



FACTOR-10 ECONOMICS INDEX

Tom Bender

21 Feb. 2012

The inner products of work are perhaps more vital than the outer ones.

Work that enriches skills, self-esteem, mutual respect, being of value to our community, and connection with all of creation is work that nurtures and sustains both us and the world we dream into existence.

Feeding our souls is as important as feeding our bodies.

That is our true economics.

The following articles are the roots, stretching back more than 25 years, of "Factor 10 Economics" now moving into implementation worldwide. Lovins & Hawken's *Natural Capitalism* states, "The governments of Austria, the Netherlands, and Norway have publicly committed to pursuing Factor Four efficiencies. The same approach has been endorsed by the European Union as the new paradigm for sustainable development. Austria, Sweden, and OECD have urged adoption of Factor Ten goals, as have the World Business Council for Sustainable Development and the United Nations Environment Program (UNEP). Among all major industrial nations, the United States probably has the least familiarity with and understanding of these ideas."

THE ENERGY ROOTS OF SUSTAINABLE ECONOMICS:

[FUTURE WORLD OIL SUPPLIES: There IS a Finite Limit](#), L.F. Ivanhoe
WORLD OIL, Oct. 1995. From industry statistics - when world oil peaks, depletes; strategies for wise use, false statistics. Outstanding intro to this issue.

["THE COST OF ENERGY SLAVES,"](#) RAIN May '76. Understanding things about energy such as energy quality, net energy, cascading use, peak oil, and how cheap oil was impossible to try to compete with can help develop wise actions as we transition beyond oil.

[COSMIC ECONOMICS,](#) - with Office of Energy Research & Planning, Governor's Office, State of Oregon, 1974. Growth, fueled by fossil fuels, operates on an "inversion" of values and successful practices from a sustainable society. What's now called a "Carbon Tax" originated in this article long ago, which warned of all the failure-shortcuts we're now trying, such as ethanol fuels that are not net energy producing.

["EMERGING ENERGY POLICY PRINCIPLES"](#) - with O. E. R. P, 1974. Valuable principles for public policy to guide transitions relative to peak oil.

[IT'S OIL RIGHT, FOLKS! There's Good Times Ahead,](#) Solar '96 Solar Energy Association of Oregon Conference, October, 1996. Growth, greed, and inequity currently quadruple our cost of living. Why it's time, now, to let go of them, and why "technical fixes" won't work.

["INDEPENDENCE?"](#) - with O.E.R.P, 1974. Concise summary of shift needed in energy policy.

["LIVING WITHOUT OIL,"](#) 24 Aug. 2006. North Coast Citizen. The door is still open to get to the best possible futures.

AN ECONOMICS TEN TIMES AS EFFECTIVE:

["QUICK AND SIMPLE ANSWERS"](#), 26 Oct. 2008. Here's major and simple change that we can do in our lives and in our hearts.

[LIVING LIGHTLY: ENERGY CONSERVATION IN HOUSING.](#) Monograph excerpts. 1973.

[LIVING LIGHTLY: ENERGY CONSERVATION IN HOUSING.](#) Full monograph. 1973. This was pretty audacious. Asserting, in 1973, that we can lower our energy use by 90%. Asserting we will be happier and healthier when we do. Showing how, in our built environment. Then taking a class of pre-architecture students and *building* a demonstration house to show it works.

[BUDDHIST ECONOMICS,](#) by E.F. Schumacher, 1966. Schumacher's essay on the economics which arise from different value systems was a profound breakthrough for me in understanding how to create a society worth living for.

[SHARING SMALLER PIES](#), Excerpts from monograph. 1975. Thirty-seven years old, but still an excellent introduction to the "new" operative values involved in becoming a part of a sustainable world. Pioneered consideration of values as core and highly productive elements of change.

[SHARING SMALLER PIES](#). Full monograph. 1975.

["THE ECONOMICS OF WHOLENESS"](#), MAGICAL BLEND, June '02. Article overview of sustainable economics book, **LEARNING TO COUNT WHAT REALLY COUNTS**.

LEARNING TO COUNT WHAT REALLY COUNTS: The Economics of Wholeness, Fire River Press, 2002. Values, the sacred, and economics rarely inhabit the same worlds. Yet put together with systems thinking, ecology and energy, they are the essential elements of obtaining multiple order-of-magnitude improvements in economics. Here is how to restore wholeness and sustainability to our economics and culture, while making the whole world a success.

[THE ECONOMICS OF TRUE SUSTAINABILITY](#), e-book, 2012. New updated edition of *Learning to Count What REALLY Counts*.

[THE ECONOMICS OF GIVING](#), from THE HEART OF PLACE, 1993. This might sound absurd at first, but shows the vital importance of values as an integral part of economics. In the economics of giving, *both* the giver and receiver gain.

[BUILDING REAL WEALTH](#), May 1993. Text of top award winning entry in the 1993 AIA/UIA Sustainable Community Solutions International Competition. What constitutes our real wealth, with a cluster of illustrations of how our surroundings change when we embrace more nurturing values.

[ENDGAMES](#), Nov. 1990. Significant cost differences of alternative courses of action include where they leave us in at the end. Twenty years of heating a house with natural gas leaves us with twenty years less reserves of gas. Heating with insulation leaves us at the end of the same period still having that twenty years of gas available, plus houses insulated to save heat for fifty or a hundred more years.

["FORECLOSING OUR FUTURE,"](#) 12 April 2002. The core mechanism of our economics has been future discounting or "present net value accounting". In real life, it causes major loss of economic productivity compared to longer term thinking. The integrative approach of Factor-10 economics, in contrast, produces far more economic productivity and financial return. Actions taken under PNV thinking often destroys the more productive long-term options, giving the appearance of "best value."

["SELF-RELIANT ECONOMICS,"](#) RAIN, Dec. '78. An early scoping of changes needed.

["STOLEN GOODS,"](#) RAIN, Nov. '76, RAINBOOK, '77. How do we know the value of something?

[ECO-BUILDING II,](#) May 1996. A succinct overview of the immense savings from letting go of the costly values of growth, greed, inequity, and violence. Some of the paradoxes involved if we capture those savings without first dealing with population, appetites, and our inner values.

SOME SECTOR TRANSFORMATIONS:

FORESTRY

["IMPROVING THE ECONOMIC VALUE OF COASTAL PUBLIC FOREST LANDS,"](#) Dec. 1994. Updated as ["FIXING FAILED FORESTS,"](#) April 2002. Only 18 years ago, this examined forestry as example of what we "conveniently" forget to account for in conventional economics and how we achieve ten times or more effectiveness improvements using wholistic economics.

EDUCATION

["VITALITY AND AFFORDABILITY OF HIGHER EDUCATION,"](#) Oct. 1993. How to reduce the cost of higher education by 90%. Nineteen years later, Stanford University professors are offering *free* on-line courses, with up to 160,000 students from 190 countries!

[TERMINAL ED: OUR SCHOOLS ARE DEAD,](#) 2001. Finding a ray of light for our public schools. What to do when almost all aspects are screwed up.

BUILT ENVIRONMENT

[THE HIDDEN COSTS OF HOUSING,](#) Top award winning entry in the 1981 California Affordable Housing Competition. Laid out strategies to reduce housing costs by 90% through unconventional approaches to the whole spectrum of housing costs.

["OUR HOMES ARE A GOLDMINE,"](#) Daily Astorian, Feb. '09. A progress report on demonstrated ways of reducing energy use of existing homes by 80%

["FLEXPLEX ENERGY,"](#) NeahCasa, Aug. 2010. Yes, and here's an innovative design for a duplex that uses 95% less energy/unit than the standard American house.

["BEYOND AN OVERSTUFFED WORLD,"](#) 3 Nov. 2008. Images of the savings and benefits of thinking smaller in our homes.

"TILLAWATTS", 21 Jan. 2009. Combining zoning permitting accessory dwellings with energy upgrades is a strategy with multiple interesting benefits.

"BANK OF ASTORIA: BUILDING COMMUNITY SUSTAINABILITY", May 2001. 2001 AIA Sustainable Design Award, 2002 Top 10 Green Buildings Award. A small town bank designed from F-10 economics. Just the impact on employee effectiveness more than pays front-end costs.

"AMAZON STUDENT HOUSING." April, '94. A case study done for the students at the University of Oregon wanting to extend the life of existing student housing rather than replacing it. Same story here, of ignoring full project and life-cycle costs, but here dealing with actual existing buildings. Ability to avoid financing costs through incremental replacement / upgrading is key issue that offsets the costs of working on existing buildings. The "outdated" buildings have been moved to a new site, and now continue to provide quality affordable housing!

TRANSPORTATION

RENT-ALLS, 1993. Again, almost 20 years ago, showing value of CarShare/ZipCar, systems. Some of the least visible yet most important elements and concepts for creating a transportation system providing more freedom, convenience, and quality of transportation than current.

NEAHCASA TRANSPORTATION. Everything is connected. A brief touch on rural non-profit carshare systems and their potential benefits for housing affordability.

"OR-MAX", w/Lee Johnson, 1988. Proposal for development of an electric rail system for Oregon.

SECURITY

"TRUE SECURITY", RAIN, Oct/Nov 1982. *Everyone* must feel safe and fairly treated for any of us to have true security.

"THE END OF NUCLEAR WAR", Dec. 1986. Fifteen years before 9/11, this warned of the vulnerability of centralized high-tech societies and the importance of dealing with the real needs of everyone. Not the same scenario as 9/11, but equally scary. Rejected by *Foreign Affairs* as "too theoretical" and by *Harvard Business Review* as "not giving our CEOs 'effective policy actions'".

HEALTH AND HEALING

["REAL HEALTH CARE"](#), 30 Nov. 2006. North Coast Citizen. The systemic costs alone of a for-profit insurance based system show 50% savings possible through Single-Payer Medicare-type systems.

["ARE WE ALL VETERANS OF WAR?"](#) 17 June 2009. HEADLIGHT HERALD 1 July '09. PTSD, shamanic, and community healing of the inner wounds of our culture.

[HOSPICE: GATEWAYS OF LIFE AND DEATH,](#) Oct. 2000. Acknowledgment and honoring the major transitions of life transform the institutions we create to deal with them.

["DON'T BREED WONDER-BUGS,"](#) 1 Nov. 2007. "Health" systems based on killing don't work.

[MIDNIGHT COMES: A JOURNEY FROM DEATH- TO LIFE-CENTERED HEALING,](#) Feb. 2001. A battle with mutant staph infections, and what they say about our relationship to the rest of life.

SCIENCES

["NOTES ON OUR PLASMA UNIVERSE,"](#) Oct. 2007. This one is still unfolding, but combines emerging "electric universe" information with life-force energy, as source for the plasmas that generate our material world.

TOURISM

["TRANSFORMING TOURISM"](#), EARTH ETHICS, Summer 1993. A narrative of how powerful transformation in a slice of our society occurs - personally and institutionally.

"Make Where You ARE Paradise," RAIN Poster Issue, Apr. '76, RAINBOOK, '77. An alternative to the cost and negatives of tourism is to make where we ARE so wonderful we want to stay home for a vacation.

DEBT

["GET U.S. OUT OF DEBT"](#) 29 Dec. 2007 North Coast Citizen. Until we point our minds and hearts in the right direction, it's difficult to figure out "how-to" details that become obvious when we do. 20% reduction in costs of all we do, once we turn around!

["DEBT TRAPS ARE BIGGER THAN MOUSE TRAPS,"](#) 16 Nov. 2006. North Coast Citizen. How do we design ways out of the traps our banking system has put us in?

["BORROWING TROUBLE"](#) Nov. 1993. Why haven't we been able to see the absurd illogic of debt-based systems?????

["FREE HOMES,"](#) Sept. 2006. A strategy using CLT structures to get us out of the housing debt-trap and eliminate home financing costs in 25 years.

["FINANCE-FREE HOUSING"](#), Sept. 22, 2006. Using Factor-10 economics to reduce overall housing costs by 80-90% in 20 years. The only real cause of housing unaffordability is our passive acceptance of government policy causing income disparity and allowing corporate profiteering on housing finance and energy operating costs. Here are systemic changes - within local community control - that can cut housing costs by 50-75% - across the board.

TAKING ACTION:

["FIRST THINGS FIRST: RESTORE FREE ELECTIONS,"](#) Daily Astorian, 1 June 2009. You can't have a democratic government if candidates for office have to pay today's huge fees for advertising. No civilized country permits such costs for use of public media.

["QUICK AND SIMPLE ANSWERS"](#), 26 Oct. 2008. Here's major and simple change that we can do in our lives and in our hearts.

["OCCUPY EARTH INDEX TO CHANGE"](#), 12 Jan '12. The interactive spiderweb of changes needed right now.

["PAYING FOR CHANGE,"](#) 28 May 2009. Sure, change costs money, but can save far more, and *how* we pay for change can change things in itself.

["TPUD: PLEASE RAISE OUR RATES"](#), 20 Nov. 2008. Using electrical rate increases to fund efficiency improvements that LOWER energy bills.

See [GLOBAL WARMING INDEX](#)

["BIG CHANGES ARE EASIER THAN SMALL ONES,"](#) 21 Sept. 2006. North Coast Citizen. Systemic changes are way more cost-effective than band-aids.

"Make Where You *ARE* Paradise," RAIN Poster Issue, Apr. '76, RAINBOOK, '77. An alternative to the cost and negatives of tourism is to make where we *ARE* so wonderful we want to stay home for a vacation.

[**SOME QUESTIONS WE HAVEN'T ASKED**](#), April 1996. A more extensive coverage of the issues, showing that political actions needed involve little more than reversing some of the laws enacted in recent decades.

[**SIMPLE PRICES**](#), Feb. 1996. A quick snapshot which illustrates how totally our values color our every action, and the magnitude of change implicit in small actions.

[**"AD-FREE TV,"**](#) RAIN Apr. '77. What if, like other countries, TV programming wasn't based on promoting consumerism????

[**"BAN BILLBOARDS, BUY LESS, WORK LESS"**](#) Daily Astorian, 24 July 2008. Not promoting consumption, and consuming and working less is one real way to reduce energy use, reduce global warming, and make life better! Europeans work 25% fewer hours a year than Americans, while having greater productivity. That's the equivalent to three months more vacation every year.

DEAD ENDS

[**"FORECLOSING OUR FUTURE,"**](#) 12 April 2002. The core mechanism of our economics is future discounting or "present net value accounting". In real life, it causes major loss of economic productivity compared to longer term thinking. The integrative approach of Factor-10 economics, in contrast, produces far more economic productivity and financial return. Actions taken under PNV thinking often destroys the more productive long-term options, giving the appearance of "best value."

[**GREEN POWER OR GREED POWER,**](#) NORTH COAST CITIZEN Nov. '03. When are utility-scale giant wind power plants "green", and when just more of the same old greed?

[**LNG IMPORTS: NEITHER SAFE NOR WISE,**](#) HIPFISH, Jan. 2005. LNG terminals are proposed around the US. They hold potential for catastrophic accidents, can be major terrorism targets, and one of the least wise alternatives for meeting our energy needs.

[**"BAD DREAMS, BAD FIX - IT'S A GAS!"**](#), 17 May 2007. North Coast Citizen. Good example of ignoring "net-energy", and the disaster of converting food crops to ethanol for motor vehicles.

LINKS TO RELATED ITEMS:

[**AFFORDABLE HOUSING INDEX**](#)

[**ENERGETICS OF PLACE INDEX**](#)

[GLOBAL WARMING INDEX](#)

[OCCUPY EARTH INDEX](#)

[SOCIETY WORTH LIVING FOR INDEX](#)

[ALPHABETICAL ARTICLE INDEX](#)

[CHRONOLOGICAL ARTICLE INDEX](#)