come to the conclusion that the people in this room have the highest average I.Q. this side of the Ritalin dispensary at M.I.T.

The last Guild conference I was at was in Burlington in 2005. I gave a talk in Burlington. Before I sat down to write this talk I read that one. It reminded me of how much the world has changed in that four years. It has been, to put it bluntly, a mold-shattering time. It also reminded me of how little I have changed during that time. I find that part a little disappointing.

Recently, my wife Chris and I had our 3 and 5 yr old grandchildren over for five days while their Mom & Dad went off for the first time. When they returned the kids' Mom, Jess, asked 3 yr old Axel if he'd had fun. “Yeah. Mom, he said, I had a lotta fun. But Mom,” he said, “ that was a

very long day.”

When I started building, in 1970, the world was a remarkably different place. The 40 years since has been a very long day. A lot has happened that never happened previously in the long ride of human civilization to date. And a lot happened that never happened previously in the very brief history of the United States of America. But two new things, in particular, that hadn't happened before, foreshadowed the future.

In 1973, during the first oil crisis, we Americans waited on line for hours on end to fill our tanks with a few gallons of gas. There was not enough to go around. Never before.

Two years later, in 1975, the capture of Saigon by North Vietnam marked the first time ever that the U.S. ever lost a war. It was the end of a long reign by the wonderful New World experiment in democracy known as America. Over and done. It meant that the whole world – not just this new world – had changed. And it meant that it was time for a different New World. The only trouble was that very few people knew it. So, as the rest of the world changed, America sunk into a funk and didn't. It was a very long day.

Just a few years before those events, in 1969, Stewart Brand released *The Whole Earth Catalog*, a “book” that probably had as much influence on my life as any other. On the frontispiece there is a statement of purpose that begins with this now-famous sentence, We are as gods and might as well get

good at it.” I recently finished his new book, *Whole Earth Discipline, an Ecopragmatist Manifesto*. Has anyone read it yet? This one begins with this, “We are as gods and HAVE to get good at it.” That sums up what’s happened during the 40 year interval. No time left to fool around.

Two weeks ago the International Day of Climate Action swept across 170 countries like a fireball. I hope it signified the dawning of a new day.

Not long before that our new president won the Nobel peace prize. Why did Obama win the prize? What was the committee saying? Those of you who have read *Dreams of My Father* know that Obama knows everything he needs to know to do the things he needs to do. But what has he done? He got elected – I guess you can make a case for saying that becoming the first black president in the history of our country might be enough right there. I guess you could say that the uplifting message that he sent to the world, and the fact that he promised, during his campaign, to talk – just to talk – with any country – friend or foe – that he’s willing – well, maybe that’s enough, and maybe that’s why the judges selected him.

But maybe they were saying something else. Maybe they were saying, “This kid talks a good game. But let’s hang this prize around his neck and up the ante. Let’s force the issue. Let’s say, “You’ve said all the right things. Now do them.”

Or maybe they were saying something else again. Maybe they gave the prize – not to Obama himself – but to Obama as the representative of the American people. Maybe they were daring the American people – that’s us

– to hold our president accountable. Put up or shut up. With perhaps the most important meeting in our lifetimes about to convene in Copenhagen to tackle global climate destabilization, perhaps they wanted to put the pressure right where it should be. On the American president, the American congress, and the American people.

What does all this mean for us? We can't possibly know. But we know a few things, I think.

“Opportunity is missed by most people because it is dressed in overalls and looks like work,” said Thomas Edison. We know we will have to work very hard in order to take advantage of the opportunities that present themselves.

We know too that the next ten years is going to be fundamentally unlike the last ten years. It's not just that we have a new president; it's that we have a new economy and a new urgency to confront climate change, the most vexing problem we humans faced so far. The next ten years are the ones that count. As companies, and as individuals within companies, we need to learn what this means, and we need to embrace it. We will need to work together in deep collaboration to help each other marshal our collective abilities.

It will take fortitude, I'm certain, and it will also take extreme good will. I trust we will have enough of each.

There's an old proverb about a young boy walking to town who passes a

stone quarry. He sees a disgruntled looking man chipping away at the stone and asks him, “What are you doing?”

The man replies, “I’m chipping away at this wall of stone, trying to get a rock out of it.”

He walks further in the quarry, and encounters another man, who looks less grumpy but is still grunting while he works. “What are you doing?” he asks.

“I’m chipping out a stone block that is going to be part of a foundation of a building,” comes the response.

Finally he stops to talk to a third man who is happily whistling as he chips away at the stone. “What are you doing?” he asks and the man replies, “I’m building a cathedral.”

This is the predominant spirit we must cultivate; that no matter what we are doing – chipping stone, writing a letter, designing a house, cutting timbers, stacking lumber, considering layoffs, nailing sheathing, doing a heat loss calculation, making lunch, commiserating with a colleague, causing trouble, saving the world – whatever we’re doing, it’s all a part of making beautiful things of durable utility in service to a better future. We are building a cathedral, each and every minute of each and every day. We must make things with meaning all of the time. Even in this economy.

We are at a convergence of staggering proportion. At the greatest moment of truth for our planet, the economy which is supposed to support it tanked. And most who are entrusted with guiding us had not a clue. That’s neither strange or unusual. Economist John Kenneth Galbraith once said that the reason for the existence of economists is to give credibility to astrologers.

I read the New Yorker's "Money" issue recently. I read about Google (is it invincible? Or headed for a tumble?) about CEO compensation (what's to be done about CEOs earning hundreds of times what the workers who create the wealth make), and about a gold trader who never earned a college degree (like me), who has been named the "top North American economist (and other awards), and who is now serving a nine year jail sentence (unlike me, so far. . .).

I digested what I read. But I didn't really understand what any of it meant.

I think I understand my small company. I understand how it feels when things are flush and when things are less certain. I understand the effect on the whole when someone is having a rough time, or is away for an extended period, or when two co-workers are having a rough time with each other. I understand what we do, what we produce, who we affect, and how. I understand what we make, and what the value of that is for those who pay us to make it.

I think I also understand my small island community. I understand its strengths and limitations. To some degree, I understand the issues and their potential solutions.

I think I understand my family. I understand the joys of parenting and grandparenting, the pleasures and stresses that come from having four living parents over the age of 85, and the ups and downs of 40 years of marriage (my wife has a friend who says, "When my husband and I got married we

decided I'd make the small decisions and he'd make the big ones. We've stuck to it, too. Funny thing is there haven't been any big decisions.”). I think I understand these things, at least to some small degree.

But I don't understand Google or CEO compensation or gold. Another thing I don't understand: derivatives. Do you understand derivatives? Yes, I've read the Wikipedia definition. Yes, I get the concept (sort of). But derivatives are abstractions, and I do not understand why they generate wealth. They do not make anything that is useful to anyone else (like food, or shelter, or recreation, or pleasure (well, that's not really true – they give pleasure to those who equate money with power and power with pleasure who make money from messing around with derivatives). But don't humans have anything better to do?

Yes, we do. Here's one thing: make beautiful, durable, comfortable, healthy buildings that people can live in and find protection from the elements, food for the soul, and community for the family.

That's what we all do, but as we do, the contrasts and tensions of modern day life are conspicuous. Our country is experiencing more mood swings than a teenager. But it's all a prelude, a prelude to all the good things we know must come next. But there are no guarantees, only possibilities.

We cannot re-build the same economy we had before. We must build a new one.

As we re-build the economy, we need to re-direct it. We don't need to

widen our roads; we need a great passenger rail system. We don't need new financial instruments; we need to begin the re-industrialization of the nation. We need to start making the things we need, like turbines and panels, and fixing the things we've got, like buildings and electrical distribution. The current low oil prices will not last. Now is our chance to prepare for the time when they soar again. It will come, before we know it."

John Fullerton, former Managing director of JP Morgan, says, "At the beginning of the 20th century scale did not matter. At the start of the 21st century, scale redefines our economic challenge. The world may be flat, but far more critical in terms of its implications, the world is full, and that changes everything."

Let's look at scale where it really matters.

Saul Griffith is an inventor whose company, MAKANI, is working to harness the energy of high altitude wind with huge kites. Recently they received a \$5,000,000 investment from Google .

But Saul Griffin is no beat-the-energy-problem-into-submission-with-one-big-solution-kinda guy. He has been analyzing his own life "in extreme detail to figure out exactly how much energy he uses and what changes might reduce the load. In 2007, when he started, he was consuming about 18,000 watts, like most Americans. It's far lower now, but not even close to the average energy use of people worldwide, which is about 2,200 watts.

Meanwhile, the carbon dioxide level right now is 385 ppm and rising. America's leading climatologist, James Hanson, says we must lower the carbon dioxide level to 350 ppm if we want to keep the world we evolved in. But let's talk about leveling off at 450 ppm, a level that would supposedly keep global warming just barely manageable but would still lead massive loss of species, millions of climate refugees, and other major problems).

The world currently runs on about 16 terawatts (trillion watts) of energy, mostly fossil fuels. To level off at 450 ppm of carbon dioxide, we have to reduce the fossil fuel burning to 3 terawatts and produce the rest with renewable energy, and we have to do it in 25 years or it's too late.

Currently half a terrawatt comes from clean hydropower and one terrawatt from clean nuclear. That leaves 11.5 to generate from new clean sources.

Saul Griffith has done the math. He knows what it will take. It would mean the following, approximately, if we combine the sources that are feasible today:

- Installing 1200 square feet of 15-percent-efficient solar cells every second, second after second, for the next 25 years.

- Installing 750 square feet of 30% efficient highly reflective solar thermal mirrors every second, second after second, for 25 years.

- Biofuels ? Something like one Olympic swimming pool of genetically engineered algae, installed every second, second after second for 25 years.

- Wind: a 300-foot-diameter wind turbine every 2.5 minutes, for 25 years.

- Geothermal: Build 2 75-megawatt steam turbines every day for 25 years.

It's not one of those we need to do; it's all of those, combined with massive worldwide energy conservation efforts to reduce use.

In his book *Whole Earth Discipline* Stewart Brand dubs the land area required for this Renewistan, nearly a third of the area of the continental United States, to keep the carbon dioxide level at 450 ppm. To get to Hanson's goal of 350 ppm of carbon dioxide, fossil fuel burning would have to be cut to ZERO, which means expanding the size of Renewistan further by 26 percent.

It won't be easy, folks. Can the world actually build Renewistan? Griffin says it's like the whole of World War II, only with all antagonists on the same side this time. Damn near impossible, but necessary. And the world has to decide to do it.

The Pearl Harbor shock triggered a vast mobilization that amounted to a government-led industrial revolution, an historic economic transformation. It's what we need to do now.

It may not sound like it, from what I'm telling you, but awhile ago I gave up on doom and gloom. Dumped it. Cold turkey. I've read and heard enough to know the problems, as you probably have, and I got damn tired of reading 250 pages of meticulously researched how-bad-it-is followed by 25 pages of generalities about the solutions. But I broke my rule when I

saw *Down to the Wire*, the new book by David Orr, someone I've long admired. The subtitle is *Confronting Climate Collapse*. He definitely does that. And he declares that "The global crisis ahead is a direct result of the largest political failure in history."

Orr, a professor of environmental studies and politics at Oberlin, goes on to say that "No national leader has yet done what Lincoln did for slavery and placed the issue of sustainability in its larger moral context, . . . and cast it as the linchpin that connects all other issues. Adoption of a robust energy policy is the fastest and cheapest way to improve the economy, environment, health, and equity, and increase security. It is the keystone issue, not just another stone in the arch."

The book is stark, blunt, and powerful.

"None of us," says Orr, "asked for these challenges. But it has been given to us to lay the foundation for a durable and just global civilization, to secure the gift of life and pass it on undiminished to unnumbered generations, No previous generation could have said that, and none had greater work to do."

In his view, it's all about politics.

And he's very hard on pathological optimists like me. When I was done reading his book I needed a lift.

I thought maybe I would find it in Stewart Brand's new book, which I

mentioned before. In his inimitable way (expository writing doesn't really get any better than his, in my view) and with the same deeply thoughtful, fearless, story-filled and at-the-same-time analytically and argumentatively complex way that he has for four decades, Stewart shakes it up again.

He comes at the issue quite differently from Orr. In Brand's view it's all about science and technology. But the two books share a fundamental underlying principle: Time is short and the work ahead is massive. We've put deep dents in all the margins. We're like a car at the demolition derby that can only take a couple more bumps. Bruised and battered, we can no longer hem and haw and gild all the lilies.

In his classic 1973 economics text, *Small is Beautiful*, which came out right at the time of the first energy crisis, Britain's EF Schumacher argued that a linked system of small-scale local economies would be more effective, resilient, and people-centered than a large multi-national economy.

In the Next Whole Earth Catalog, published a few years later, Stewart Brand said about Schumacher's book, "Few books have exerted such leverage on an Age as this one . . . The wonder of Schumacher's work is his eminent practicality. . . with good sense and a mature spirituality [he] comes on like John Henry against the mega-machine, sure that he will win, and he is."

Now Brand is promoting the mega-machine. But Schumacher himself said that if everyone were for small, he'd be for big, and it wasn't just being contrarian. "It was a question of balance," says Susan Witt of the

Schumacher Institute. “Even in the 1960’s and 70’s when he was writing and speaking, he understood that the balance was tipping too much toward large scale economic institutions and there needed to be a correction towards the local and regional.”

Orr argues for the same. Brand does too, but he believes that “at this whiplash moment” it will take mighty change to save civilization as we know it, and that means more than political change and re-localization. “If the transition to a less livable Earth is already under way, we’re ants on a burning log. We can rush around all we want; there’s nothing in our ant repertoire that can fix the problem.”

Brand believes in urbanization and advocates greening the cities (where, he says, 80% of the world’s population will live by mid-century) and allowing the relatively emptied countryside to be restored and he stirs three unusual ingredients into the usual environmental recipes: stepping up the use of next-generation nuclear power, using bio-engineering to feed a changing world, and geoengineering the planet, if necessary, to “change the climate back.” It’s bold, it’s futuristic, it’s risky, it’s anathema to many environmentalists, and it’s Brand, through and through.

Above all, both of these environmental thinkers know that the key to our future is the rapid phase-out of coal. Even environmental activist Bill McKibben makes the point, in Stewart’s book, when he says that “Nuclear power is a potential safety threat, if something goes wrong. Coal-fired power is guaranteed destruction, filling the atmosphere with planet-heating carbon when it operates the way it’s supposed to”.

One thing Brand is not concerned about is over-population – he demonstrates clearly that we are headed toward planetary population stabilization (and probably reduction). He’s worried about those of us already here. “Five out of six people live in the developing world – about 5.7 billion in 2010. One way or another, the world’s poor will get grid electricity. Where that electricity comes from will determine what happens with the climate.” Brand is convinced that Saul Griffith’s challenge is a tough act.

Throughout his career, Brand has been a prognosticator – his predictions are legendary. Some of them, as he is quick to relate, have been way off the mark. Some, however, have not. He says now that “The shift from dread to action is under way. The outcome is wholly uncertain.”

To assure an outcome we can live with, Obama must be the Lincoln of this century. But, let’s remember, it’s entirely our job to hold him accountable. The procrastination penalty grows with each passing moment, and he’s not doing so well. . . .yet.

Hopefully we will watch Obama move seamlessly from symbol of change to broker of change to steward of change. I’m not holding my breath, but I do find it invigorating to have *reason* for a smidgeon of optimism instead of just my usual pathological optimism. Hopefully he will become the deserving recipient for the Nobel Peace Prize, as so many others have been.

Meanwhile, we’re stuck with the business of holding ourselves accountable.

In my case, that's a full time job. I worry that I don't change the way I live more significantly, that I have not yet internalized, enough, the changes that must come, the changes we must lead. Change is hard and unsettling but change is coming. Like I said, I'm a little disappointed by the rate of my own change. And, like I said, the mold is being shattered. And now is a time to insist on the future we need; either that, or we will let a different future happen to us against our will. One way or another, there will be change. We must be the authors and the actors of that change. And that won't be easy. My friend Terry Brennan is right when he says "All self-knowledge is initially bad news."

None of us can do it all, but each of us can do something. And maybe it's more than we think. At South Mountain Company, the design/build company I founded in 1975 that has been owned and operated by its employees for the past two decades, one of our goals is to make all operations carbon neutral in 10 years. Today we heat our building and run our forklifts with biodiesel which we make ourselves. We generate 75% of our electricity with a wind turbine and a solar electric system. Soon it will be well over 90. In our work, we are moving closer and closer to net-zero-energy houses, and even our subsidized affordable housing is built to super high performance standards that will allow it be "forever affordable." To reach our goal we will have to keep chugging, keep changing, year after year. But so what? How does our fumbling little drop-in-the-bucket matter?

It gives us hope. Vaclav Hamel, the former Czech president, says this about hope:

Hope. . . is not the same as joy that things are going well, or willingness to invest in enterprises that are obviously headed for early success, but, rather, an ability to work for something because it is good, not just because it stands a chance to succeed. Hope is not the conviction that something will turn out well, but the *certainty that something makes sense, regardless of how it turns out.*

This is the reason we do what we do – the conviction that it makes sense, regardless of its modest impact. The new economy will have to be less about doing and making as much as we can as fast as we can and more about satisfying human needs as elegantly and effectively as we possibly can, about thinking about “enough” rather than “more”.

We are only one small bit player of many doing this work. And the many enlarges each day as more and more of us turn our attention to this Great Work that we have been preparing to tackle for decades and which can only succeed by combining the modest efforts of each and every one of us.

Our future will require us to transform our economy, one drop at a time. We must pace ourselves and build the road as we travel. But the pace must be steady and robust. Along this road business and sustainability intersect, join hands, and continue on together, inseparable.

And that takes me from the global wilderness and brings me closer to the tiny garden I have played in for 35 years, my life in business and building. And to the idea that our future is a design issue, and that we need to re-design our companies to meet the challenges of the era.

In “Searching for Trouble,” the New Yorker article about Google that I didn’t understand, the author says “Google has become the front door to the world for many people, the place they go for information. It is probably the most visible service concocted by mankind.” I agree. And I get it.

But the article points out that [Google founders] Larry Page and Sergey Brin haven’t had to care about the numbers because growth has been so steady and the company’s competitive position has been so strong that they never needed to. He says that until the last year or two Google never had a systematic process for developing an annual budget or allocating capital across businesses.

They’ve never had to make hard choices. The company has been so successful that it can do anything. There are good and bad things about being in that position. Google has been able to take risks; they have been able to invest in high-upside, low-likelihood renewable energy start-ups like Saul Griffiths. But they’re also living the troubles of the growth economy – when what you do is based on perpetual growth you are living off a limited future. The question is, when things get hard, can they make tough decisions?

This all reminds me of the position we were in – as a company - for some years before the 2008 crash. And perhaps many of you. Not so much the growth part, in our case, but for awhile there things were pretty cushy. We could count on high end work – plenty of it – to support our chosen endeavors, our experimentation, and our community work. At Google the

founders have sometimes agonized about their employees' sense of entitlement, given the full time good times and lack of any reckonings. In our case, we have worried about our own sense of entitlement.

On Sept 18, while my co-owner Peter Rodegast was preparing the plans for a large project for construction, and nearly ready to begin, we got a call from our client. He said the crashing economy and the threat to his job in banking made it imperative that he and his wife put their project on hold.

That was a defining incident of the last year in the history of my company – the first domino in a cascade of backlog-diminishing postponements. It was time to take a sobering look at who we are, what we do, and what the future might hold.

For 33 years, every SMC employee has come to work each day of each week of each month of each year and had productive work to do. Now, perhaps for the first time, that legacy might some day be in jeopardy. For us, 2008 began like gangbusters. But when the effects of the US economic collapse came, they came quickly. It became the year of trials and tribulations, tumultuous change, and scrambling to stay ahead of the wave.

But the events that made this year so dramatically different from any other were also incredibly invigorating, and inspired us to open our minds, to think differently, to act differently, to dream differently, and to address tough issues. Difficulty and opportunity mingle; at times it is hard to distinguish one from the other. Sometimes you win, sometimes you learn.

I'll talk more about specific steps we have taken as a company at this afternoon's panel discussion, but for now I want to say that, in the end, we may have all kinds of wonderful aspirations for our company, but they must all be carefully balanced with the absolute and fundamental imperative of putting weekly paychecks into the accounts of 30 families and providing productive, rewarding work for all. It's the number one thing that has kept *me* awake at night the last three decades. Nothing visionary about that; just a plain and simple priority.

A group of friends was visiting for a post-Labor Day vacation, enjoying the last harmonies of Vineyard summer – warm water, cool breezes, and empty roads. Devon Hartman runs a design/build company in L.A. and Jamie Wolfe is a design/build remodeler from Connecticut. Dennis Allen runs a building company in Santa Barbara, CA. Sal Alfano is the editor of both the Journal of Light Construction and Remodeling Magazine. Each is remarkable in his own way. Each has much to teach. All agreed to do a panel discussion for an SMC company meeting.

The following questions were put to the four of them: what happened to your business (and you) between last September and this September, what lasting effects has the economic crisis had, and what's next for you and your enterprise?

Jamie, whose business had severely tanked – gone over a cliff, in fact - talked about the opening that has come with the lack of work - a rare opportunity to "re-boot" his business from Powered Down to Re-New. He has now re-invented it in impressive fashion.

Dennis spoke of the perfect occasion for providing greater service and paying closer attention to clients, and told about the risks they have taken, like promoting two young employees to positions of General Manager and Production Coordinator, guys who, Dennis said "think a lot faster than I do."

Devon talked about the utter necessity of relentless, effective, and widespread communication within his market area, and the need to expand the breadth of both terrain and service. He pointed out that you never know how little people know about what you do and what your capabilities are. Just recently his own brother asked him to recommend someone who could help him figure out how to reduce energy use (a new specialty of his own company!). And when he ran into a client in the supermarket who he hadn't seen in 25 years she said, " So. . . how's the painting business going?" They haven't been a painting company for a quarter century.

And Sal, with the great overview that his position in the industry affords him, said that nobody is immune to these times. Everyone is affected. He said we're thinking less about what we'd like to do and more about what we have to do. It's not for the faint of heart.

We have had many company meetings with a variety of stimulating people, topics and exchanges, but this one seemed to touch more people, in more ways, than usual. I think it's because all four were speaking, from the heart, about making the most of hard times and holding true to our values at the same time.

Times of adversity are when our values are tested. I once heard Paul Saginaw of Zingermans' say, "Principles aren't principles until they cost something." I think he got that right.

But now that our values are being tested, where to? What's next? Who are we? More importantly, what will we become and how will our industry change? These questions lead to more questions.

How many \$2,000,000 custom second homes are going to be coming our way in the coming years? I don't know. Even if we have the opportunity, how many more do we want to do? I don't know. How do we adapt our business model appropriately? How do we learning to be a new business and weave new skills into the fabric of our future?

As woodworkers, we're always trying to work with the grain. But how do we understand its direction? Which way does the grain of our careers run, and the grain of our culture? How can we be certain that as change affects our businesses and our work lives we are aware of that change, and have some modest degree of control over the effects?

This past year I served on Governor Patrick's Massachusetts Zero Energy Building Task Force. Our charge was to formulate a set of recommendations that would lead the way toward universal adoption of zero net energy buildings for new residential and commercial construction by 2030. The first day we met someone said, "In Massachusetts we build roughly 20,000 new buildings a year. But there are two million existing buildings and well over half of them will still be standing in 2030. We

need to concentrate at least as much of our attention – and maybe more – on existing buildings. And we did.

On Martha's Vineyard, there are 16,000 existing buildings. Each of these must be fixed; each of these must be equipped to enter a new era. At South Mountain we think the Deep Energy Retrofit is a big part of our future.

Fortunately, and I think this is probably true of many of you in this room, I am finding that we have been preparing for these times for decades, and that we have accelerated that pace during the past few years – changing, gradually, the nature of our work.

Along with other colleagues in my company, I am a member of the Deep Energy Tribe. It's an association of roughly two dozen building scientists, systems engineers, architects, builders, and carpenters on the East Coast. We are trying to learn how to fix buildings in fundamental and far-reaching ways, just as a few intrepid timber framing adherents learned to make buildings in new ways some decades ago. As we dig into this new territory, we are learning how little we know, how much we have to learn, how much there is to do. There is room for all in this new endeavor.

I recommend that you incorporate this pursuit into your practices. Don't delay. Get Home Energy Rating Service training and have a HERS rater in your company. Make blower doors, and fog machines, and infrared cameras an essential part of the carpenter's tool kit. Begin to make the buildings in your community make sense for the future. Read the ACI Whitepaper, "Moving Existing Homes Toward Carbon Neutrality." Join the

thousand home challenge. Make a Deep Energy Tribe of your own. We don't need to tear 'em down we can fix 'em.

Those new tools – blower doors, infrared cameras, data loggers, and those still to come – will help us to measure our progress, will promote hyper-awareness of what we're doing and how well we're doing it. They will not replace the tools with which we are familiar – those that our hands and minds have become accustomed to – but they will extend our reach into a restorative future.

It's essential to measure what we are doing. We must infuse our work with knowledge, and refrain from making decisions based on rumor, innuendo, and hearsay. Empiricism must be at the center of our new story. This is the part we can play in adopting and practicing the new skills of what Stewart Brand calls “planet craft.”

Tim Brown is the CEO of the legendary design firm IDEO. IDEO's first great prototype was created when the company consisted of eight scruffy designers crowded together in an upstairs studio on University Avenue in Palo Alto. Douglas Dayton and Jim Yurchenko affixed the roller ball from a tube of Ban roll-on deodorant to the base of a plastic butter dish. Before long Apple Computer was shipping its first mouse.

Tim is a proponent of Design Thinking – every problem is a design issue and can only be solved with Design Thinking. I am convinced that the future of our industry is the fusion of Planet Craft and Design Thinking. It is a vast virgin forest of opportunity.

Timber Framers are not only craftsman; we are technical. Because you all have had to re-invent, and then take to new places, an industry that didn't exist, the spirit of analytical, innovative thinking – design thinking – is deeply ingrained. Now we have to advance from timbercraft to planetcraft. That doesn't mean we have to leave one behind and embrace the other. It means we have to expand what we do.

We need to re-invent our companies as Ben and all the rest of the Southworths at Garland Mills Timberframes in New Hampshire have done. How many of you know Ben? I wrote to him and said “Do me a favor - tell me quick how you moved, and thought process of doing so, from timberframe mindset to planetcraft.”

He wrote back and said, “John John John! Quick explanation of my twisted thought process? Not possible. Here is the long winded, disjointed speed rap version though “ and 1500 words later I sorta knew where he was coming from. And of course it's all about leaving the campsite a little tidier than you found it in the first place. But it's also about doing the work that we need to be doing in a way that makes us want to do it. And therein lies the challenge.

Part of it is a new flexibility, a new sense of breadth. One story is emblematic, for me, of these times in the life of South Mountain.

There's a wonderful non-profit think tank in nearby Falmouth called the Woods Hole Research Center. It's a world-class scientific institution deeply

engaged in the study of global climate change. Their current executive director, John Holdren, just left to join Obama as White House Science Advisor. We have admired the institute for years.

They are expanding their staff from 45 to 60. To accommodate everyone, they bought a building adjacent to their current facility, a beautiful old carriage house with about 6000 SF of floor area. When they bought the building, early last summer, their financial director, Bob Barry, called me and said, “Hey John, we’ve got this building, it needs a gut rehab, we want to do a great job – want to do it?”

For many years we have been committed to limiting our work, except for educational work, to the small island where we are located. When Bob called we were swamped, and I gave my stock answer, “Honored that you would think of us, but.. you know. . .we have a commitment to working only on MV and we pretty much toe the line on that one.” We talked for a while and I wished him luck with the project.

Not long after, as the economy began to crumble, we began to experience our wave of postponements. As our backlog began to disappear, we began to strategize about many ways to build it back up. One approach was to expand our horizons. One day in October I called Bob Barry and asked him how things were going with the carriage house.

“Terrible“ he said, “we haven’t found an architect who truly gets what we’re doing and we’re generally unhappy with the way it’s going.”

“Hey Bob,” I said, “We’ve changed our minds. We’ve dumped our commitment not to work off the island. We’re interested. Is it too late?”

“No way,” he said. “Let’s do it. Jump on the boat and come meet with our building committee.” Soon after that I did, and soon after that we had a design/build contract for a major Deep Energy Retrofit. Everyone at SMC is very excited about the project. Everyone there is excited about our participation. It’s exactly our kind of work, and all we had to do was tweak our comfort zone, knock loose our petrified status quo, think a little differently, and there it was.

When we investigated the building, which was built in 1905, we found that there were three wonderful timber trusses spanning the 50’ width. One had been cut through 30 years ago when they converted the building into three apartments. The other two were intact. Our design revolved around these two and we worked with Ben Brungraber and his associates to come up with an elegant partial timber frame that will celebrate these trusses. We can match our aesthetics with our imperatives.

WHRC hired us because we could, at once, do a complete deep energy retrofit of the highest quality, guided by the best of today’s building science, AND uncover, restore and add to the wonderful old timber trusses that had been buried over by years of modification. Both qualities of our practice were essential to their desire for our services.

So. . . while we busily compromise our values, we can promote new values at the same time. We don’t need to wait for our customers to ask. Henry

Ford once said, “If I’d asked my customers what they wanted they’d have asked for a faster horse.” We need to be capable and reliable guides for our clients. We need to spread the news and share the knowledge. We need to offer new services. The work, as my friend Jamie says, will still be in homes. It will still require imagination and experience. It will still depend on trust, competence, and craft. Nobody needs to throw out those babies with the bathwater.

And to do so we need, once again, to learn a lot. Buildings are our number one energy consumer (40% of primary energy) and yet the building industry spends 1/10th as much on R&D as the national average for other industries. There’s no single governmental agency driving the building science agenda – it’s a scattershot affair at best. Germany prioritizes building science research. Is it any surprise they’re light years ahead of us and have many products that we desperately need?

Trial and error. Measure and learn. Innovate and prototype. Ban hearsay. Adopt Planet Craft and Design Thinking. We are, in fact, urging our clients to do 40 year master plans for their buildings, to ensure comfort, durability, and energy reduction so that by 2050 they can be well-adapted to a very different world. We want to be sure that they – as they maintain, change, alter, and add – have No Missed Opportunities.

So we keep pushing. Deep Energy Reductions for our existing houses and, whenever we can, we’re marching toward zero net energy in our new homes. Forever affordable. Forever possible. In clusters. In neighborhoods.

It will take all the ingenuity we can muster to move forward in this new and different world. We do a lot of house moving to save buildings people want to throw away and make them into affordable housing. We do it for other purposes too. Two years ago we were moving a building that a client wanted to tear down to make a garage out of it. It was moving to a slab-on-grade foundation. When you move a house you place steel beams under it, lift it, set it over a foundation, cut holes in the foundation for the beams, set it down, pull the beams, and patch the holes. On a slab on grade there would be no place for the beams to go. The building was placed over the foundation, but how would it be lowered? We asked Mike Reid, the mover, how he would do it.

“Show up on tomorrow and you’ll see.” he replied.

Our guys showed up, mike’s pick-up arrived, and he and his two guys got out and started unloading blocks of ice from the truck. They carefully placed six of them on the foundation, slowly lowered the house down, pulled out the I-beams, said “You’re all set here” and drove off. Twelve hours later the ice had melted and the building was sitting squarely on the foundation. Now that’s ingenuity, huh?

And it’s our own ingenuity that we must harness and employ to create the future of our businesses and communities.

The timber framing community is an extraordinary tribe. It’s passion that makes it so. That passion is a compass, and that passion needs continual

renewal. We don't need to re-invent ourselves overnight. We can pace ourselves. I want to read a quote from Andre Gide, who relates this experience of a trip he took into the Belgian Congo: "My party had been pushing ahead at a fast pace for a number of days, and one morning when we were ready to set out, my native bearers, who carried the food and equipment, were found sitting about without any preparations made for starting the day.

Upon being questioned, they said, 'Quite simply, they had been traveling so fast in these last days that they had gotten ahead of their souls and were going to stay quietly in camp for the day in order for their souls to catch up with them.

So they came to a complete stop." We don't have to come to a complete stop, but it may be that we need to find time, especially in these slower economic times, for our souls to catch up with us. It's time to stop, take a deep breath, and think about the futures of our companies and our industry.

I am consumed, these days, with unwrapping the complex bundle of convergences that suggests that the next ten years will be *dramatically* different from the last ten. Our job: to try to understand what the differences will be, and to change our business and our selves so we are ready, able, and above all willing to do what it takes. It won't be easy, but I think it will be a thrilling journey. It is an awakening, and I find it to be the most invigorating of times. It opens our minds and frees us from doctrinaire thinking.

An old fisherman friend of mine once told me “When you fish, in this life, always use a big hook, because, even if you catch nothing, it’s more exciting to not catch a big fish than to not catch a small one.” It’s time to go after a very big fish.

Tim Brown, from IDEO, says:

“I want to challenge designers to transform design practice. There will always be a place for the artist, the craftsman, and the lone inventor, but the astonishing pace of change in the world demand new approaches to design: collaborative, in a way that amplifies, rather than subdues, the creative powers of individuals; focused but flexible and responsive to unexpected opportunities. . . The next generation of designers will need to begin looking at every problem – from adult literacy to global climate change – as a design problem.”

This long-term global transformation will require more than political will and appropriate investment; it will also require collaboration, the kind Tim Brown refers to, but possibly of a type and scale heretofore unknown. We will need new tools, new abilities, and new ways of working together. New forms of governance and business. All of us will need to own the endeavor. A central requirement for the journey may be the ability to own our workplaces and share responsibility for the outcomes, both good and bad.

In 1987 I re-structured my company from a sole proprietorship under my ownership to an employee owned co-operative corporation. Most of you have heard me talk about this before. It was a dramatic hinge point in the

history of the company. Ownership became available to all employees, enabling people to own and guide their workplace. The responsibility, the power, and the profits all belong to the group of owners. There are no outside investors and no non-employee owners. We decide what kind of business ours will be. The decisions are partly economic and partly philosophical.

At the time of the re-structuring I was frightened but energized; I did not know where this path would lead. Tremendous rewards and benefits derived from that decision, for me and for the company. Two decades later I am fully convinced that the conversion to employee ownership has been a critical factor in the long-term success of our company.

Some of you, along with the rest of our fellow baby boomers, own several million businesses, and during the next two decades, most of these founders will exit.

The businesses will either be shut down, sold (usually outside the community) or they will be passed on. Passing on a business to its employees is an option that deserves to be more widely understood, for it offers powerful benefits to all parties. It is in part a replacement for the family tradition. It is becoming an important entity of choice.

It's all about the recognition that when the people who are making the decisions bear the responsibility for the consequences of those decisions, and also share in the rewards that derive, better decisions will result. It's about building true community within the workplace and deep connections to the communities where we work and live.

While we work toward political solutions, we have the liberty to invent the corporation of the future right now. We can make whatever kinds of companies we want. Nothing stands in our way.

Owning our work, and finding meaning there, is as essential to a good life as it is to own our homes. When the employees, who live in the community, and are part of the civic landscape, are making the decisions, it is less likely the business will be sold, more likely that it will stay rooted in place, and there is more incentive to be a positive force in the community. We are a part of the place we are raising our children, and we have a long-term commitment to it. Community accountability is woven into the fabric of the system.

At South Mountain our long-term commitment to the small island community where we work leads us to expect that the work that we have begun will continue for generations and will never be done, much like the people who once worked on cathedrals they would never see completed.

Nothing is all peaches and cream. Our struggle with our values is ongoing. Constant adjustments are necessary, but living our structure has shaped a dedicated, skillful, compassionate body of decision-makers. Nobody's getting rich, but we are living comfortably doing the work we enjoy in the location of our choice. *All* of us are able to make good livelihoods *because* no one of us is getting rich. Our fundamental purpose is to use our business to create good products, good lives, and a strong community, and to profitably employ the economy in the service of well-being. The people

in my company – those with whom I share the ride – give me hope.

When Senator Kent Conrad of South Dakota introduced the idea of health cooperatives to the health care discussion, millions of Americans – and much of the media - learned a little about something they knew nothing about. Cooperatives?

And in Michael Moore's new film: *Capitalism: A Love Story*, people around the country and all over the world have been seeing worker cooperatives and workplace democracy in action – they are presented as a possible solutions to the undemocratic, inequitable and greed-driven economy that Moore spends most of the film building a case against.

Featured on film are Alvarado Street Bakery in Rohnert Park, California, and Isthmus Engineering in Madison, Wisconsin. Scenes of workers making decisions, working on production lines, and eating and laughing together paint a picture of worker cooperatives that stands in marked contrast to the exploitation and abandonment shown in other parts of the film.

And just yesterday I learned of an historic agreement between the United Steelworkers and the Mondragon Cooperatives in Spain (the longest-running, highest-grossing, greatest experiment in workplace democracy in the world). The agreement provides for a partnership: Mondragon will help the Steelworkers buy and start U.S. manufacturing businesses as worker-owned cooperatives responsible to Main Street rather than Wall Street. It could jump-start a return to manufacturing that is crucial to our

future.

On Martha's Vineyard, a new cooperative has formed. It's called Vineyard Power. It will be owned by our electricity ratepayers. The current business plan calls for a first phase of seventeen 2.5 megawatt off-shore wind turbines to make a large fraction of the Vineyard's energy needs. The large privately owned Cape Wind which has been so much in the news, and which we need, and which will be built, would have been in operation long ago if there had been a community-ownership component. Developments like these give me hope.

Our *active participation* in the doings of our industry and our nation are required. In his new book *Come Home America*, William Greider says: "I have some hard things to say about our country. Beyond recession and financial crisis, we are in much deeper trouble than many people suppose or the authorities want to acknowledge. . . Americans will get through this. We can emerge from it in promising new ways, not necessarily richer, but wiser and joined more closely together as a people, more able to realize fulfilling lives. If we do the hard work.

"We have to examine, he says, what we have become and imagine how we might change it – governing institutions, political and social routines, the laws and economic relationships we inherited. This is a little like renovating an old house that is well loved but neglected; the process is more difficult than building a new house. How might our country look after we get through these adverse circumstances? What is America the Possible?"

America needs a Deep Energy Retrofit.

We have a chance to dream. I think we have an obligation.

Although hope and optimism are not the currencies of the day, I look around me and I see wonderful ideas and forces stewing at the edges of our culture. A mosaic of new institutions and approaches is emerging, and making inroads. They're right here, in this room, embodied in you. As we unpack these tools and concepts of true community we are changing the chemistry of our future. I have a deeply embedded sense that if we are encouraged sufficiently, we will choose to care about the common good.

I had a dream the other night,. It was an epic hippie era seguing into South Mountain dream. At one point a guy asked me to take a look at a piece of writing. I read the title. It was called "An Open Letter to My Shoes." I thought - what a great title, and what a great idea - it could have so many possibilities - shoes, walking, path, journey, where they've taken me, etc. etc. Wow, I thought, I wish I'd 'a thought of that! And then I woke up and realized – hey I did think of that - it was my dream. So I'm going to try to write that letter some time, but meanwhile let's remember – it's our dream! It's our journey, it's our path, it's our home.

There's a Chinese saying that "Man stands for long time with mouth open before roast duck flies in." We can't wait. There's nothing to keep us from living our dream, except ourselves. We need to be the ones roasting the duck. Thank you.

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