4K KEYS
To Sustainable Communities Everywhere on the Planet

Economic Key

Editors
Jonathan Dawson
Helena Norberg-Hodge
Ross Jackson

Gaian Economics

Living Well within Planetary Limits

The Economic Key of the EDE

Gaiaeducation

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living well within planetary limits

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The Four Keys to the Design of Sustainable Communities

Gaia Education is a not-for-profit institution founded by an international team of educators in sustainability from leading ecovillages around the world. Gaia Education's major focus is on developing curricula and courses on the holistic design of sustainable urban and rural settlements. While drawing upon best practices within ecovillages worldwide, Gaia Education works in partnership with universities, ecovillages, government and non-government agencies and the United Nations.

Our team has to date developed two such programs:

(1) The Ecovillage Design Education (EDE) and

(2) The Gaia Education Design for Sustainability (GEDS)

The EDE is a four week comprehensive course on the fundamentals of ecovillage design. The GEDS is a broader 10 month Internet university level version of the EDE in Spanish and English offered in cooperation with the Open University of Catalonia in Barcelona.

The EDE Curriculum has the endorsement of the United Nations Institute for Training and Research (UNITAR) and is an official contribution to the UN Decade of Education for Sustainable Development – UNDESD (2005-2014).

Gaian Economics: Living Well within Planetary Limits (The Economic Key) is the second in the series of Four Keys that supplement the Curriculum. This particular book is for anyone seeking solutions to the economic problems facing both global society and local communities in a sustainable world. The four volumes are stand alone anthologies as well as supplements to the EDE and GEDS teaching programmes for both students and teachers, and are edited by the same ecovillagers from all over the world who designed the curriculum.

Other titles in the series:

Beyond You & Me: Inspirations & Wisdom for Building Community
(The Social Key) Editors: Kosha Anja Joubert, Robin Alfred (Permanent Publications, UK, 2007)

The Song of the Earth: A Synthesis of the Scientific and Spiritual Worldviews
(The Worldview Key, Permanent Publications, UK, nyp)
Editors: Maddy Harland, William Keepin

Designing Ecological Habitats: Creating a Sense of Place
(The Ecological Key, Permanent Publications, UK, nyp)
Editors: E. Chris Mare, Max O. Lindegger, Maddy Harland

Overall editors and publishers of the Four Keys are Maddy and Tim Harland of Permanent Publications, UK, while the inspirer and overall coordinator of the project is Hildur Jackson of Gaia Trust, Denmark.

The Four Keys project has been sponsored by Gaia Trust Denmark (www.gaia.org) and Permanent Publications (www.permaculture.co.uk).
Enjoy!

Ross and Hildur Jackson, Gaia Trust
May East, Program Director, Gaia Education
Maddy Harland, Editor and Publisher, Permanent Publications

Contents

Foreword	*Mark Richmond*	xi
Introduction	*Jonathan Dawson, Ross Jackson & Helena Norberg-Hodge*	xiii

1 Shifting the Global Economy towards Sustainability

Rebuilding True Security in an Age of Insecurity	*Vandana Shiva*	2
The Great Turning: From Empire to Earth Community	*David Korten*	5
Sustainable Growth: An Impossibility Theorem	*Herman E. Daly*	11
Shifting the Global Economy	*Ross Jackson*	17
Shifting Direction	*Helena Norberg-Hodge*	21
Beyond the Bailout: Agenda for a New Economy	*David Korten*	30
Adapting to the Lean Economy	*David Fleming*	36
Descending the Energy Staircase with Tradable Energy Quotas (TEQs)	*Rob Hopkins*	40
Global Warming and the South	*Helena Norberg-Hodge*	44
Climate Solutions: Part I. Comparing Alternatives	*Ross Jackson*	49
Climate Solutions: Part II. The Carbon Board	*Ross Jackson*	61

2 Community Banks & Currencies

Financial Stability: A Case for Complementary Currencies	*Margrit Kennedy*	68

The Politics of Money — *Hazel Henderson* — 81
Reforming the Financial Casino — *Ross Jackson* — 86
The Saber: A Complementary Currency for Learning — *Bernard Lietaer* — 91
A Tale of Two Ecovillages: Reviving the Health of Local Communities — *Jonathan Dawson* — 94
Beyond Equality:Work, Money, and Equality in the Economic Fellowship of the Camphill Communities — *Jan Martin Bang* — 99
The Second Foundation at The Farm — *Albert Bates* — 103
The Permaculture of Pensions: Making Savings work for People and Planet — *Jonathan Dawson* — 106
Freecycle: Something for Nothing — *Simon Bradbury* — 109

3 Right Livelihood

Buddhist Economics — *E. F. Schumacher* — 114
Simplicity: A Cool Lifestyle for a Hot Planet — *Duane Elgin* — 121
Sarvodaya Means 'Everybody Wakes Up' — *Joanna Macy* — 127
Designing Your Local Economy — *Hildur Jackson* — 130
Rules for a Local Economy — *Wendell Berry* — 136
In Defence of Pleasure: The Slow Food Movement — *Aldra Robinson* — 138
Tallying National Happiness — *The Japan Times: editorial* — 142
Economics of Happiness — *Helena Norberg-Hodge* — 144

4 Local Economies

The Specialization Trap — *J. M. Greer* — 150
Fifty Million Farmers — *Richard Heinberg* — 154
Why You Should Think Local First — *Michael H. Schuman* — 170
Reclaiming our Future: Reclaiming our Food — *Helena Norberg-Hodge* — 175
Profits of Place — *Josh Harkinson* — 180
Short Tails: The Coming Small-Mart Revolution — *Michael H. Schuman* — 185

Economics of Solidarity: Good Practice from within the Ecovillage Family	*Jonathan Dawson*	192
The Economy of Auroville	*Marti Mueller*	195
Will Earthaven become a 'Magical Appalachian Machu Picchu'?	*Diana Leafe Christian*	200
Creating and Managing an Ethical Business: Permanent Publications	*Maddy Harland*	205
Powerdown and Permaculture: At the Cusp of Transition	*Rob Hopkins*	212

5 Legal & Financial Issues

Financial and Legal Issues in Ecovillage and Enterprise Formation	*Alex Walker*	220
Making a Business Plan	*Ross Jackson*	224
Preparing Feasibility Studies and Business Plans	*Alex Walker*	228
Legal Entities for Owning Ecovillage Land	*Diana Leafe Christian*	230
Buying in – the Effect of an Ecovillage's Economic Choices	*Tony Sima*	236

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Foreword

Under the Patronage of

With the support of

Five years ago the UN Decade of Education for Sustainable Development (2005-2014) was launched. The goal of the UNDESD, for which UNESCO is the lead agency, is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This educational effort has been encouraging changes in behaviour worldwide thus creating a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.

Gaia Education was one of the organisations present at the international launch of the Decade, in March 2005, when some 165 participants gathered in a meeting room at the UN Headquarters in New York, under the chairing of Mr Matsuura, UNESCO Director-General of UNESCO. Since then, the decade has been promoting and advancing the whole 'education for sustainability' debate as a keystone for the human future. Under the guidance of UNESCO, the decade explored the fertile interlinkages between environment and development, education and activism, values and behaviour, culture and natural ecology. It promotes the integration of the values inherent in sustainable development into all aspects of learning – learning to know, learning to do, learning to be, learning to live together, and learning to transform the world.

There has been an unprecedented growth of interest in ESD from the international community. Discussions on what exactly needs to be sustained and what sort of education is required have taken place worldwide. One of the main outcomes was the cross-cultural recognition that the barriers to a smooth transition to sustainability, whatever forms it may take, are not so much technological as they are social, political, and educational.

Gaia Education has been an active collaborator of the Decade, featured in various DESD reports and newsletters. It has partnered with UNESCO's Man and the Biosphere (MAB) Programme in offering Gaia Education

Design for Sustainability places to Biosphere Reserve's directors. It was also selected as one of the 25 official exhibitors of the UNESCO World Conference on ESD (Bonn, 2009) displaying its work in Senegal and the world over.

Gaia Education was born out of the ecovillage movement, and in a short period of time it has spread its wings. Today, it teaches in various settings and in partnership with universities and many urban centers. The major achievement of Gaia Education to date has been the development of the Ecovillage Design Curriculum, which draws from the experience and expertise of a network of some of the most successful ecovillages and community-based projects across the world. The curriculum is systemically organized around what Gaia Education has identified as the four primary intrinsic dimensions of human experience: Ecological, Social, Economic, and Worldview. Over the last five years, it has been taught in 21 countries in different stages of development, and applied equally to urban and to rural settings.

The DESD Secretariat at UNESCO team is pleased to partner with Gaia Education in launching the 4 Keys for Sustainability publications, and in particular the Economic Key – *Gaian Economics – Living Well within Planetary Limits*. The challenge that lies before us today as a global civilization is to find a way of living well within our means. This will require us to reorientate our values away from consumerism and towards life-affirming sustainability; to make do with less and to make much better and more efficient use of what we have; and to create systems that help us live and stay in harmony with our planet.

This publication provides a wealth of views and perspectives. Containing contributions from some of today's most eminent theorists and most effective activists, it represents an overview of cutting edge thinking and practice in the evolution of an economy that serves the needs of people and planet. We hope that this reader will both inspire and empower people to learn their way to sustainability.

Mark Richmond
Director, Division for the Coordination of UN Priorities in Education
UNESCO Education Sector

Introduction

This is a book about living well within our means. The pun here is intentional. For, what we are exploring in this anthology is not just ways of reducing our consumption to levels that enable natural systems to self-regenerate, but how we can do so in ways that permit a high quality of life – so that we live within our means and that we live well.

Since the advent of the Scientific Era in the sixteenth century, humans have stood apart from the rest of nature, seeking to manipulate it for their benefit. Thus, we have learned to refer to the natural world as 'the environment' and to see it, in economic terms, as little more than a bank of resources to be transformed into products for human use and pleasure. This has brought us to the brink of collapse, with natural systems straining under the weight imposed by the sheer volume of our numbers and the levels at which we are consuming.

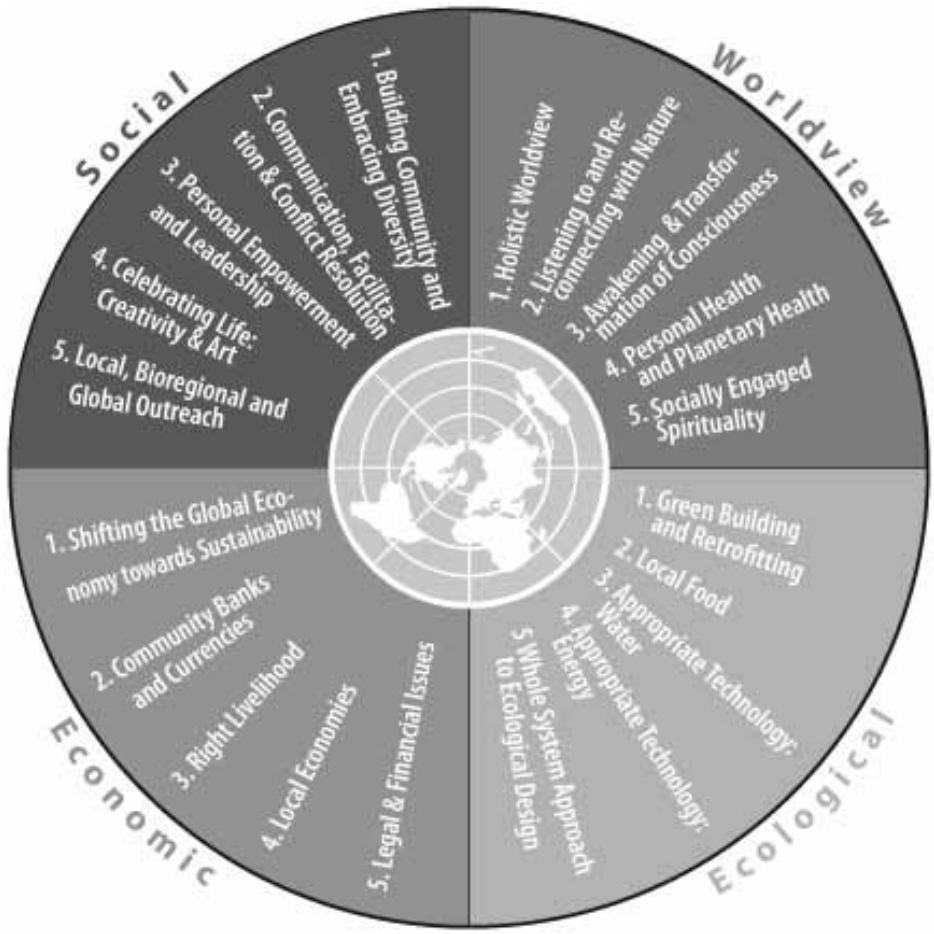
We are, however, on the threshold of a new paradigm shift – into a new way of seeing and understanding the world and our place within it – that is as large and significant as the transition from the Mediaeval to the Scientific Era. The new age into which we are moving has been called by some the 'Ecological Age'. It will be characterised by a new understanding of our place as a thread in the Web of Life, of our interconnectedness with all other living things.

Given the pivotal role of economics in defining the nature of the Industrial Age – characterised by consumerism, unsustainable exploitation of the natural world and ever-widening wealth disparities within the human family – it is here perhaps more than in any other field that we need urgently to find new ways of thinking and being in the world.

The book – which we call the Economic Key – is one of the 'Four Keys' structured along the same lines as the educational programs developed by Gaia Education. These include the Ecovillage Design Education (EDE); a UNITAR-endorsed four week course taught at a number of ecovillages across the world, and the on-line version known as Gaia Education Design for Sustainability (GEDS), an eight month distance learning program at UOC (the Open University of Catalonia in Barcelona, Spain). The GEDS program was developed jointly by UOC (www.UOC.edu) and Gaia Education (www.gaiaeducation.org). As well as being a supplement to

these two educational programmes, this book is a general reader for anyone interested in the role of economics in a sustainable future.

The Four Keys represent the four dimensions of sustainable design – the Worldview, the Social, the Ecological and the Economic. Each Key is further divided into five 'modules'.



Module 1 looks at how the global economy currently works – the extent to which we are currently living beyond our means and how the global economy can be shifted towards sustainability. Module 2 pays special attention to the role of money, and how it is currently created through debt, in shaping the global economy as we know it today. We explore different possible ways in which money systems could be designed, including the creation by communities of complementary currencies, so that money can, once again, become our servant rather than our master.

Module 3, Right Livelihood, examines values and the ethical dimensions to our economic life, exploring how the way we live, consume and invest can

be brought into greater alignment with our values. This module includes a re-examination of what constitutes true wealth, looking beyond financial capital to include social capital and natural capital.

In Module 4, we look at the role of local economies and ask to what degree we can use small-scale, locally-based enterprises to provide the kinds of social and ecological goods and services that would enrich our communities while contributing to the accumulation of real wealth.

Module 5 explores the legal and financial dimensions of creating social enterprises and other bodies to enrich our local communities. This includes how we can raise money to finance our projects and the legal forms that will be most conducive towards this end.

While the book draws upon the experience of ecovillages in developing their own economies, it also refers to both community-based and other initiatives from around the world which have developed tools and models that are of relevance to local economic revitalisation.

We hope that this anthology will be an inspiration for all those interested in the theory and practice of community economic development and in building a sustainable future.

Jonathan Dawson, Ross Jackson and Helena Norberg-Hodge

MODULE 1

Shifting the Global Economy towards Sustainability

The current global economy did not emerge by accident. Nor, as is sometimes implied by our political elites, is it the result of some natural evolutionary process. Rather, it is the product of carefully chosen and easily identifiable policies and structural arrangements.

This module will help us identify the key systems and patterns that make the global economy behave as it does today – that explain, for example, why economic activities that erode natural capital tend to be the most profitable and why it is often cheaper to buy goods flown in from the other side of the world than those made next door. An understanding of how and why these systems work as they do will better enable us to explore how the global economy can be turned towards sustainability.

This exploration will include an examination of some of the key concepts and models that are currently being proposed – and in some cases implemented – to effect structural change in how the global economy operates.

Contents

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Shifting Direction

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Global Warming and the South

Climate Solutions: Part I. Comparing Alternatives

Climate Solutions: Part II. The Carbon Board

Indian activist, Vandana Shiva, lays out the core tenets of Earth Democracy; a philosophy that celebrates diversity, seeks to give a voice to species other than humans and attempts to balance rights with responsibilities.

Rebuilding True Security in an Age of Insecurity

Vandana Shiva

Humanity seems to be in a free-fall towards disaster. The ecological fabric of our existence is being torn apart, as the violence of corporate globalisation combines with the violence of war.

Alternatives to war, non-sustainability and social and economic injustice are becoming a survival imperative. These alternatives need to combine our making peace with the planet and our making peace among people from diverse cultures. One is not possible without the other. The roots of terrorism, violence and war lie in environmental and economic exclusion and the insecurity it generates. People's security does not lie in larger military budgets, bigger bombs and stronger police states. It lies in ecological security, in economic security, in cultural and political security. Rebuilding these multiple securities is the only way to create peace, justice and sustainability.

We need a new paradigm that allows us to move from the pervasive culture of violence to a culture of non-violence, creativity and peace: that is the Earth Democracy Paradigm.

Why are we as a species destroying the very basis of our survival and existence? Why has insecurity been the result of every attempt to build security? How can we as members of the Earth community reinvent security to ensure the survival of all species and the future of diverse cultures? How do we turn from the ruins of the culture of death and destruction, to the culture that sustains and celebrates life?

We can do it by breaking free of the mental prison of separation and exclusion to see the world in its interconnectedness and non-separability, allowing new alternatives to emerge. Despair turns to hope. Violence gives way to non-violence. Scarcity transforms into abundance, and insecurity to security. We need once more to feel at home on the Earth and with each other. We need a new paradigm that allows us to move from the pervasive culture of violence to a culture of non-violence, creativity and peace: that is the Earth Democracy Paradigm.

Earth Democracy is based on creating living economies that protect life on Earth and provide basic needs and economic security to all. It is based

on living democracy, which is inclusive. The Earth Democracy Movement is a commitment to go beyond the crisis of economic injustice and inequality, ecological non-sustainablility, the decay of democracy and the rise of terrorism. Earth Democracy provides an alternative world-view in which humans are embedded in the Earth family. We begin to see that we are connected to each other through love, compassion, ecological responsibility and economic justice, which replace greed, consumerism and competition as objectives of human life.

In Earth Democracy, economics, politics and society move from negative systems that benefit a few in the short run, to positive systems that ensure the fundamental right to life of all species. The maintenance of life in its diversity and integrity is the basis of relationships in Earth Democracy.

As the basis of relationships, Earth Democracy transforms our minds and our actions, and liberates us from patterns of thought and paradigms that have pushed us to our contemporary predicament. It helps address the common roots of problems that are defined separately as economic, ecological and political. Earth Democracy enables us to make mind shifts that are conducive to meeting our needs without destroying other species and cultures, and to improving human welfare while ensuring the welfare of all beings. In India, we pray: "Let all beings be happy."

Earth Democracy enables us to make mind shifts that are conducive to meeting our needs without destroying other species and cultures, and to improving human welfare while ensuring the welfare of all beings.

Earth Democracy embodies principles that enable us to transcend the polarisation, divisions and exclusions that are pitting the economy against ecology, development against environment, people against the planet, and nations against one another in a new culture of fear and hate. It is symbolised in farms rejuvenating biodiversity, and species acting in mutuality to benefit one another. Earth Democracy re-contextualises humans as one member of the Earth family and diverse cultures in the mosaic of cultural diversity.

Since other species do not vote, cannot lobby, and have no purchasing power in the marketplace, Earth Democracy creates an obligation on us as humans to take their well-being into account. As His Holiness the Dalai Lama said on his 60th birthday, "All beings have a right to well-being and happiness. We have a duty to ensure their well-being." This creates human responsibility as trustees, instead of the dominant notion of mastery, control and ownership.

Earth Democracy privileges diversity in nature and society in form and in function. When the intrinsic worth and value of every life form is recognised, biological diversity and cultural diversity flourish. Monocultures result from exclusion and dominance of species: one variety, one race, one religion, one world-view. Monocultures are an indication of coercion and loss of freedom. Freedom implies diversity. Diversity signifies freedom.

Earth Democracy nourishes diversity by going beyond the logic of exclusion, of apartheid, of 'us' and 'them', of 'either/or'. It implies multifunctionality, the logic of 'and', of inclusion. It transcends the false polarisation of wild vs. cultivated, nature vs. culture, or even the false clash of cultures. It allows for the forest farm and the farmed forest; it recognises that biodiversity can be preserved and can also meet human needs. Through

diversity replacing monocultures, and multi-dimensionality replacing one-dimensional systems, the negative economics of scarcity-creation can be replaced by the positive economics of mutually shared abundance, guaranteed provision of basic needs and access to vital resources. Diversity and creativity flourish in nature and in culture.

The separation of rights and responsibility is at the root of ecological devastation and gender and class inequality.

Earth Democracy puts responsibility at the centre of our relationships, with rights flowing from responsibility, instead of the dominant paradigm where there are rights without responsibility and responsibilities without rights. The separation of rights and responsibility is at the root of ecological devastation and gender and class inequality. Corporations that earn profits from the chemical industry, or from genetic pollution resulting from genetically engineered crops, do not have to bear the burden of that pollution. The social and ecological costs are externalised and borne by others who are excluded from decisions and from benefits.

Earth Democracy is based on those who pay the price for having a say, and those who carry responsibility for having the rights. This creates direct or basic democracy. On the one hand this implies decisions moving downwards, from global institutions and centralised governments to local communities. On the other hand it implies a shift in our interpretation of sovereignty. Therefore, Earth Democracy moves the constellation of power from corporations to the people, and in so doing, rebalances the role and functions of the state, which is becoming increasingly undemocratic.

Earth Democracy is about life. It is about natural rights to the conditions of staying alive. It is everyday life and decisions and freedoms related to everyday living – the food we eat, the clothes we wear, the water we drink. It is not just about elections and casting votes. It is a permanently vibrant democracy. It combines economic democracy with political democracy and ecological democracy. It creates positive economies, positive politics, positive identities. It creates security, and hence the conditions of peace.

Earth Democracy offers a potential for changing the way governments, intergovernmental organisations and corporations operate. It creates a new paradigm for global governance while empowering local communities. It creates the possibility of strengthening ecological security while improving economic security. And on the foundations of ecological and economic security it makes societies immune to the virus of hatred and fear. Earth Democracy offers a new way of seeing in which everything is not at war with everything else, but through which we can cooperate to create peace, sustainability and justice.

Reprinted from *Resurgence* magazine no. 214

David Korten is co-founder and board chair of the Positive Futures Network, which publishes Yes! Magazine. He is one of the most eloquent critics of the corporate dominated world we live in, and outlines here his vision of a shift to a world based on the values of 'Earth Community' based on his book The Great Turning.

The Great Turning: From Empire to Earth Community

David Korten

By what name will future generations know our time?

Will they speak in anger and frustration of the time of the Great Unravelling, when profligate consumption exceeded Earth's capacity to sustain and led to an accelerating wave of collapsing environmental systems, violent competition for what remained of the planet's resources, and a dramatic dieback of the human population? Or will they look back in joyful celebration on the time of the Great Turning, when their forebears embraced the higher-order potential of their human nature, turned crisis into opportunity, and learned to live in creative partnership with one another and Earth?

A defining choice

We face a defining choice between two contrasting models for organizing human affairs. Give them the generic names Empire and Earth Community. Absent an understanding of the history and implications of this choice, we may squander valuable time and resources on efforts to preserve or mend cultures and institutions that cannot be fixed and must be replaced.

Empire organizes by domination at all levels, from relations among nations to relations among family members. Empire brings fortune to the few, condemns the majority to misery and servitude, suppresses the creative potential of all, and appropriates much of the wealth of human societies to maintain the institutions of domination.

Earth Community, by contrast, organizes by partnership, unleashes the human potential for creative co-operation, and shares resources and surpluses for the good of all. Supporting evidence for the possibilities of Earth Community comes from the findings of quantum physics, evolutionary biology, developmental psychology, anthropology, archaeology, and religious mysticism. It was the human way before Empire; we must make a choice to re-learn how to live by its principles.

Freeing ourselves... depends on a common solution – replacing the underlying dominator cultures and institutions of Empire with the partnership cultures and institutions of Earth Community.

Developments distinctive to our time are telling us that Empire has reached the limits of the exploitation that people and Earth will sustain. A mounting perfect economic storm born of a convergence of peak oil, climate change, and an imbalanced U.S. economy dependent on debts it can never repay is poised to bring a dramatic restructuring of every aspect of modern life. We have the power to choose, however, whether the consequences play out as a terminal crisis or an epic opportunity. The Great Turning is not a prophecy. It is a possibility.

A turn from life

According to cultural historian Riane Eisler, early humans evolved within a cultural and institutional frame of Earth Community. They organized to meet their needs by cooperating with life rather than by dominating it. Then some 5,000 years ago, beginning in Mesopotamia, our ancestors made a tragic turn from Earth Community to Empire. They turned away from a reverence for the generative power of life (represented by female gods or nature spirits) to a reverence for hierarchy and the power of the sword (represented by distant, usually male, gods). The wisdom of the elder and the priestess gave way to the arbitrary rule of the powerful, often ruthless, king.

Paying the price

The peoples of the dominant human communities lost their sense of attachment to the living earth, and societies became divided between the rulers and the ruled, exploiters and exploited. The brutal competition for power created a relentless play-or-die, rule-or-be-ruled dynamic of violence and oppression and served to elevate the most ruthless to the highest positions of power. Since the fateful turn, the major portion of the resources available to human societies has been diverted from meeting the needs of life to supporting the military forces, prisons, palaces, temples, and patronage for retainers and propagandists on which the system of domination in turn depends. Great civilizations built by ambitious rulers fell to successive waves of corruption and conquest.

The primary institutional form of Empire has morphed from city-state to nation-state to global corporation, but the underlying pattern of domination remains. It is axiomatic: for a few to be on top, many must be on the bottom. The powerful control and institutionalize the processes by which it will be decided who enjoys the privilege and who pays the price, a choice that commonly results in arbitrarily excluding from power whole groups of persons based on race and gender.

Troubling truths

Herein lies a crucial insight. If we look for the source of the social pathologies increasingly evident in our culture, we find they have a common origin in the

dominator relations of Empire that have survived largely intact in spite of the democratic reforms of the past two centuries. The sexism, racism, economic injustice, violence, and environmental destruction that have plagued human societies for 5,000 years, and have now brought us to the brink of a potential terminal crisis, all flow from this common source. Freeing ourselves from these pathologies depends on a common solution – replacing the underlying dominator cultures and institutions of Empire with the partnership cultures and institutions of Earth Community. Unfortunately, we cannot look to imperial power-holders to lead the way.

Beyond denial

History shows that, as empires crumble, the ruling elites become ever more corrupt and ruthless in their drive to secure their own power – a dynamic now playing out in the United States. We Americans base our identity in large measure on the myth that our nation has always embodied the highest principles of democracy, and is devoted to spreading peace and justice to the world.

But there has always been tension between America's high ideals and its reality as a modern version of Empire. The freedom promised by the Bill of Rights contrasts starkly with the enshrinement of slavery elsewhere in the original articles of the Constitution. The protection of property, an idea central to the American dream, stands in contradiction to the fact that our nation was built on land taken by force from Native Americans. Although we consider the vote to be the hallmark of our democracy, it took nearly 200 years before that right was extended to all citizens.

Americans acculturated to the ideals of America find it difficult to comprehend what our rulers are doing, most of which is at odds with notions of egalitarianism, justice, and democracy. Within the frame of historical reality, it is perfectly clear: they are playing out the endgame of Empire, seeking to consolidate power through increasingly authoritarian and anti-democratic policies. Wise choices necessarily rest on a foundation of truth. The Great Turning depends on awakening to deep truths long denied.

Global awakening

Empire's true believers maintain that the inherent flaws in our human nature lead to a natural propensity to greed, violence, and lust for power. Social order and material progress depend, therefore, on imposing elite rule and market discipline to channel these dark tendencies to positive ends. Psychologists who study the developmental pathways of the individual consciousness observe a more complex reality. Just as we grow up in our physical capacities and potential given proper physical nourishment and exercise, we also grow up in the capacities and potential of our consciousness, given proper social and emotional nourishment and exercise.

Wise choices necessarily rest on a foundation of truth. The Great Turning depends on awakening to deep truths long denied.

Over a lifetime, those who enjoy the requisite emotional support traverse a pathway from the narcissistic, undifferentiated magical consciousness of

the newborn to the fully mature, inclusive, and multidimensional spiritual consciousness of the wise elder. The lower, more narcissistic orders of consciousness are perfectly normal for young children, but become sociopathic in adults and are easily encouraged and manipulated by advertisers and demagogues. The higher orders of consciousness are a necessary foundation of mature democracy. Perhaps Empire's greatest tragedy is that its cultures and institutions systematically suppress our progress to the higher orders of consciousness.

Given that Empire has prevailed for 5,000 years, a turn from Empire to Earth Community might seem a hopeless fantasy if not for the evidence from values surveys that a global awakening to the higher levels of human consciousness is already underway. This awakening is driven in part by a communications revolution that defies elite censorship and is breaking down the geographical barriers to intercultural exchange.

The consequences of the awakening are manifest in the civil rights, women's, environmental, peace, and other social movements. These movements in turn gain energy from the growing leadership of women, communities of color, and indigenous peoples, and from a shift in the demographic balance in favor of older age groups more likely to have achieved the higher-order consciousness of the wise elder.

It is fortuitous that we humans have achieved the means to make a collective choice as a species to free ourselves from Empire's seemingly inexorable compete-or-die logic at the precise moment we face the imperative to do so. The speed at which institutional and technological advances have created possibilities wholly new to the human experience is stunning.

Just over 60 years ago, we created the United Nations, which, for all its imperfections, made it possible for the first time for representatives of all the world's nations and people to meet in a neutral space to resolve differences through dialogue rather than force of arms. Less than 50 years ago, our species ventured into space to look back and see ourselves as one people sharing a common destiny on a living spaceship. In little more than ten years our communications technologies have given us the ability, should we choose to use it, to link every human on the planet into a seamless web of nearly costless communication and cooperation.

Already, our new technological capability has made possible the interconnection of the millions of people who are learning to work as a dynamic, self-directing social organism that transcends boundaries of race, class, religion, and nationality, and functions as a shared conscience of the species. We call this social organism 'global civil society'. On February 15, 2003, it brought more than ten million people to the streets of the world's cities, towns, and villages to call for peace in the face of the build-up to the U.S. invasion of Iraq. They accomplished this monumental collective action without a central organization, budget, or charismatic leader, through social processes never before possible on such a scale. This was but a foretaste of the possibilities for radically new forms of partnership organization now within our reach.

Break the silence, end the isolation, change the story

We humans live by stories. The key to making a choice for Earth Community is recognizing that the foundation of Empire's power does not lie in its instruments of physical violence. It lies in Empire's ability to control the stories by which we define ourselves and our possibilities in order to perpetuate the myths on which the legitimacy of the dominator relations of Empire depend. To change the human future, we must change our defining stories.

Story power

For 5,000 years, the ruling class has cultivated, rewarded, and amplified the voices of those storytellers whose stories affirm the righteousness of Empire and deny the higher-order potentials of our nature that would allow us to live with one another in peace and cooperation. There have always been those among us who sense the possibilities of Earth Community, but their stories have been marginalized or silenced by Empire's instruments of intimidation. The stories endlessly repeated by the scribes of Empire become the stories most believed. Stories of more hopeful possibilities go unheard or unheeded and those who discern the truth are unable to identify and support one another in the common cause of truth telling. Fortunately, the new communications technologies are breaking this pattern. As truth-tellers reach a wider audience, the myths of Empire become harder to maintain.

The struggle to define the prevailing cultural stories largely defines contemporary cultural politics in the United States. A far-right alliance of elitist corporate plutocrats and religious theocrats has gained control of the political discourse in the United States not by force of their numbers, which are relatively small, but by controlling the stories by which the prevailing culture defines the pathway to prosperity, security, and meaning. In each instance, the far right's favoured versions of these stories affirm the dominator relations of Empire.

The imperial prosperity story says that an eternally growing economy benefits everyone. To grow the economy, we need wealthy people who can invest in enterprises that create jobs. Thus, we must support the wealthy by cutting their taxes and eliminating regulations that create barriers to accumulating wealth. We must also eliminate welfare programs in order to teach the poor the value of working hard at whatever wages the market offers.

The imperial prosperity story tells of a dangerous world, filled with criminals, terrorists, and enemies. The only way to insure our safety is through major expenditures on the military and the police to maintain order by physical force.

The imperial meaning story reinforces the other two, featuring a God who rewards righteousness with wealth and power and mandates that they rule over the poor who justly suffer divine punishment for their sins. These stories all serve to alienate us from the community of life and deny the positive potentials of our nature, while affirming the legitimacy of economic

As the stories of Empire nurture a culture of domination, the stories of Earth Community nurture a culture of partnership.

inequality, the use of physical force to maintain imperial order, and the special righteousness of those in power.

It is not enough, as many in the United States are doing, to debate the details of tax and education policies, budgets, war, and trade agreements in search of a positive political agenda. Nor is it enough to craft slogans with broad mass appeal aimed at winning the next election or policy debate. We must infuse the mainstream culture with stories of Earth Community. As the stories of Empire nurture a culture of domination, the stories of Earth Community nurture a culture of partnership. They affirm the positive potentials of our human nature and show that realizing true prosperity, security, and meaning depends on creating vibrant, caring, interlinked communities that support all persons in realizing their full humanity. Sharing the joyful news of our human possibilities through word and action is perhaps the most important aspect of the Great Work of our time.

Changing the prevailing stories in the United States may be easier to accomplish than we might think. The apparent political divisions notwithstanding, U.S. polling data reveal a startling degree of consensus on key issues. Eighty-three percent of Americans believe that as a society the United States is focused on the wrong priorities. Supermajorities want to see greater priority given to children, family, community, and a healthy environment. Americans also want a world that puts people ahead of profits, spiritual values ahead of financial values, and international cooperation ahead of international domination. These Earth Community values are in fact widely shared by both conservatives and liberals.

Our nation is on the wrong course not because Americans have the wrong values. It is on the wrong course because of remnant imperial institutions that give unaccountable power to a small alliance of right-wing extremists who call themselves conservative and claim to support family and community values, but whose preferred economic and social policies constitute a ruthless war against children, families, communities, and the environment.

The distinctive human capacity for reflection and intentional choice carries a corresponding moral responsibility to care for one another and the planet. Indeed, our deepest desire is to live in loving relationships with one another. The hunger for loving families and communities is a powerful, but latent, unifying force and the potential foundation of a winning political coalition dedicated to creating societies that support every person in actualizing his or her highest potential.

The distinctive human capacity for reflection and intentional choice carries a corresponding moral responsibility to care for one another and the planet.

In these turbulent and often frightening times, it is important to remind ourselves that we are privileged to live at the most exciting moment in the whole of the human experience. We have the opportunity to turn away from Empire and to embrace Earth Community as a conscious collective choice. We are the ones we have been waiting for.

Excerpted from *YES!* magazine, summer 2006.

Herman Daly, an ecological economist, is a professor of public policy at the University of Maryland in the USA. He has received numerous awards for his work in economics and the environment, including the Right Livelihood Award. Here he discusses both the quantitative and qualitative aspects of economic growth in a thought-provoking challenge to conventional economic thinking.

Sustainable Growth: An Impossibility Theorem

Herman E. Daly

Impossibility statements are the very foundation of science. It is impossible to: travel faster than the speed of light; create or destroy matter-energy; build a perpetual motion machine, etc. By respecting impossibility theorems we avoid wasting resources on projects that are bound to fail. Therefore economists should be very interested in impossibility theorems, especially the one to be demonstrated here, namely that it is impossible for the world economy to grow its way out of poverty and environmental degradation. In other words, sustainable growth is impossible.

In its physical dimensions the economy is an open subsystem of the earth ecosystem, which is finite, non-growing, and materially closed. As the economic subsystem grows, it incorporates an ever greater proportion of the total ecosystem into itself and must reach a limit at 100 percent, if not before. Therefore its growth is not sustainable. The term 'sustainable growth' when applied to the economy, is a bad oxymoron – self-contradictory as prose, and unevocative as poetry.

Challenging the economic oxymoron

Economists will complain that growth in GNP is a mixture of quantitative and qualitative increase and therefore not strictly subject to physical laws. They have a point. Precisely because quantitative and qualitative change are very different it is best to keep them separate and call them by the different names already provided in the dictionary. To grow means 'to increase naturally in size by the addition of material through assimilation or accretion'. To develop means 'to expand or realize the potentialities of; to bring gradually to a fuller, greater, or better state'. When something grows it gets bigger. When something develops it becomes different. The earth ecosystem develops (evolves), but does not grow. Its subsystem, the economy, must eventually stop growing, but can continue to develop. The

term 'sustainable development' therefore makes sense for the economy, but only if it is understood as 'development without growth' – i.e. qualitative improvement of a physical economic base that is maintained in a steady state by a throughput of matter-energy that is within the regenerative and assimilative capacities of the ecosystem. Currently the term 'sustainable development' is used as a synonym for the oxymoronic 'sustainable growth'. It must be saved from this perdition.

Politically it is very difficult to admit that growth, with its almost religious connotations of ultimate goodness, must be limited. But it is precisely the non-sustainability of growth that gives urgency to the concept of sustainable development. The earth will not tolerate the doubling of even one grain of wheat 64 times, yet in the past two centuries we have developed a culture dependent on exponential growth for its economic stability (Hubbert, 1976). Sustainable development is a cultural adaptation made by society as it becomes aware of the emerging necessity of non-growth. Even 'green growth' is not sustainable. There is a limit to the population of trees the earth can support, just as there is a limit to the populations of humans and of automobiles. To delude ourselves into believing that growth is still possible and desirable if only we label it 'sustainable' or colour it 'green' will just delay the inevitable transition and make it more painful.

Limits to growth?

If the economy cannot grow forever then by how much can it grow? Can it grow by enough to give everyone in the world today a standard of per capita resource use equal to that of the average American? That would turn out to be a factor of seven, a figure that is neatly bracketed by the Brundtland Commission's call (Brundtland *et al.*, 1987) for the expansion of the world economy by a factor of five to ten.[1] The problem is that even expansion by a factor of four is impossible if Vitousek *et al*. (1986, pp. 368-373) are correct in their calculation that the human economy currently preempts one-fourth of the global net primary product of photosynthesis (NPP). We cannot go beyond 100 percent, and it is unlikely that we will increase NPP since the historical tendency up to now is for economic growth to reduce global photosynthesis.

Sustainable development is a cultural adaptation made by society as it becomes aware of the emerging necessity of non-growth.

Since land-based ecosystems are the more relevant, and we preempt 40 percent of land-based NPP, even the factor of four is an overestimate. Also, reaching 100 percent is unrealistic since we are incapable of bringing under direct human management all the species that make up the ecosystems upon which we depend. Furthermore, it is ridiculous to urge the preservation of biodiversity without being willing to halt the economic growth that requires human takeover of space occupied by other species.

If growth up to the factor of five to ten recommended by the Brundtland Commission is impossible, then what about just sustaining the present scale – i.e. zero net growth? Every day we read about stress-induced feedbacks from the ecosystem to the economy, such as greenhouse build-up, ozone

layer depletion, acid rain, etc., which constitute evidence that even the present scale is unsustainable. How then can people keep on talking about 'sustainable growth' when: (a) the present scale of the economy shows clear signs of unsustainability, (b) multiplying that scale by a factor of five to ten as recommended by the Brundtland Commission would move us from unsustainability to imminent collapse, and (c) the concept itself is logically self-contradictory in a finite, non-growing ecosystem? Yet sustainable growth is the buzz word of our time. Occasionally it becomes truly ludicrous, as when writers gravely speak of 'sustainable growth in the rate of increase of economic activity'. Not only must we grow forever, we must accelerate forever! This is hollow political verbiage, totally disconnected from logical and physical first principles.

Sustainable development must be development without growth – but with population control and wealth redistribution – if it is to be a serious attack on poverty.

Alleviating poverty, not angelizing GNP

The important question is the one that the Brundtland Commission leads up to, but does not really face: How far can we alleviate poverty by development without growth? I suspect that the answer will be a significant amount, but less than half. One reason for this belief is that if the five to tenfold expansion is really going to be for the sake of the poor, then it will have to consist of things needed by the poor – food, clothing, shelter – not information services. Basic goods have an irreducible physical dimension and their expansion will require growth rather than development, although development via improved efficiency will help. In other words, the reduction in resource content per dollar of GNP observed in some rich countries in recent years cannot be heralded as severing the link between economic expansion and the environment, as some have claimed. Angelized GNP will not feed the poor.

Sustainable development must be development without growth – but with population control and wealth redistribution – if it is to be a serious attack on poverty. In the minds of many people, growth has become synonymous with increase in wealth. They say that we must have growth to be rich enough to afford the cost of cleaning up and curing poverty. That all problems are easier to solve if we are richer is not in dispute. What is at issue is whether growth at the present margin really makes us richer. There is evidence that in the US it now makes us poorer by increasing costs faster than it increases benefits (Daly and Cobb, 1989, appendix). In other words we appear to have grown beyond the optimal scale.

Defining the optimal scale

The concept of an optimal scale of the aggregate economy relative to the ecosystem is totally absent from current macroeconomic theory. The aggregate economy is assumed to grow forever. Microeconomics, which is almost entirely devoted to establishing the optimal scale of each micro-level activity by equating costs and benefits at the margin, has neglected to

inquire if there is not also an optimal scale for the aggregate of all micro activities. A given scale (the product of population times per capita resource use) constitutes a given throughput of resources and thus a given load on the environment, and can consist of many people each consuming little, or fewer people each consuming correspondingly more.

An economy in sustainable development adapts and improves in knowledge, organization, technical efficiency, and wisdom; and it does this without assimilating or accreting, beyond some point, an ever greater percentage of the matter-energy of the ecosystem into itself, but rather stops at a scale at which the remaining ecosystem (the environment) can continue to function and renew itself year after year. The non-growing economy is not static – it is being continually maintained and renewed as environment.

What policies are implied by the goal of sustainable development, as here defined? Both optimists and pessimists should be able to agree on the following policy for the US (sustainable development should begin with the industrialized countries). Strive to hold throughput constant at present levels (or reduced truly sustainable levels) by taxing resource extraction, especially energy, very heavily. Seek to raise most public revenue from such resource severance taxes, and compensate (achieve revenue neutrality) by reducing the income tax, especially on the lower end of the income distribution, perhaps even financing a negative income tax at the very low end. Optimists who believe that resource efficiency can increase by a factor of ten should welcome this policy, which raises resource prices considerably and would give powerful incentive to just those technological advances in which they have so much faith. Pessimists who lack that technological faith will nevertheless be happy to see restrictions placed on the size of the already unsustainable throughput. The pessimists are protected against their worst fears; the optimists are encouraged to pursue their fondest dreams. If the pessimists are proven wrong and the enormous increase in efficiency actually happens, then they cannot complain. They got what they most wanted, plus an unexpected bonus. The optimists, for their part, can hardly object to a policy that not only allows but gives a strong incentive to the very technical progress on which their optimism is based. If they are proved wrong at least they should be glad that the throughput-induced rate of environmental destruction has been slowed. Also severance taxes are harder to avoid than income taxes and do not reduce incentives to work.

At the project level there are some additional policy guidelines for sustainable development. Renewable resources should be exploited in a manner such that harvesting rates do not exceed regeneration rates and waste emissions do not exceed the renewable assimilative capacity of the local environment.

Balancing non-renewable and renewable resources

Non-renewable resources should be depleted at a rate equal to the rate of creation of renewable substitutes. Projects based on exploitation of non-

Non-renewable resources should be depleted at a rate equal to the rate of creation of renewable substitutes.

renewable resources should be paired with projects that develop renewable substitutes. The net rents from the non-renewable extraction should be separated into an income component and a capital liquidation component. The capital component would be invested each year in building up a renewable substitute. The separation is made such that by the time the non-renewable is exhausted, the substitute renewable asset will have been built up by investment and natural growth to the point where its sustainable yield is equal to the income component. The income component will have thereby become perpetual, thus justifying the name 'income', which is by definition the maximum available for consumption while maintaining capital intact. It has been shown (El Serafy, 1989, pp. 10-18) how this division of rents into capital and income depends upon: (1) the discount rate (rate of growth of the renewable substitute); and (2) the life expectancy of the non-renewable resource (reserves divided by annual depletion). The faster the biological growth of the renewable substitute and the longer the life expectancy of the non-renewable, the greater will be the income component and the less the capital set-aside. 'Substitute' here should be interpreted broadly to include any systemic adaptation that allows the economy to adjust the depletion of the non-renewable resource in a way that maintains future income at a given level (e.g. recycling in the case of minerals). Rates of return for the paired projects should be calculated on the basis of their income component only.

However, before these operational steps toward sustainable development can get a fair hearing, we must first take the conceptual and political step of abandoning the thought-stopping slogan of 'sustainable growth'.

Note

[1] Consider the following back-of-the-envelope calculation, based on the crude estimate that the US currently uses 1/3 of annual world resource flows (derived from National Commission on Materials Policy, 1973). Let R be current world resource consumption. Then R/3 is current US resource consumption, and R/3 divided by 250 million is present per capita US resource consumption. Current world per capita resource consumption would be R divided by 5.3 billion. For future world per capita resource consumption to equal present US per capita consumption, assuming constant population, R must increase by some multiple, call it M. Then M times R divided by 5.3 billion must equal R/3 divided by 250 million. Solving for M gives 7. World resource flows must increase sevenfold if all people are to consume resources at the present US average. But even the sevenfold increase is a gross underestimate of the increase in environmental impact, for two reasons. First, because the calculation is in terms of current flows only with no allowance for the increase in accumulated stocks of capital goods necessary to process and transform the greater flow of resources into final products. Some notion of the magnitude of the extra stocks needed comes from Harrison Brown's estimate that the "standing crop" of industrial metals already embodied in the existing stock of artefacts in the ten richest nations would require more than 60 years' production of these metals at 1970 rates. Second, because the sevenfold increase of net usable minerals and energy will require a much greater increase in gross resource flows, since we must mine ever less accessible deposits and lower grade ores. It is the gross flow that provokes environmental impact.

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Ross Jackson, PhD, economist and long time critic of neo-liberal thinking, critiques the main components of the global economic system and highlights how these could be changed to protect the environment, while serving people's needs.

Shifting the Global Economy

Ross Jackson

The 2007-2009 world economic crisis has been characterized by some mainstream observers as the final death throes of the neo-liberal economic model introduced by Ronald Reagan and Margaret Thatcher in the 1980s. The list even includes Francis Fukuyama who famously, and perhaps a little too hastily, proclaimed 'the end of history' less than 20 years ago, referring to the neo-liberal free market model as the final one for the rest of time, as nothing better was possible. (The only alternative he considered was the hopeless central planning model of the Soviet Union.)[1] Many are the calls now, primarily from the ordinary people who are suffering from the collapse, for a 'third alternative', a 'new economic order' or a 'new Bretton Woods' agreement.

In the following I will outline some of the major components that would be desirable in shifting the global economy towards a new economic world order that is not only efficient, but protective of the environment and social structures.

Capita movement

One of the foundation stones of the current system, which contributes to its instability, is the free flow of capital across borders. The reason why this is so important to the neo-liberals is that they want to be able to get their money out of a country fast when necessary so it can be invested elsewhere at a higher short term return. The problem is that the amounts involved are huge, while the markets where they operate are relatively small. These small, illiquid equity and currency markets cannot withstand the selling pressure in a liquidity crisis, and simply collapse. Several markets (for example the Russian) had to suspend operations temporarily for this very reason in the autumn of 2008. We saw a collapse of several Asian currency and stock markets in the late 1990s for the same reason. There should have been reforms on capital flows at that time, but there was successful resistance to

any change by the neo-liberal promoters and their extended arm – the IMF.

Critics have pointed out that there is absolutely no reason, neither empirically nor theoretically, why unrestricted capital flow, which was not widespread before the 1980s, should benefit anyone other than speculators. Former chief economist of the World Bank, Joseph Stiglitz, wrote in support of this viewpoint that as regards 'capital liberalization, there was scant evidence in support and a massive amount of evidence against'[2] and 'no evidence showing it spurs economic growth'.[3] Furthermore, IMF Article VI explicitly authorizes member countries 'to exercise such controls as are necessary to regulate international capital movements'.

It is a cruel myth that capital controls impede international trade. In fact, trade grew faster in the period 1945-1980, when such controls were the norm, than in the free market neo-liberal period after 1980.

Free trade and protectionism

'Free trade' is euphemistic shorthand for a particular economic strategy that allows the strong to exploit the weak, as opposed to protectionism, which protects the weak from the strong. A more descriptive term than 'free trade' would be 'forced trade', no country can keep out unwanted foreign products under a free trade regime, as they could prior to the formation of the World Trade Organisation (WTO) in 1995.

No country ever became industrialized following a free trade policy. On the contrary, every single existing industrial state used protection of its fledgling industries to get where it is today. There are no exceptions to this rule. China is the latest example. Furthermore, today's strongest economies, in particular the USA and the EU, continue to follow protectionist policies when it suits them, while preaching free market ideology to the developing countries – the height of hypocrisy. For example, President Bush introduced tariffs on steel imports in 2003 to protect the inefficient US steel industry, in flagrant disregard of WTO rules.

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A great myth promoted by the neo-liberals is that protectionism impedes growth. Economic historian Paul Bairoch wrote of this claim, 'It is difficult to find another case where the facts so contradict a dominant theory'.[4] One must admit that the neo-liberals have been brilliant in getting their fabricated historical view accepted by so many people. Control of the media certainly helps.

The key to any reform is to understand that there are different kinds of protectionism. Some are negative (e.g. protection of inefficient exploitative local monopolies), but most are actually positive (e.g. protection of the environment and other self-defined national security interests, such as food security). The problem with the WTO rules is that they forbid all kinds of protectionism. The entirely predictable result is the raping of the environment as corporations devour the planet's natural capital and call it 'growth'. Under the WTO rules, no member country dares protect its environment

by requiring that its industry use more environmentally friendly production methods, because their industries would become uncompetitive, while they would not be allowed to put tariffs on foreign products that have lower environmental standards.

Several independent studies have documented that the free trade regime of the past quarter century has had two major effects (1) increased the gap between rich and poor (2) accelerated destruction of the environment.[5] A continuation of current policies will inevitably lead to a new future crisis when these income differences become unbearable, or when the ecosystem collapses from overload.

Sovereign states need to take back control of their economies from foreign corporations, and a new global regime of trade and global governance that is protective of the environment and human social needs must be established.

Protection of the environment

To tackle the problem of environmental protection we must introduce mechanisms that will give the incentive to private corporations to protect the environment rather than to destroy it. Reforms of this nature go to the very heart of the problem with the global economy, and will undoubtedly meet strong resistance from the most powerful economies. What we need is nothing less than a new international trade regime to replace the WTO. But how can this be achieved? The USA and EU are certainly not willing to take the lead. Not even the major developing countries are ready for it.

There is, however, another possibility – a group of visionary, smaller nations who are willing to take on a leadership role at this time. They should get together and formulate a new and just template for international trade and global governance that would work for the entire global community, a model that would allow a wide degree of corporate freedom to innovate, but within a framework that is protective of the environment and recognizes the right of individual nations to take back control of their economies and define their own political priorities.

Such a global template must include the introduction of environmental costs into product prices, for example by putting a cost on permission to burn fossil fuels.[6] Nation states must be allowed to place tariffs on imports that do not live up to their environmental standards. Sovereign states, rather than foreign corporations, should determine what products are allowed into their local stores. Every country should actively exercise its IMF Article VI rights and reinstate capital controls on investment flows over a specified minimum, individual for each country. The reforms must also include the formation of new institutions of global governance with a mandate to protect the interests of the whole rather than that of individual states.

This template is not about unregulated capitalism nor central planning, but a third alternative that allows private corporations a maximum of freedom to innovate, within a global framework that is protective of the environment and social structures; a framework that cherishes cultural diversity and the principle that each country has the right to determine its own economic and cultural policies without outside interference.

The pioneers who put forth this new vision should be prepared to break away from the WTO and form a new trade organisation, and invite other nations to join when they are ready – not immediately, because they are not ready for it, but perhaps after the next crisis, which is not far off.

Conclusion

The 25-year experiment with free trade, unrestricted capital flows and deregulation has benefited only the already wealthy and created an unacceptable level of financial instability that will continue until reforms are implemented which reverse the foundation stones of free market ideology. We need greater regulation of the corporate sector. We need capital controls on investment flows. Sovereign states need to take back control of their economies from foreign corporations, and a new global regime of trade and global governance that is protective of the environment and human social needs must be established.

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Helena Norberg-Hodge is a leading analyst of the impact of the global economy on culture and agriculture worldwide and a pioneer of the localisation movement. In this piece, she outlines the essential steps in shifting from economic globalisation to economic localisation, along with the social, ecological and economic benefits this would bring.

Shifting Direction

Helena Norberg-Hodge

Today, every economy in the world is being induced to enlist in a single, highly-centralised economy, one which depends on vast homogenised markets and ever-increasing trade. Although the globalisation of this economic model is exacerbating a wide range of social, economic, and environmental problems, governments continue to subsidise the global economy's physical infrastructure, and to rewrite trade treaties, laws and regulations to facilitate its spread.

A number of concrete steps would allow support to be shifted from the globalising model, toward 'localisation'. Such steps would set us on the road to economic and environmental health, stem the unhealthy tide of urbanisation, and support cultural diversity; thereby lessening ethnic conflict and violence. Shifting towards the local would be far less costly to taxpayers than our current globalising path, and would be less socially and environmentally disruptive.

Already, many individuals and organisations are working from the grassroots to strengthen their communities and local economies, creating many of the positive 'micro-trends' mentioned earlier. Yet for these efforts to succeed, they need to be accompanied by policy changes at the national and international level. How, for example, can participatory democracy be strengthened if corporations are allowed to direct government policy and manipulate public opinion? How can small farmers and locally owned shops flourish if governments continue to champion 'free trade' and subsidise global corporations? How can cultural diversity be nurtured if monocultural media images continue to bombard children in every corner of the planet? How can small-scale renewable energy projects compete against massive subsidies for huge dams and nuclear power plants?

Clearly, local initiatives must go hand in hand with policy changes if the globalisation process is to be reversed. Rather than just thinking in terms of isolated, scattered grassroots efforts, it is necessary to encourage government policies that would promote small scale on a large scale, allowing space for more community-based economies to flourish and spread.

Policy shifts

Changing the direction of the economy means rethinking global economic and financial policies. It means looking at trade agreements, public expenditures, regulatory reform, and development policies. Here are some examples:

- *Transport.* The money currently spent on long-distance ground transport alone offers an idea of how heavily subsidised the global economy is. The UK government plans on spending £1 billion next year on improving transport infrastructure, mainly around airports and long-distance rail networks. US president Barack Obama has pledged the largest investment in improving road networks in the last fifty years. Rather than expanding trade-based transport networks, a portion of these funds could instead go towards a range of transport options that favour smaller, more local enterprises. This shift would bring enormous benefits – from the creation of jobs, to a healthier environment, to a more equitable distribution of resources. Depending on the local situation, transport money could be spent on building bike paths, footpaths, boat and rail service, and where appropriate, paths for animal transport.
- *Markets and public spaces.* High-speed motorways built with government funds (or through public and private 'partnerships') inherently promote the growth of corporate 'super-stores', 'hyper-markets', and sprawling shopping malls. Spending some of that money instead to build or improve spaces for public markets – such as those that were once found in virtually every European town and village – would enable local merchants and artisans with limited capital to sell their wares. This would enliven town centres while reducing car use, fossil fuel burning and pollution. Similarly, support for farmers' markets would help to revitalise both the cities and the agricultural economy of the surrounding regions, while reducing the resources spent to process, package, and transport food. Creating and improving spaces for public meetings – from town halls to village squares – would encourage face-to-face exchanges between decision-makers and the public, serving both to invigorate communities and to strengthen participatory democracy.
- *Energy.* From nuclear power stations to big dams, large-scale centralised energy projects are heavily subsidised, and their environmental costs largely ignored. Phasing out these multi-billion dollar investments while offering real support for locally available renewable energy supplies would result in lower pollution levels, reduced greenhouse gas emissions, and less dependence on dwindling petroleum supplies and dangerous nuclear technologies. These decentralised energy sources would also help to keep money from 'leaking' out of local economies.

  In the South, large-scale energy plants are geared towards the needs of urban areas and export-oriented production – thus promoting both urbanisation and globalisation. Supporting decentralised renewable energy infrastructures instead would strengthen villages, smaller

Rather than just thinking in terms of isolated, scattered grassroots efforts, it is necessary to encourage government policies that would promote small scale on a large scale, allowing space for more community-based economies to flourish and spread.

towns and rural economies in general, and thereby help halt the urbanising process.

- *Agriculture.* Farm subsidies in most countries today heavily favour large-scale industrial agribusinesses. In Europe, for example, only 1.3% of the €635 billion spent in 2003 in direct subsidies for agriculture were used to support organic farming practices, even though 3.9% of the total agricultural area was under organic cultivation. It is not only direct payments to farmers that are biased towards large-scale agriculture: funding for agricultural research is heavily skewed in favour of biotechnology, and chemical and energy-intensive monoculture. Shifting these expenditures towards those that encourage smaller-scale, diversified agriculture would help revitalise rural economies in both North and South, while promoting biodiversity, healthier soils, food security, balanced and diverse diets, and fresher food.

  In countries of the South, colonialism, development and globalisation have meant that the best land is devoted to crops for Northern markets. Shifting the emphasis to diversified, low-input production for local consumption would not only improve economic stability, it would also reduce the gap between rich and poor, while eliminating much of the hunger that is now so endemic in the 'developing' parts of the world.

- *Global media.* Television and other centralised mass media have been the recipients of massive subsidies in the form of research and development, infrastructure development, educational training, and other direct and indirect support. Now even national broadcasting companies are threatened with takeover by global media empires. These conglomerates are rapidly homogenising diverse traditions around the world. Supporting facilities for regional entertainment – from music and drama to dances and festivals – would offer a healthy alternative. Communities and nations should have the right to restrict the bombardment of their children by violent and commercial media images.

- *Education.* Schooling is being increasingly geared towards the needs of corporations, which are presumed to be the future employers of today's children. Curricula are ever more standardised and technology-focused. Shifting course so as to provide training in regional agriculture, architecture and appropriate technology would further a real decentralisation of production for basic needs. Rather than encouraging specialisation for a competitive, 'jobless growth' economy, children would be educated for diverse environments, cultures and economic systems. This does not imply that the flow of information from other cultures would be curtailed; in fact cultural exchange would be an important part of education.

  In much of the South, formal education continues to be based on the Colonial model – with rote-learning in the language of the colonial power, with cultural, historical and other information coming from abroad, and with training in skills relevant to the export economy rather than the local or regional economy. In most countries, this

Supporting decentralised renewable energy infrastructures would strengthen villages, smaller towns and rural economies in general, and thereby help halt the urbanising process.

Rather than encouraging specialisation for a competitive, 'jobless growth' economy, children would be educated for diverse environments, cultures and economic systems.

form of education filters out any information from around the world about widespread social and economic problems, leaving idealised myths about 'development' and western urban life intact. The South would benefit enormously from a shift away from this monocultural model towards diverse forms of education that are related to living and working in specific environments and cultures.

- *Healthcare.* At present, investments in healthcare favour huge, centralised hospitals serving urban populations. The inevitable pressure to cut costs means that doctors and nurses have to serve more and more patients, inevitably eroding the quality of attention given to each patient. Spending the same money instead on a greater number of smaller local clinics – relying less on high technology and more on health practitioners, local health education and preventative medicine – would bring healthcare to more people while boosting local economies.

  In the South, local economies and communities would similarly benefit if support for capital – and energy-intensive, centralised healthcare based on a Western model – were shifted towards more localised and indigenous alternatives that are affordable to the majority of the population.

Regulatory reforms

In addition to the many direct and indirect subsidies given to them, large-scale, globally oriented businesses also benefit from a range of government regulations – and in many cases, a lack of regulations – at the expense of smaller, more localised enterprises. Among the areas that need to be examined are:

- *Trade treaties.* 'Free trade' policies are leading to greater power and freedom for corporations, while leaving national and local economies ever more vulnerable and constrained. Instead, a careful and, ideally, internationally agreed policy of using trade tariffs to regulate the import of goods that could be produced locally would be in the best interests of the majority. Such 'protectionism' is not targeted against fellow citizens in other countries; rather, it is a way of safeguarding jobs and defending local resources worldwide against the excessive power of transnational corporations.
- *Capital flows.* The unregulated flow of capital has been a prerequisite for the rapid growth of transnational corporations. The ease with which they can shift profits, operating costs and investment capital to and from all of their far-flung enterprises enables them to operate anywhere in the world, and even to hold sovereign nations hostage by threatening to leave and take their jobs with them. As a consequence, they can obtain subsidies denied to smaller companies. Limiting the free flow of capital would help to reduce the advantage that huge corporations have over

smaller, more local enterprises, and help to make corporations more accountable to the places where they operate.

- *Yardsticks of economic health.* Decision-makers often point to rising levels of Gross Domestic Product (GDP) as proof that their policies are successful. What they fail to acknowledge is that GDP is woefully inadequate as a measure of societal well-being. GDP is simply a gross measure of market activity, of money changing hands. It does not distinguish between the desirable and the undesirable, between costs and gain. Increased expenditures on cancer, crime, car accidents, or oil spills all lead to rising GDP, but any reasonable assessment would count these as symptoms of societal ill-health, rather than well-being.

  What's more, GDP considers only the portion of economic activity that involves monetary transactions, thereby leaving out the functions of family, community, and the environment. Thus, paying to send one's children to a day-care centre adds to GDP, while care at home by members of the family does not. Similarly, a forest cut down and turned into pulp adds to GDP, but a standing forest – crucial to the health of the biosphere – does not. As a result, policymakers who rely on GDP can easily support policies that do irreparable harm.

- *Tax systems.* In almost every country, tax regulations systematically discriminate against small and medium-scale businesses. Smaller-scale production is usually more labour-intensive, and heavy taxes are levied on labour through income taxes, social welfare taxes, value-added taxes, payroll taxes, etc. Meanwhile, tax breaks (accelerated depreciation, investment allowances and tax credits, etc.) are afforded the capital, and energy-intensive technologies, used by large corporate producers. Reversing this bias in the tax system would not only help local economies, but would create more jobs by favouring people instead of machines. Similarly, taxes on the energy used in production would encourage businesses that are less dependent on high levels of technological input – which again means smaller, more labour-intensive enterprises. And if fossil fuels were taxed so that their price reflected real costs – including some measure of the environmental damage their consumption causes – there would be a reduction in transport, an increase in regional production for local consumption, and a healthy diversification of the economy.

- *Banking policies.* Small businesses are also discriminated against through the lending policies of banks, which charge them significantly higher interest rates for loans than they charge big firms. They also often require that small business owners personally guarantee their loans – a guarantee not sought from the directors of large businesses.

- *Land use regulations.* Local and regional land use rules could be amended to protect wild areas, open space and farmland from

An unfair burden often falls on small-scale enterprises through regulations aimed at problems caused by large-scale production.

development. Political and financial support could be given to the various forms of land trusts that have been designed for this purpose. In some cases, local governments have used public money to buy the development rights to farmland, thereby simultaneously protecting the land from suburban sprawl while reducing the financial pressure on farmers. Studies have also shown that developed land costs local governments significantly more in services than the extra tax revenues generated – meaning that when land is developed, taxpayers not only lose the benefits of open space, they lose money as well.

In urban areas, zoning regulations usually segregate residential, business and manufacturing areas – a restriction necessitated by the needs and hazards of large-scale production and marketing. These could be changed to enable an integration of homes, small shops and small-scale production. A rethinking of restrictions on community-based ways of living would also be beneficial: zoning and other regulations aimed at limiting high-density developments often end up prohibiting environmentally sound living arrangements like co-housing and eco-villages.

- *Health and safety regulations.* An unfair burden often falls on small-scale enterprises through regulations aimed at problems caused by large-scale production. Battery-style chicken farms, for example, clearly need significant environmental and health regulations. The millions of closely confined animals are highly prone to disease, the tons of concentrated effluent need to be safely disposed of, and the long-distance transport of poultry entails the risk of spoilage. Yet a small producer – such as a farmer with a dozen free-range chickens – is subject to essentially the same regulations, often raising costs to levels that can make it impossible for them to remain in business. Large-scale producers can spread the cost of compliance over a far greater volume, making it appear that they enjoy 'economies of scale' over smaller producers. Such discriminatory regulations are widespread, and are decimating farm-based cheese production in Europe, and small-scale apple cider production in America, to name just a couple.

  One solution to this dilemma is a two-tier system of regulations: stricter controls on large-scale producers and marketers, with strong safeguards against the 'revolving door' between regulatory agencies and Big Business; and a simpler set of locally determined regulations for small-scale localised enterprises. Such a system would acknowledge that communities deserve the right to monitor foods that are produced locally for local consumption, and that such enterprises involve far fewer processes likely to damage human health or the environment.

  These highly localised community regulations would co-exist with national and international regulations for goods produced in one region and sold in another. Small-scale businesses oriented towards local markets would not be burdened by inappropriate regulations, but

people and the environment would still be protected from the excesses of large-scale enterprises.

Economic indicators

GDP (Gross Domestic Product) was first introduced as a measure of economic health around World War Two. Since then it has been taken on by every country in the world. Its primary purpose is to provide an easily quantifiable assessment of economic growth by measuring output and income. The result is that the more goods and services are bought and sold (the more money changes hands) the higher GDP rises. Today, economists and politicians rely on GDP as an indicator of 'progress', and increased growth is deemed essential for societal welfare. However, when we examine the impact of increased growth, as measured by GDP, we find that the opposite is true. An increase in GDP is linked to social and environmental breakdown!

Despite what we've been taught about 'supply and demand' or 'natural scarcity', prices in the marketplace today are the product of political choices. Policymakers look to GDP to validate these choices, assuming that the rate at which GDP rises is a valid measure of the health of society and the economy. It is anything but that. When tap water is so polluted that we must buy our drinking water in plastic bottles, GDP increases. GDP also grows when we pump oil out of the ground and burn it, as though we could do this indefinitely. It increases when we cut down an old-growth forest and turn it into bathroom tissue, as though the services provided by forest ecosystems – including fresh air, water and a stable climate – were unimportant. When more people are sick and need pharmaceutical drugs and hospital care, GDP goes up. If pollution decreases and people are healthy in body and mind, GDP goes down. In other words, the more pollution, illness, and breakdown there is in society, the more the economy 'grows' and the better off we're assumed to be.

Growth is normally considered a good thing; it is associated with life itself. But economic growth is quite different. It is actually undermining the conditions necessary for life on the planet at a frightening speed. The process of extraction, production and disposal that contribute to economic growth take an enormous toll on the environment. On a planet of finite resources we can only extract and produce so much before all non-renewable resources are exhausted. 'Sustainable economic growth' has been much touted as the compromise between protecting the environment while carrying on growing the economy. Of course, sustainable growth is not only a contradiction in terms, but it is dangerously misleading.

In part because of faulty economic yardsticks, such as GDP, we continue depleting the planet with the belief that we will all be better off in the long-run. A fall in GDP, even a minor one, is often cause for concern. For example, in the UK, GDP fell by 1.5% in the fourth quarter of 2008. This

was attributed to a weaker output in services and production. Industries that had reduced their output, and therefore were partly responsible for the drop in GDP, included mining and quarrying, electricity, gas and water, and transport and storage. Just as crazy is the fact that governments worldwide are alarmed by a drop in consumer spending. Actually, through subsidies, taxes and regulations, they encourage ever increased consumerism.

If societal values change and people turn towards more meaningful activities than shopping, GDP goes down. From a conventional economic standpoint, this picture looks dreary. Yet, by any real world standard, a decrease in consumerism, mining, transport, electricity and water use is a promising sign. It shows a promising reduction in the wanton use of resources and destruction of the natural landscape. Just as importantly, a drop in consumer spending would actually be a sign of an increase in human well-being.

We need an entirely new approach that emphasizes societal and environmental wellbeing. That would mean subtracting more beds in a hospital, more money spent on cleaning up pollution and more prescriptions for depression from our balance sheets. It would also mean assessing healthy, intact ecosystems, decreases in crime and non-income generating work (like caring for one's children) for the contribution they make to the overall wellbeing of society. Perhaps, more than anything else, we need common sense and an open debate about what actually lies behind the myths surrounding GDP.

There are a number of attempts to develop alternative indicators. The Genuine Progress Indicator (GPI), created in the 1990s by a California-based organization called Redefining Progress, aims to quantify the impact a country's economic growth has on the welfare of the people of that nation. This work is also carried out at GPI Atlantic in Canada. There is also the recently introduced Happy Planet Index (HPI), formulated by the New Economics Foundation. Such metrics seek to properly acknowledge the many services provided by healthy ecosystems and subtract the expenditures we make in response to breakdown – prison construction, cancer treatment, antidepressant drugs, and so on.

An international movement is seeking to develop indicators based on an idea of the former King of Bhutan, who proposed 'Gross National Happiness' (GNH) rather than GDP as a true measure of economic and social well-being. Adopting GNH as a standard would provide a very different picture of the global order. In a survey of more than sixty-five countries conducted from 1999 to 2001, Nigeria turned out to have the highest percentage of people who considered themselves happy. Britain ranked twenty-fourth on this scale, despite boasting a GDP more than twenty-two times higher than that of Nigeria. A recent BBC poll found that 81% of people surveyed think the government should focus on making them happier rather than wealthier.

The process of extraction, production and disposal that contribute to economic growth take an enormous toll on the environment.

At the moment, GDP is a central part of a system that is pushing people and the planet in a disastrous direction. We need economic literacy and economic activism to shift direction. If the multitude of social and

environmental movements wake up to the need to link hands to address this common agenda, sufficient pressure can be exerted to bring about meaningful change. With more awareness, people will insist on indicators and systems that support them, their children and the natural world.

Grassroots initiatives

In addition to these policy and regulatory shifts, we need countless more small, diverse, local initiatives of the kind that are already emerging: buy local campaigns, community banks, local food initiatives such as farmer's markets and community supported agriculture, Ecovillages and other intentional communities, eco-building, natural health care, etc.

Unlike actions to halt the global economic steamroller, these small-scale steps require a slow pace and a deep, intimate understanding of local contexts, and are best designed and implemented by local people themselves. If supported by the policy changes discussed above, such initiatives will, over time, inevitably foster a return to cultural and biological diversity and long-term sustainability.

Economic localisation means an adaptation to cultural and biological diversity; therefore, no single 'blueprint' is appropriate everywhere. The range of possibilities for local grassroots effort is as diverse as the locales in which they would take place.

Personal shifts

The economic changes discussed above must also be accompanied by shifts at the personal level. In part, these involve rediscovering the deep psychological benefits – the joy – of living in community. Another fundamental shift involves reinstalling a sense of connection with the place where we live. A sense of place means helping ourselves and our children to see the living environment around us: reconnecting with the sources of our food, perhaps even growing some of our own, and learning to appreciate the cycles of seasons and the characteristics of the flora and fauna. Ultimately, this involves a spiritual awakening that comes from making a connection with others, and with nature. It requires us to see the world within us – to experience more consciously the great interdependent web of life, of which we ourselves are part.

David Korten is the co-founder and board chair of YES! *magazine, founder of the People-Centred Development Forum, and widely read author of 'When Corporations Rule the World'. In this article he explains how, in the wake of the bailout, we can avoid future large-scale financial crises through re-regulating the global economy*

Beyond the Bailout: Agenda for a New Economy

David Korten

The financial crisis has put to rest the myths that our economic institutions are sound and that markets work best when deregulated. Our economic institutions have failed, not only financially, but also socially and environmentally. This, combined with the election of a new president with a mandate for change, creates an opportune moment to rethink and redesign.

US President Obama has promised to grow the economy from the bottom up. That would be a substantial improvement over growing the top at the expense of the bottom. The real need, however, is a bottom-up transformation of our economic values and institutions to align with the imperatives and opportunities of the 21st century. It involves a five part agenda: clean up Wall Street, play by market rules, self-finance the real economy, measure what we really want, and convert to debt-free money.

The recent market meltdown and the resulting bailout commitments of more than a trillion dollars have focused the nation's attention on the devastating consequences of Wall Street deregulation. This is but the tip of the iceberg of a failed economy in serious need of basic redesign.

Our economy is wildly out of balance with human needs and the natural environment. The result is disaster for both. Wages are falling in the face of soaring food and energy prices. Consumer debt and housing foreclosures are setting historic records. The middle class is shrinking. The unconscionable and growing worldwide gap between rich and poor with its related social alienation is producing social collapse, which in turn produces crime, terrorism, and genocide.

At the same time, excessive consumption is pushing Earth's ecosystem into collapse. Scientists are in almost universal agreement that human activity bears substantial responsibility for climate change and the related increase in droughts, floods, and wildfires. We face a monumental economic challenge that goes far beyond anything being discussed in the U.S. Congress. The hardships imposed by temporarily frozen credit markets pale by comparison.

The Wall Street bailout package that Congress passed in its moment of panic did nothing to address the structural cause of the credit freeze, let alone the structural cause of the economy's even more serious environmental and social failures. On the positive side, the financial crisis has put to rest the myths that our economic institutions are sound and that markets work best when deregulated. It creates an opportune moment for deep change.

Here are some essential steps toward a system redesign that can put us on the path to a just and sustainable economy that works for all.

The financial meltdown pulled away the curtain to reveal a corrupt system that runs on speculation, the stripping of corporate assets, predatory lending, and asset bubbles like the real estate and dot-com 'booms'.

Clean up Wall Street

The first item of business is to get the immediate crisis under control. Wall Street institutions have long claimed their trading activities create wealth, provide the funds that keep business moving, increase economic efficiency, and stabilize markets. The financial meltdown pulled away the curtain to reveal a corrupt system that runs on speculation, the stripping of corporate assets, predatory lending, and asset bubbles like the real estate and dot-com 'booms'.

If the people involved produce anything of value, it is purely incidental to their primary quest for speculative gains, which placed the entire global economy at risk and led to extortionate demands for taxpayer bailouts when their bets went bad. For these labours, the 50 highest-paid private investment fund managers in 2007 averaged $588 million in compensation – 19,000 times more than average worker pay.

We must hold Wall Street accountable, recover some of our losses from those responsible, and preclude a repetition of the credit collapse. The recommendations of the Institute for Policy Studies (IPS), a Washington D.C. think tank, are a good place to start. In *A Sensible Plan for Recovery*, IPS calls on Congress to make Wall Street pay for both the bailout and a true economic stimulus package. The plan recommends a securities transactions tax, a minimum corporate income tax, recovery of bonuses paid to Wall Street CEOs responsible for the crisis, an end to corporate tax havens, and an end to tax loopholes for CEO pay. IPS also calls for extensive federal regulation to limit speculation and assert real oversight over financial markets.

Implementing these recommendations will be an excellent start on limiting speculation, restoring a progressive tax system to achieve a more equitable distribution of economic power, and putting the more predatory Wall Street firms out of business.

Additional steps will be needed to break up concentrations of corporate power, beginning with Wall Street, and to hold the remaining banks accountable to the public interest. Treasury Secretary Henry Paulson's decision to buy a government equity stake in troubled banks is a positive step that may open the way to a deeper restructuring of the financial system.

The federal government should immediately reinstate the provisions of the Glass-Steagall Act prohibiting the merger of commercial and investment

banks, and force the break-up of financial conglomerates and any other Wall Street institutions that are too big to fail. As Senator Bernie Sanders has observed, "If a company is too big to fail, it is too big to exist."

Play by market rules

Once we extinguish the immediate fire, we can turn our attention to redesigning the potentially beneficial institutions of finance to align with the imperatives of sustainability and equity. Ironically, given the excesses committed by Wall Street in the name of market freedom, the economy we need to create looks remarkably like the market economy vision of Adam Smith, revered by many as the father of capitalism.

Smith envisioned a world of local market economies populated by small entrepreneurs, artisans, and family farmers with strong community roots engaged in producing and exchanging goods and services to meet the needs of themselves and their neighbours. His vision bears little resemblance to the Wall Street economy of footloose global capital, credit default swaps, reckless speculation, and global corporate empires.

As I elaborated in *When Corporations Rule the World* and *The Post-Corporate World: Life After Capitalism*, socially efficient market allocation depends on a number of important conditions that Wall Street and those economists devoted to the ideology of neoliberal market fundamentalism routinely ignore. These include:

- Market prices must internalize full social and environmental costs.
- Trade between nations must be in balance.
- Investment must be local.
- No player can be big enough to directly influence market price.
- Economic power must be equitably distributed.
- Every player must have complete information and there can be no trade secrets (read: no government-enforced intellectual property rights).

To avoid the distortion of unfair competitive practices, markets must be regulated to assure that these essential conditions are maintained. Think of them as basic principles for securing the healthy, just, and sustainable function of Main Street economies.

Self-finance the real economy

Far from serving the financial needs of Main Street, Wall Street treats Main Street like a colony to be managed for the benefit of its colonial master. In alliance with the Federal Reserve, Wall Street players have used a combination of control over the money supply, predatory lending practices, and

lobbying and campaign contributions to suppress wages, dismantle social safety nets, and capture the value of productivity gains for themselves. The top one percent of U.S. income earners increased their share of national cash income from nine percent to 19 percent between 1980 and 2005, according to Charles R. Morris in *The Trillion Dollar Meltdown*. Income for 90 percent of households fell relative to inflation, household savings rates dropped to less than one percent, and household debt soared as Main Street workers struggled to hold their lives together.

Creating a fair distribution of wealth by restoring progressive tax rates, increasing the minimum wage, containing health care costs, and regulating mortgage and credit card interest rates is an essential element of a post-bailout economic agenda.

Creating a fair distribution of wealth by restoring progressive tax rates, increasing the minimum wage, containing health care costs, and regulating mortgage and credit card interest rates is an essential element of a post-bailout economic agenda. This will help those at the bottom restore household savings and purchasing power, and, combined with the debt-free money system proposed below, eliminate Main Street dependence on Wall Street financing. The financial services needs of Main Street economies are best served by a federally regulated network of independent, locally owned community banks that fulfil the classic textbook banking function of acting as intermediaries between local people looking for a secure place for their savings, and local people who need loans to buy a home or finance a business. Evidence that people with savings are moving their accounts from the giant banks with questionable balance sheets to smaller local banks is a positive step.

Wall Street interests have also rigged the economic game to give a competitive advantage to mega-corporations over the local independent businesses that are the heart and soul of Main Street economies. The New Rules Project of the Institute for Local Self Reliance provides a wealth of recommendations for restoring a proper balance in favour of Main Street that also merits serious consideration.

Measure what we really want

The only legitimate function of an economic system is to serve life. At present, however, we assess economic performance solely against financial indicators (gross domestic product (GDP) and stock prices) while disregarding social and environmental consequences. We are now paying the price for years of managing the economy for financial performance, which translates into making money for people who have money – that is, making rich people richer. It was not a wise choice. We now bear the devastating costs of this foolishness in the form of massive social and environmental damage and financial instability.

This would be a good time to start evaluating economic performance against indicators of what we really want: healthy children, families, communities, and natural systems. This would place life values ahead of money values and dramatically reframe the public policy side of our economic decision-making. Happiness, by the way, is an important indicator of physical and psychological health.

We might well continue to track GDP, a measure of economic throughput, as a quite useful indicator of the economic cost of producing a given level of health and well-being. When we recognize that GDP represents cost, not gain, it becomes clear why making it grow is a mistake. A number of researchers have been pointing out that happiness, as well as other indicators of human, social, and environmental health, have been declining even as GDP increased, but their appeals have been largely ignored. We continue to manage our economies to maximize the cost, rather than the benefit, of economic activity. The shock of financial collapse creates an opportunity to draw attention to this substantial anomaly. We will know we have turned an important corner when business news reporters happily announce, "It has been a successful quarter. Happiness rose by two points and GDP is down by one point."

Convert to debt-free money

This brings us to the most important reform of all: changing the way we create money. One key to Wall Street's power and to the inherent instability of the financial system is the current practice of private banks creating money with a simple bookkeeping entry each time they make a loan. Because the bookkeeping entry creates only the principal, but not the interest, unless the economy grows fast enough to generate sufficient demand for loans (to create the new money required to make the interest payments on the previous loans), debts go into default and the financial system and the economy collapse. The demand for repayment with interest of nearly every dollar in circulation virtually assures the economy will fail unless GDP and inequality are constantly growing.

Leading economists and political figures, including Thomas Jefferson and Benjamin Franklin, have advocated replacing the system of bank-created debt-money with an alternative system in which the government creates debt-free money by spending it into existence to fund public goods like infrastructure or education. The suggestion that government creates money with the stroke of a pen sets off all sorts of alarm bells about runaway inflation. The primary change, however, would simply be that the entry is made by government for a public good rather than by a private bank for private profit. Ellen Hodgson Brown's *The Web of Debt* is an informative current review of issues and options.

Privately issued debt-money adds to debt and taxes and bears major responsibility for environmental destruction because it requires infinite growth, extreme inequality (because it assures an upward flow of wealth from Main Street to Wall Street), and economic instability (because issuing loans to fuel reckless speculation generates handsome short-term bank profits). Publicly issued debt-free money would greatly reduce debt, taxes, and environmental harm, be more equitable, and increase financial stability. In a democracy, it should be ours to choose.

This is an opportune moment to move forward an agenda to replace the failed money-serving institutions of our present economy with the institutions of a new economy dedicated to serving life. The idea that we humans might put life ahead of money may seem unrealistic and contrary to our human nature. Surely, that is what our prevailing cultural story would have us believe. That story, however, has no more validity than the story that Wall Street speculation serves a higher public purpose. As I noted in my article *We are Hard-Wired to Care and Connect* in the Fall 2008 issue of *YES!* scientists have found that the human brain is hard-wired for compassion and connection.

My many years living abroad in Africa, Latin America, and Asia taught me that people of every race, religion, and nationality the world over share a dream of a world of happy, healthy children, families, and communities living in vibrant, healthy, natural environments. When they see an opportunity, people are willing to make extraordinary investments of their life energy in an effort to actualize this dream, as regularly documented in the pages of *YES!* Liberated from the predatory grip of Wall Street, this long-suppressed energy has the potential to transform our relationships with one another and Earth, and to realize our shared dream of a world that works for all.

Excerpted from *YES!* magazine, Winter 2009.

David Fleming, PhD, is a British economist, who for many years worked as an independent consultant in environmental policy and business strategy for the financial services industry. Here, he gives some illuminating and unexpected insights into the post-peak-oil world that is looming on the horizon, and explains why re-localising is an economic, as well as ecological, necessity.

Adapting to the Lean Economy

David Fleming

Getting used to the idea of the oil peak was the easy part. The hard part, starting now, is facing up to how big this thing is going to be. It will mean deep and lengthening energy shocks affecting (first) oil and (later) gas and the electricity grid. It will probably be part of a package of trouble: climate, water, food shortages and destabilised populations. We will come to regret the delay and denial which has stolen the fifty years we should have had to get ready. We will be in trouble.And yet this could also be the moment when we start to build a political economy which will persist far into the future, in a world in which the short-lived special case of the market economy, with its ludicrous dependence on fossil energy and sustained economic growth, becomes an embarrassing memory. There is a way of achieving permanence, of integrating human ecology into the ecology of the rest of the planet. The principle that lies at the heart of that is scale.

The right size

There is a way of achieving permanence, of integrating human ecology into the ecology of the rest of the planet. The principle that lies at the heart of that is scale.

The biologist J. B. S. Haldane published a famous essay in 1927 with the title, 'On Being the Right Size'. He showed that the structure and metabolism of systems is governed by their size. He pointed out the connection between two properties of systems which you might not think would necessarily go together: how large an organism is, and how complicated it is. With each advance in size, there has to be a corresponding increase in complication. Why so?

Well there are lots of reasons, but the main one is that large organisms have a small surface area relative to their size, and that makes it difficult for them to absorb food and water. Unlike (for instance) ants, larger animals can't breathe through their skin, so they have to invent ingenious devices such as lungs, and intestines lined with velvety textures presenting the huge surface area needed to absorb food. 'Comparative anatomy', he summarises, 'is largely the story of the struggle to increase surface in proportion to volume... The higher animals are not larger than the lower because they are more complicated. They are more complicated because they are larger'.

Regrettable necessities

What, then, does 'complication' mean in the case of our political economy and way of life? Well, it refers to something which, to adapt a term used in mainstream economics, is called the 'intermediate economy' also known as 'regrettable necessities', that is, things which are necessary, given the size and structure that we happen to have at the moment, but regrettable in that we don't actually get any pleasure from them: If a way could be found of getting along without them, we would be better off. (Economists talk about both 'intermediate' and 'defensive' expenditure in senses related to the one intended here.) The most obvious example of a regrettable necessity is the transport of goods: transport is a necessity, given the way we organise things at the moment, but there is nothing in the actual process of transport which adds to the quality of the goods or to the flavour of the food. Our hearts do not leap with delight at the sight of articulated trucks; we just put up with them. Transport is in this sense a regrettable necessity. Other examples are:

- *Travel (by people)*
  A necessity because the place we live in is, economically, socially and culturally, capable of providing few of the facilities we want and need to live.

- *Police and Security Equipment*
  A necessity because local communities are not able to sustain their own law-and-order.

- *Bureaucracies*
  Required to administer a large political economy whose structure of self-regulating communities has broken down.

- *Social Security*
  Needed to meet the welfare needs of children and old people, for instance those who are neglected in a society in which communities and families are in trouble.

A necessary and unregrettable shift

Now, local communities will never be able to supply all their needs completely. There will still, as a fact of life, be a need for some transport and travel; there will always be some crime, some poverty, some local insufficiency in the supply of food which can be rectified only with outside help (if available); we will always need widely-shared institutions such as the law. The aim is not complete localisation, but to achieve an utterly revolutionary shift towards localisation.

On pottery

In fact, the market economy we live in is by no means the only civilisation which has had to build up a giant intermediate economy just to keep going. Every previous civic society has done the same. The Romans transported food and crockery from all over their empire, notably in an endless procession of ships across the Mediterranean from North Africa. There is no empire that has not felled the forests of the lands under its control and laboriously transported timber to the capital. And recent studies of ancient empires have shown, elegantly, some of the reasons why it was inevitable that they should do so.

For example, a budding empire that wanted to increase its wealth (or reduce its poverty, or generally to get itself off the floor) had a powerful incentive to develop specialisation of labour. Pottery is a case in point: if they needed a lot of pottery, and a lot of food and drink to put into it, they would do far better to build up separate professions of specialist potters and specialist farmers, rather than relying on farmers to make pots in their spare time. It is hard to argue with that. But, hang on – just try following through the implications: you get all the pots you need, but you get a whole lot of other things which you hadn't bargained for too (see box). Before you know where you are, you have built up a big civilisation with convoys of wagons trundling down the road, or fleets of cargo ships crossing the Mediterranean, or rivers of 40-tonne trucks bashing down motorways and all you really wanted was a few more pots. Progress comes encumbered with a vast and unintended storm of regrettable necessities.

Going Local – where to start

When the oil peak hits, it will be the intermediate economy that collapses. That sounds like good news, but in fact it will be terrible news for everyone except those who have already succeeded, or can quickly succeed, in building small-scale living systems in which the complication – the reliance on a massive intermediate economy – has been all but eliminated. That means going local, and here are some ways to make a start.

Create and maintain a network of like-minded people. Talk about the practical things you can do. Make a resolution each to do, say, one thing every week to prepare for the future. Set up your own private website to report on progress and discuss problems with every member writing down the one thing he or she has done each week. Learn some new skills, and develop the skills that you already have. Citizens of the Lean Economy will have practical skills, such as gardening, cooking, IT skills, building, sewing, woodwork, waste management and water management; they will also have social skills, including music, story-telling, dancing, and the whole range of things which create conviviality in people and families. If you can, go on to develop permaculture skills in more detail; the more experience you have, the better.

Prepare for the transition

The coming change will not come smoothly. There will be shocks during which (say) petrol is unobtainable and supermarket shelves are empty. The Government has issued advice (e.g. www.pfe.gov.uk) about what to do. It includes, for instance, the recommendation that households should have several days supply of food and bottled water. Some people I know have taken this very seriously, stocking up their cupboards with a minimum of five weeks supplies, from water purifiers to such 'essentials' as shower gel. Think about everything you may need; start adding a little bit extra to your regular shopping.

Get involved in politics in some way

It will be an advantage to have a local council which is, at least to some extent, aware of the changes that are on the way, and the need to prepare for them. Get up to speed about the kind of national political initiative you would like to see. For instance, a fair and effective system for rationing energy will be needed, such as Tradable Energy Quotas (www.teqs.net). Talk to your MP about setting up such a system before the oil shock hits, so that when it happens, a tried and tested system is in place. Make up your mind that your community – along with the like-minded communities around it – has to be a place of beauty. There needs to be art, music, architecture; beauty in clothes, courtesy in manners. There are lots of reasons for this. Without beauty, local community would become unbearably boring: there is a limit to the number of conversations you can have about solar panels without needing to get away. Good manners towards your environment are in the end the same thing as good manners towards each other, and you will need those if you are to be able to talk and think your way through the problems and decisions that lie ahead. There will need to be the deep co-operation and trust among you. This can occur among people who feel they belong, in a place that has been made beautiful and which you can love.

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Keep cheerful

Being depressed about the way things are going is self-perpetuating – it will simply make them worse. If you are seriously on the case (as above) it will do wonders for your confidence, and your optimism will encourage those around you to do the same. Decide to join together and make a future, locally.

Rob Hopkins is best known as the founder of the transition town movement that activates local citizen groups to take responsibility for their own future in a world threatened by peak oil and climate change. Here, he comments on David Fleming's proposal on how to reduce CO_2 emissions while engaging ordinary citizens.

Descending the Energy Staircase with Tradable Energy Quotas (TEQs)

Rob Hopkins

On the surface, the issues of climate change and peak oil call for very similar responses. They are, after all, about reducing the use of fossil fuels. However, there are differences, highlighted in the UK Government's announcement that it will begin a new programme of nuclear power plant building. On the face of it a good solution to climate change, it brings the UK's carbon emissions in line with international agreements and business-as-usual can continue. From a peak oil perspective however, it is no solution at all. Nuclear power plants take 20 years to come on stream, peak oil is estimated for sometime between now and 2010. Our transport based economy needs cheap oil, not nuclear power. Running the nations cars on hydrogen made from nuclear power would require 100 new nuclear power plants, not the ten that are proposed.

Thinking about both climate change and peak oil requires new thinking and new mechanisms. David Fleming's *Energy and the Common Purpose* is an excellent example of new thinking in response to a new problem. This economist has designed a mechanism for a 21st century rationing system which he calls Tradable Energy Quotas or TEQs, (pronounced 'tex'). TEQs take the concept of rationing and bring it up to date, combining modern technology and the need for drastic cuts in energy consumption.

Fleming's approach is well thought through and offers the clearest mechanism yet outlined. In brief, it is an electronic system for rationing energy. Every adult is allocated an equal number of units whereas the government and industry have to bid for theirs at a weekly tender. Everyone has a card, like a credit card, which must be produced every time energy is purchased. Your account is then debited accordingly. If you use more energy than your quota you can buy units from those who haven't used all of theirs. This all happens electronically, with the minimum of hassle. The number of units available is set out in a 20 year budget, which shows that every week they are slightly reduced, in keeping with the pre-agreed 20 years Energy Budget.

Colin Campbell of the Association for the Study of Peak Oil recently proposed what he calls the Oil Depletion Protocol (it can be read online at www.peakoil.ie). This would essentially be an international agreement by which oil exporting nations would agree to restrict their exports in line with an internationally agreed depletion rate. At the same time, oil importing nations (a club the UK recently joined) agree to gradually reduce their imports accordingly. The Protocol would seek to reduce profiteering among exporting nations, and also ensure that the poorer importing nations still have access to oil rather than being priced out of the market. Campbell's Protocol was recently presented at a conference of the international oil industry, but found itself sidelined and has yet to be ratified. It is similar in many ways to the Contraction and Convergence mechanism which aims to reduce climate change through inter-national agreement to cut carbon emissions, but which is better known and which seemingly has a higher chance of being ratified. In order to enable us to be in any kind of a position to withstand the imminent contractions in oil supply, we require a mechanism that achieves the necessary cuts in oil consumption needed for a steady contraction of the economy, and which also brings CO_2 emissions down to the 80% reduction required by 2050. Any mechanism that enables us to do this must be easily implementable, capable of being marketed as a positive step that isn't a hassle, and widely seen as fair.

Taxing a diminishing resource makes no sense at all. The alternative to a Carbon Tax is a rationing system.

The much touted Carbon Tax, while it may bring about the required reductions in CO_2 emissions, is a grossly blunt weapon with which to achieve it. It penalises the poor, while the wealthier are more able to continue their lifestyles unfettered. It is widely seen as unfair, and can generate a great deal of bad feeling towards both the mechanism and its objectives. Also, Carbon Taxes are only appropriate when oil supply is guaranteed. The time to tax something is when there is a lot of it about but you want to reduce demand.

Taxing a diminishing resource makes no sense at all. The alternative to a Carbon Tax is a rationing system. When rationing was last introduced in the UK, circumstances were very different, and so was society. People were more individualistic, less likely to endure what is seen as State 'interference', and, of course, we were faced with the imminent possibility of invasion. Fleming argues that for the first few years after the introduction of TEQs, people will hardly notice any difference. Indeed, for people living more efficiently it amounts to a rebate rewarding good practice. What TEQs do over the first few years is start to focus the mind – as Fleming writes, 'They call on each of us to be (at least) a little bit of an energy expert, a little bit of a visionary'.

If you run a small business, your TEQs can be counted as a business expense in the same way as other such expenses are at present. Again, it focuses the mind on how the business will need to adapt to what is a clearly laid out timetable of diminishing oil availability. As Fleming argues, TEQs 'concentrate the mind; they make planning ahead a necessary business skill; they make it second nature'.

One of the things that TEQs can do is create the basis for a collective motivation, a common purpose of living within an energy budget. Rationing

means that it is in individuals' interests to help others reduce their carbon dependency. It is an incentive for co-operation over competition. This is seen especially clearly in the possibilities for neighbours or communities to pool their TEQs into a local fund for energy conservation or renewable projects.

Fleming's book, *Energy and the Common Purpose*, is an excellent overview of the TEQ concept and its practical implications. It is short, so its 34 pages fit within most peoples' attention spans. It is clear and concise and it answers most of the questions you might have on the subject. This is an idea that is extremely well thought through and it could be rapidly implemented. It offers the promise of the Oil Depletion Protocol via a different avenue. It means that in the absence of an internationally binding agreement to begin to rein exports and imports within the curve of depleting resources, communities and local authorities can take these depletion rates as the benchmark against which to measure the success or otherwise of Energy Descent Action Plans (or whatever ground-up mechanism is designed to facilitate this transition). The Oil Depletion Protocol and our bottom up efforts can meet in the middle.

When the UK Government appears to have decided that the future is nuclear, and that our standard of living is non-negotiable, TEQs could well constitute the key for a national 'powerdown' process, if there was the political will to implement it. It would be a very skilful government that could get elected on the promise of offering a contracting economy – however if the will for living within the decline curve of the depletion protocol was demonstrated at the community level, it would appear more feasible to government.

Once again, this boils down to the essence of our work as permaculturists; that is showing by example, story, myth, lifestyle, speech, images, song, film or natural buildings, that life without oil can be a preferable place to where we are now. If I have one criticism of this book it is that Fleming doesn't really articulate how life could be at the end of this process. If you want someone to go on holiday with you, you don't tell them about how great the airports that you'll be passing through are, and about the in-flight magazines, you tell them what a lovely place it is that you are going to and what a great time you'll have when you get there. This book offers an excellent, workable and common sense mechanism for making this transition smoother, but what might life look like when we reach the end, and have made the 80% reduction? For most people it is impossible to imagine.

It came up in conversation with a friend recently that neither of us could think of a film that showed a vision of the future which was in any way like the kind of future we are talking about here. *Star Trek*'s visions of Earth in future centuries are all about technology running rampant; other films show apocalyptic wastelands, science gone mad; *Star Wars* with its multilevel traffic jams, *Mad Max*, even the children's film *Transformers* which portrays the future as endless war between half-men/half-robots. We could think of no film which showed a future of people living in a low energy way, with food gardens and localised economies. It's funny how we are more able to visualise that, than a desirable future for us all. I think this is an essential

part of this work: articulating a desirable vision of the future in a way that makes it easy for others to see it too. In fairness that is what Fleming does in his magnum opus, *The Lean Economy*, which is yet to be published but which sets out a bold vision of how a low energy future might feel, look and function.

I recommend *Energy & The Common Purpose* without reservation, and David deserves all our praise and support for thinking this approach through in such a way that it is this watertight. It is an idea that deserves to be spread as widely as possible, as it is an idea of its time. Take the time to read and understand this mechanism thoroughly; it is a powerful tool to counter the arguments that the only way to maintain our 'standard of living' is to build new nuclear power stations or introduce unpopular and self defeating Carbon Taxes. New situations require fresh thinking.

Helena Norberg-Hodge is founder/director of the International Society for Ecology and Culture (ISEC) and author of Ancient Futures: Lessons from Ladakh for a Globalizing World. *Here, she reveals how globalisation fuels climate change and how localisation would reduce carbon emissions as well as alleviate poverty around the world.*

Global Warming and the South

Helena Norberg-Hodge

As signs of climate instability increase around the world, public awareness of the need for fundamental change is growing. The former president Bush administration's stance on climate change appalled the world. Their refusal to ratify the Kyoto protocol – in part because they claim it is unfair to require the US to curb its emissions, while few limits are imposed on other polluters in the so-called Third World – angered people on all sides. Hopes are high that President Obama will put an end to this era of arrogant refusal to take the situation seriously. Global collaboration for radical and rapid action is required, but it is crucial that we first rethink many of the assumptions that have been bandied about in connection with this crisis.

Unfortunately, many environmentalists and concerned citizens in the West subscribe to the thinking that the countries of the South should have the right to continue increasing their emissions and then, once they have reached a certain level of industrialization, gradually reduce them. The assumption is that industrial production in India and China, for example, is necessary to reduce poverty. On the surface this thinking makes sense. It is underpinned by the feeling that rich countries have no right to make demands of the so-called poor countries. The argument goes like this: "We have benefited from conventional industrial development; we can't tell people not to follow in our footsteps". This ignores the fact that, in reality, we in the West have robbed them of the ability to follow in our footsteps; they have no 'Third World' to exploit. The fact is that much industrial production in the South is aimed almost entirely at satisfying the consumerist needs of Western markets, usually at the expense of local workers and their communities. Rising CO_2 emissions in the less developed parts of the world are not a sign of positive endogenous development, but rather a direct result of development and globalization policies. These same policies are responsible for a dramatic increase in poverty for the majority, while benefiting only a small wealthy elite.

Rising CO_2 emissions in the less developed parts of the world are not a sign of positive endogenous development, but rather a direct result of development and globalization policies.

Globalising pollution and poverty

One of the best ways of reducing both CO_2 emissions and poverty in the South would be to strengthen the existing, decentralized demographic pattern by keeping villages and small towns alive.

Part of the problem stems from the way we have been taught to conceive of the history of industrialization. In the 1980s, we were told that we had moved on from the era of heavy, dirty industry into a new, cleaner and much more efficient post-industrial world. Even ecological economists fell for this ruse. The idea was that, thanks to modern technology, we were using less energy and generating less pollution. "Look how clean the Thames/Hudson/Seine is," we were told, "there haven't been so many fish in the river since World War II". While it is true that advances have been made in cleaning up industry – scrubbers on incinerators, effluent purification systems, etc. – pollution continues to increase on a global scale. Much of the dirty production in the West was simply shifted to countries where labour was cheaper and environmental standards more lax. Energy consumption has actually increased as goods are transported over longer and longer distances.

Today, most manufactured goods and a large proportion of agricultural products that are consumed in the North are produced in the South. Global corporations benefit from raw materials and cheap labour in the South. In the industrialized countries, where salaries are high and resources are both more depleted and protected, global corporations cannot reap such large profits, so the expansion into the South is essential for their growth. And it is these institutions that are behind the notion that people in the West cannot tell the South to limit their carbon emissions. In fact, some years ago Lee Raymond, president of Exxon-Mobil, travelled around the developing world, warning leaders not to participate in treaties on climate change if they wanted to attract foreign investment.

We see that behind the refusal of the US to participate in the Kyoto treaty lies an even darker reality. As Walden Bello has written: 'When the Bush administration says it will not respect the Kyoto Protocol because it does not bind China and India, and the Chinese and Indian governments say they will not tolerate curbs on their greenhouse gas emissions because the US has not ratified Kyoto, they are in fact playing out an unholy alliance to allow their economic elites to continue to evade their environmental responsibilities and free-ride on the rest of the world'. According to Bello, the US has formed an 'Asia-Pacific' partnership with China, India, Japan, Korea and Canada as a rival to the Kyoto protocol, in order to promote the notion of voluntary curbs on CO_2 emissions instead of mandatory ones.

Bello further argues that it is the wealthy elites that 'spout the ultra-Third Worldist line that the South has yet to fulfil its quota of polluting the world while the North has exceeded its quota. It is they who call for an exemption of the big rapidly industrializing countries from mandatory limits on the emission of greenhouse gases under a new Kyoto Protocol'.

Northern institutions are not only telling the South what to do, but also imposing export-oriented, fossil fuel-based development. Government aid, direct foreign investments and the policies of the WTO, the IMF and

the World Bank are foisting ever larger-scale infrastructures on the South. Multi-billion dollar projects are introducing mega-dams, centralized power plants and other fossil fuel-based installations.

The global economy is also responsible for uprooting millions of people from the land by destroying rural livelihoods and local markets. Policies that promote large-scale centralized energy installations and export-led development feed the mass migration from rural areas – where people have greater food security and a better quality of life – into vast shanty towns. In the slums, the quality of life declines but consumption increases. Among other things, even when people are on a near starvation diet, every pound of food consumed now has to be transported and packaged, so CO_2 emissions rise. These same globalization policies lead to a massive increase in redundant trade; identical products (butter, milk, potatoes, live animals) criss-cross the globe in ever increasing quantities. This system does not promote efficiency, but rather leads inevitably to an increase in poverty, waste and greenhouse gas emissions.

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Localising production, increasing prosperity

It is essential that the West immediately reviews its ecological footprint and reduces its consumption of fossil fuels, as well as other natural resources. There is no doubt that the global North should bear the financial burden of reducing CO_2 emissions. However, it does not make sense, in the name of equity and justice, to argue that the South should have the right to continue increasing its CO_2 emissions. To a great extent, those emissions are our dirty laundry. They are the waste caused by using the most fertile lands of Africa to grow the vegetables that fill the aisles of European supermarkets. They are the smoke billowing from the factories of China which produce an endless stream of plastic trinkets for our manufactured consumer needs. They are the pollution created by sweatshops churning out goods that we could perfectly well produce for ourselves, allowing peoples of the South to use more of their labour and resources to provide for their own needs.

One of the best ways of reducing both CO_2 emissions and poverty in the South would be to strengthen the existing, decentralized demographic pattern by keeping villages and small towns alive. This would allow communities to maintain social cohesion and a closer contact with the land. A strategic way of doing so would be to help provide decentralized renewable energy to the rural peoples of the South (who constitute almost half the global population). It would be relatively easy to do so; throughout the less industrialized world there is a tremendous potential for using solar and wind, as well as small-scale hydro. To introduce such an infrastructure would cost vastly less money than the mega-billion dollar projects that are increasing fossil fuel consumption in the South. This could also help to dramatically improve the standard of living and prevent the tragic mass migration into slums where the quality of life drops dramatically, even as dependence on petroleum and other non-renewable resources escalates.

The Ladakh Project, a programme I started over twenty years ago with my organisation, the International Society for Ecology and Culture, has proven that this kind of development is both realistic and sustainable. Ladakh is a culturally distinct region on the Tibetan plateau that, until only a few decades ago, was almost completely cut off from the outside world. With only simple tools, the Ladakhis had carved out a remarkably sustainable and harmonious way of life. The economy was based upon self-sufficiency and cooperation, supplemented by trade for goods that could not be produced in Ladakh. In the 1970s, the area was opened to Western-style economic development. New, large-scale, fossil fuel technologies were suddenly imposed on the Ladakhis. Diesel powered generators, centralised industrial-style grain-mills – even large dams – were now seen as modern and essential. Within a few years, there was widespread pollution. These structural changes, combined with the psychological pressures of development, quickly brought about poverty, competition and conflict between people, where there had been none in living memory.

I do not believe that it is necessary for Ladakhis to make the same mistakes as we have made in the West. In fact, their relative lack of dependence on technology is a great advantage in this era of financial crises and dwindling fossil fuel supplies. If provided with accurate information about development, they can make choices that will enable Ladakh to benefit from the best of modern technology, while protecting their culture, environment and local economy. The Ladakh Project began by introducing a wide range of solar technologies, including greenhouses, solar ovens and trombe walls for passive solar heating. We set up an indigenous organisation, The Ladakh Ecological Development Group (LEDeG), which develops, promotes and installs appropriate technology. Over two decades later LEDeG remains one of the most active and influential organisations in the region. Now, almost every village has solar lighting and greenhouses. If this trend continues, soon all Ladakhi houses can benefit from these simple and sustainable technologies. Walden Bello says:

> One cannot depend on the elite and the middle-class in the South to decisively change course. The fight against global warming will need to be propelled by an alliance between progressive civil society in the North and mass-based citizens' movements in the South.

Localisation is the solution that links so many issues together – social, economic and environmental.

Our programs in Ladakh are not the only examples of this kind of work. All around the world people are working together to address the challenges posed by climate change and peak oil. Creative approaches to making our economies more sustainable abound. However, in order for these solutions to be truly effective, it is essential that they be founded on the principles of localisation–shifting economic activity back into the hands of local businesses, instead of concentrating it in fewer and fewer mega-corporations.

Localisation is the solution that links so many issues together – social, economic and environmental. Through localisation rural economies in both

North and South would be revitalised, helping to stem the unhealthy tide of urbanisation. Production processes would be smaller in scale and more diversified, and therefore less environmentally depleting and polluting. Unnecessary transport would be minimised. Small-scale, renewable energy installations would both reduce the ecological costs of energy extraction and greenhouse gas emissions. Ending the manic pursuit of trade would reduce the economic and hence political power of global corporations and eliminate the need to hand power to such supranational institutions as the World Trade Organisation, thereby helping to reverse the erosion of democracy.

Now is the time to stand together – both North and South. As politicians are so fond of saying, 'we need to level the playing field'. But this time, we must do it for real. No more hidden economic agendas that pit rich against poor, no more distortions of the realities behind so-called development and progress, no more avoiding taking action on the largest environmental threat of our time. There is still time to make the necessary changes. And I am hopeful that, with all the knowledge and appropriate technology we have, we can work together to tackle climate change and build a genuinely sustainable, diverse and peaceful world.

Ross Jackson is the co-founder and chairman of Gaia Trust, the primary funder of the Global Ecovillage Network and Gaia Education. He holds a PhD in Operations Research (the theory and practice of problem solving) and, for many years, worked in the business world, specialising in investment theory and international finance. Here he applies his professional training to the issue of tackling global warming in an ideal world without political and ideological constraints.

Climate Solutions: Part I Comparing Alternatives

Ross Jackson

Summary

What would be the ideal international climate agreement to succeed the Kyoto Protocol in 2012 if we ignore political positioning for the moment and consider what would be best for the whole planet?

Part I of this article reviews a number of the proposals that have been put forward to deal with the problem of limiting the emission of greenhouse gases. These are described and evaluated based on a number of criteria that should reasonably be met. Unfortunately, none of the proposals meet all the criteria.

Part II presents a new proposal by the author which does meet all the criteria, while at the same time giving the international community a viable framework to tackle, negotiate and, with guarantee, achieve success in dealing with the problem both effectively and justly.

Introduction

A number of different schemes have been put forward recently to deal with the problem of reducing greenhouse gas emissions in order to prevent an uncontrollable warming of the planet, with potentially fatal consequences for humanity. Some schemes are already in practice, for example the Kyoto Protocol of the UN Framework Convention on Climate Change, the EU's Emissions Trading System (ETS) and various forms of carbon taxes in some countries.[1] The United Nations Copenhagen Climate meeting in December 2009 (COP-15) focussed on reaching a consensus on how to continue after the first phase of the Kyoto Protocol ends in 2012, and famously failed in the endeavour. Therefore it is time to find the best possible way to go forward.

CO_2 target

All proposals start with the assumption that an international agreement will be reached on the total allowable human-dependent CO_2 emissions globally produced each year, during an agreed planning horizon. The current level, according to the IPCC, was about 49 Gigatons of 'CO_2 equivalents' in 2004.[2] The emissions ceiling would have to decline year after year over the planning period. For example, according to the IPCC's latest study, by 2050, global emissions would have to have declined by roughly 85 % relative to 2004 levels to keep the long term temperature increase under the critical concentration of CO_2-equivalents of 445 ppm, corresponding to a two degree Celsius increase in temperature relative to pre-industrial levels.[3]

Some scientists believe that even a target concentration of 445 ppm is too risky and that we should aim for 350 ppm. In any case, the purpose of this article is to compare methods of achieving the target, whatever may be agreed upon in international negotiations.

Growth must take a backseat to meeting the target. To claim the opposite leads to the absurd conclusion that we may not be able to afford to save human civilisation.

Defining the criteria

In the following I will put forward a number of criteria that an effective and just system should meet in order to accomplish the task at hand, while receiving broad acceptance. Note that this paper deals only with the method, not with the particular target level for CO_2 emissions.

Will the target be met with certainty?

This is by far the most important criterion. We only get one chance at containing global warming, and we have to get it right the first time. No voluntary system can satisfy this criterion. Even with sanctions, no voluntary scheme can guarantee that the target will be met. What good will sanctions do if we do not meet the target? Some politicians argue that emissions reductions must not hinder further economic growth. But this is a dangerous and potentially fatal way of looking at the problem, as there may be no feasible solution with this constraint. Growth must take a backseat to meeting the target. To claim the opposite leads to the absurd conclusion that we may not be able to afford to save human civilisation. We must hit the target and accept the consequences, including growth effects, whatever they may be. The task of hitting the target is a matter of survival, not a matter that can be measured in monetary or political terms.

Are permits paid for?

Emission permits can either be sold or given away without charge. Paying for emission permits, rather than just giving them away, is a positive characteristic because the added cost provides an economic incentive for energy saving and conversion to renewable energy, and for a shift to a more

sustainable lifestyle. Some innovation will, of course, occur anyway, as oil quotas decrease and prices increase, but without the added costs of permits, innovation may happen too slowly. The income from selling permits is also important as a source of funds to partially compensate lower income groups for higher costs of energy, which are generally regressive, and to make any deal attractive to the developing countries.

Are permits tradable?

In order to achieve the most efficient solution, trading of permits should be implemented so those with the most efficient innovations and lowest CO_2 emissions can access the CO_2 permits they need. This means that the limited CO_2 emissions available will be used with maximum efficiency.

Is administration simple?

Both for transparency and to minimize costs, it is desirable to design a system which is relatively simple to administer. An important consideration is whether it will work adequately in developing countries with limited infrastructure, low technology and inefficient administrative systems.

Is the scheme perceived as equitable?

For broad public support the scheme must be seen as fair and equitable. Are poorer citizens being compensated for the regressive increase of energy costs? Will developing countries perceive the scheme as equitable and worthy of support? They feel, and rightly so, that it is the industrial countries that have benefited most from all the CO_2 emissions until now and that something is owed to them.

Is the scheme intrinsically global?

'Intrinsically global' means that the scheme is designed, from the beginning, to have a global scope. For example, permit trading is international and all countries can realistically participate, especially when consideration is given to the special problems of the developing countries' infrastructure, administrative capabilities, etc. An intrinsically global scheme is the most desirable solution as it is most efficient. However, a 'piecewise global' scheme is also a possibility, where each country has an internationally agreed emissions allocation consistent with the overall emissions target, but the national schemes may differ.

The ideal scheme would have a 'yes' response to each of the above criteria.

Note that it is customary to classify schemes as 'upstream' (close to the primary producers), 'downstream' (close to individual citizens) or

'midstream' (in between). We will now look at the main characteristics of the various schemes on the table and consider the extent to which they fulfil the above criteria.

National or regional schemes

EU Emissions Trading Scheme (ETS)

This system is a so-called 'cap and trade' system; a regional, rationing, and midstream system. Permits are allocated without cost to member countries based primarily on the historical level of emissions and negotiations with industry. Each member country in turn allocates permits without cost to its major CO_2 emitters, such as power plants and major industrial users. The quota holders are then allowed to trade permits among themselves if they have too few or too many. The quota trading encourages efficiency to some extent, which is good. However, there are several problems.

The ETS is, at best, an interim scheme that may make a minor contribution to reducing CO_2 emissions until a global scheme that really works can be put into effect.

Firstly, the participating firms only cover about 40% of the EU's CO_2-eq emissions. Major omissions from the scheme include automobiles, air and ship transport; and millions of smaller firms. Hence there is no guarantee of meeting overall targets. The system is regressive, without any compensation for higher prices due to shrinking quotas, and can be expected to meet considerable citizen resistance as energy prices increase.

Secondly, there is no purchase price for permits, which reduces the economic incentive for industry to innovate, and fails to provide a pool of funds for compensation. While more cost-effective than extreme downstream schemes, the scheme is still more costly and bureaucratic than extreme upstream schemes. There are considerable negotiating problems with industry with many requests for special treatment for various reasons. Such a system was, however, successfully implemented in the USA to control sulphur dioxide (Clean Air Act of 1990).[4]

The EU got off to a bad start by giving away far too many permits in its first year, resulting in an enormous unearned gift to the worst polluters, due no doubt to pressure from the industrial sector. In principle, the EU can recover from this by using stricter quotas in future, but the other underlying flaws are irreparable. The ETS is, at best, an interim scheme that may make a minor contribution to reducing CO_2 emissions until a global scheme that really works can be put into effect. Nevertheless, the EU is to be commended for showing global leadership. It undertook this initiative courageously, even though it puts its own industries at a competitive disadvantage.[5]

Carbon Tax

The principle of this approach is to implement a national tax scheme for CO_2 emissions. It has the merit of increasing the costs of using fossil fuels, which would encourage technological innovation and renewable energy use. But that is about all that can be said in its favour, as it has fatal flaws.

The most important one is the lack of guarantee of meeting targets. There may exist a theoretical tax which is so high that CO_2 emissions would be reduced drastically to the target level, but no one knows what this level is in advance – hence there is no guarantee. There are other problems.

There is no permit trading to increase efficiency. It could be expensive and cumbersome to administer, depending on how it was structured (e.g. where do you apply the tax? Is it a flat tax or variable? How would tax income be used?). A flat tax would be regressive, which would be considered inequitable by many. A progressive tax could, to some degree, compensate the poorer segments of society for the regressive effects of increasing energy costs, but would be cumbersome to administer.

Finally, taxes are a national matter, and so a carbon tax is necessarily limited to a single nation's attempt to control its CO_2 emissions, assuming some national target. This could work in a piecewise-global system where national quotas were determined by negotiation, but it would be messy and suboptimal. The carbon tax has broad support in some countries, perhaps because of its apparent simplicity.[6]

Tradable Energy Quotas (TEQs)

This scheme is national, rationing, and an extreme downstream example of the 'cap and share' type, i.e. a rationing system whereby a portion of the income generated by permit sales is shared equally among all citizens of the country. The TEQs scheme was developed by David Fleming of the UK, originally in 1996. Since then it has gone through several incarnations under different names, including Domestic Tradable Quotas, Personal Carbon Allowances, Personal Carbon Trading, Carbon Quotas, and its current name – TEQs (pronounced 'tex').

Individuals receive emission quotas called TEQS corresponding to the proportion of the national CO_2 emissions attributable to private households (about 40% in the UK). Individuals can use these TEQS whenever they purchase fuel, electricity, etc. If they wish, they can trade them – buying more if necessary, selling for cash if not needed. Commercial companies and the government must buy permits at a weekly auction. The system requires individual carbon accounts at a bank, which acts like a middleman, trading permissions in an on-line market with commercial companies that need the quotas. This scheme satisfies several of the criteria: it guarantees that national targets will be met (but not international); it engages citizens directly and it provides an incentive for innovation. However, as opposed to some of the other schemes, only a portion of the additional costs paid by society accrue to individuals. So there is an equity deficit, although it does engage individuals actively in reducing their CO_2 emissions.

This scheme fails some of our criteria. It is not easily adaptable to the global level. It would also be costly and cumbersome, requiring individual contact with millions of people and the establishment of millions of new accounts at banks and commercial companies.[7]

In fact, this last point is true of all extreme downstream proposals. They are expensive and unwieldy in practice, and are especially unworkable in developing countries. A study of alternative schemes by the US Congressional Budget Office came to a similar conclusion, namely that 'the cost of implementing a comprehensive downstream trading program could well be prohibitive.'[8]

FEASTA

Seen in the light of our criteria and needs post 2012, the Kyoto structure is woefully inadequate. The major problem is the lack of any guarantee of success, as it is basically a voluntary agreement.

This is another cap-and-share scheme developed by FEASTA (Foundation for the Economics of Sustainability), with permits distributed to individuals on an equal basis, but with a major difference to TEQS. Rather than individuals using their emission chits to buy fuel, etc. chits are simply sold through their local bank. The banks then make a market in emission permits, selling to primary producers, who then pass on the added cost to their customers. This modification eliminates a lot of the paperwork, administration and cost at the individual level, and makes this scheme more upstream and thus more cost effective than TEQs

There are problems, however. A major weakness is no permit trading at the industrial level and hence no mechanism to achieve maximum efficiency. A second issue is the purchase of permits by the relatively small number of primary producers. The most important primary producers are already cooperating closely (e.g. OPEC). There is a risk that they would develop a cartel-like arrangement to distribute permits amongst themselves roughly proportional to their capacities to produce, and at very low cost of permits, while selling on to their customers at much higher prices. This would not be possible in a more liquid market with a large number of participants. Although FEASTA claims it could in principle work internationally, the necessity of individuals selling their permits to local banks would be a major drawback in less developed countries characterized by inefficient administration and communication as well as corruption at the local level.[9]

Global schemes

Contraction and Convergence

This scheme, originating with Aubrey Meyer, author and former member of the British Green Party, was one of the first put forward to deal with the problem. This proposal, which from the beginning was envisaged as a piecewise global system, is a method of allocation of national quotas rather than a comprehensive solution. It takes its starting point in defining initial CO_2 quotas on a country by country basis corresponding to current emission levels, but contracting over the period of descent according to the agreed descent plan until reaching levels in each country corresponding to

allocations based on population, such that each world citizen is allocated an equal quota.

The proposal can be seen as an attempt to find a political compromise between acceptance of current energy use and the principle of equity that perceives the biosphere as a common good. Quotas are not sold, which is a weakness according to our criteria, but long term equity is part of the model in the sense of equal citizen rights to emit CO_2. Trading of permits is not mandatory. There is thus no efficiency incentive built in, either nationally or internationally. However, the concept could be used with diverse national schemes that did involve some permit trading.[10]

Kyoto Protocol

As the first attempt at a coordinated international solution to tackle climate change, the Kyoto Protocol was probably the best that could be achieved in the 1990s at a time when there was not yet universal consensus on the seriousness of the problem. But seen in the light of our criteria and needs post 2012, the Kyoto structure is woefully inadequate. The major problem is the lack of any guarantee of success, as it is basically a voluntary agreement.

Even if all nations agreed to the format and the national targets and even if the total emissions target was realistic, there is no assurance that targets will be met. Indeed, experience to date with the Kyoto Protocol shows that even the very modest 2012 targets are not likely to be met.[11] The Kyoto target for 2012 is an average reduction of 5.2% relative to 1990, while worldwide CO_2 emissions in the period 1990-2004 actually increased by 27.7%.[12] To assume that much stricter targets will be met in a second phase of this scheme is simply not realistic.

The Kyoto Protocol is called 'binding', but this terminology must be qualified. Non-achievement of national targets would in practice result in purchase of CO_2 credits from a developing country at the last minute. Or, if this was not done, the deficit would be added to the next period's quota with an additional 30% added on. There is no guarantee that CO_2 credits involve actual reductions in global CO_2 emissions. Practice to date is characterized by widespread abuses and a lot of 'hot air'. A continuation of this 'binding' agreement will not be of much consolation to humanity if at the end of the 'binding' period targets have not been met.

There are also problems with several of our other criteria. Permits are allocated rather than sold. This means that there is no added cost to using fossil fuels and hence less incentive to innovate. There is no effective trading of permits that will ensure that the most efficient solutions emerge. The Kyoto Protocol does allow for a limited amount of permit trading (The Clean Development Mechanism, Joint Implementation and Emissions Trading), but it is very bureaucratic and individualized rather than being universal with on-line trading as in other schemes, and is more likely to encourage abuse and corruption than other schemes. One effect of the CDM is that there is a very limited element of redistribution of wealth for the benefit

Kyoto Protocol is expensive to administer, requiring detailed controls on actual emissions and carbon sinks from every country before allowing any permit trading. All in all, this scheme is probably the least suited to the task at hand.

of the poorer countries, but far less than in many of the other schemes in this comparison. The Kyoto Protocol is expensive to administer, requiring detailed controls on actual emissions and carbon sinks from every country before allowing any permit trading. There is no element in the scheme that gives individual citizens a stake. All in all, this scheme is probably the least suited to the task at hand.[13]

Earth Atmospheric Trust (EAT)

This is an upstream variation on cap and share which in this case is also cap and trade, proposed from the beginning to be an international scheme. In this case, an international trust, independent of governments, auctions emission rights through a market system to primary producers (oil and natural gas producers, coal mines). Thereafter, the producers pass on the added costs to their customers. Individual citizens share part of the income on an equal basis. The remaining part is used to fund renewable energy projects and for research and development on new energy sources, etc.

Aside from primary producers, this scheme eliminates all other companies, banks and individuals from the trading, which makes the system far more cost effective and less bureaucratic than the TEQS and FEASTA schemes. However, it has the same weakness as FEASTA in that permit trading is limited to the small number of primary producers, with all the risks that follow from that. An analogous 'sky trust' has been used with success in the Alaska Permanent Fund, which distributes dividends from Alaskan oil production to citizens. The authors – a number of American academic thinkers with impeccable credentials – argue for an independent trust because there would otherwise be a risk that governments would see this as a tax income, and the individual compensation might be undermined eventually due to pressure from diverse interest groups.[14]

Kyoto2

This is a very comprehensive cap and trade scheme developed by UK environmental journalist Oliver Tickell.[15] It has some similarities to the Earth Atmospheric Trust scheme, including an independent 'Climate Change Fund' to sell and trade emission rights. Tickell does not specify clearly just who can buy permits, only that they should be 'as close as possible to the primary producers', so there are potential problems with primary producers, as in the EAT scheme. Another difference is that Kyoto2 proposes that all the revenues collected are used to mitigate climate change under the auspices of the Climate Change Fund (e.g. research and development projects). There is no direct benefit to individual citizens here, which could undermine public support.

The 'central planning' thinking here risks solutions that are both unnecessary and far less effective than allowing the markets in different countries to find their own most efficient ways to manage with fewer

emissions, and allowing individual citizens to decide for themselves how best to use the revenues due to them as 'owners' of the biosphere. However, Tickell does have a point in that there may be specific areas where globally imposed restrictions or research may be called for if and when market approaches are not adequate.

Kyoto2 does introduce one important issue that is missing in the other schemes, namely the problem of non-fossil fuel sources of CO_2 emissions (e.g. deforestation and certain industrial processes, such as calcinating lime in cement factories). This important aspect can and should be incorporated into whatever scheme is adopted.

Oil Depletion Protocol

Strictly speaking this is not a proposal to tackle global warming, yet it is closely related. As Richard Heinberg, author of a book on the subject, writes, "Ignorance of energy supply issues is likely to lead to climate solutions that fail."[16] The Rimini Protocol (which led to a second version known as the Uppsala Protocol) was put forward in 2003 by British petroleum geologist, Dr. Colin J. Campbell, who was one of the first to warn of the coming peak in global oil production.[17] There is no doubt that we will soon be in a period of permanent decline in oil production globally, but there is some controversy as to when the peak will occur. The most widely mentioned time frame by the most credible oil geologists who have studied the problem is around 2010-2012. Some think it may already have peaked. Some think it may be ten years or more in the future.

Demand for oil is expected to continue to increase by about 1.5-2% per annum in the coming years, not least to satisfy the needs of China and India. The demand growth rate and hence the peak may be slowed a bit by the 2008/2009 global economic downturn, and oil prices may fall temporarily, but the longer term upwards trend is inevitable. Thus a 'business as usual' path means that we are heading for a major economic crisis in a few years, with demand for oil permanently exceeding supply and with the gap increasing year after year. We can expect to see exploding oil prices when demand exceeds supply, with devastating consequences for the global economy. Much human suffering, particularly in the least developed countries, is inevitable.

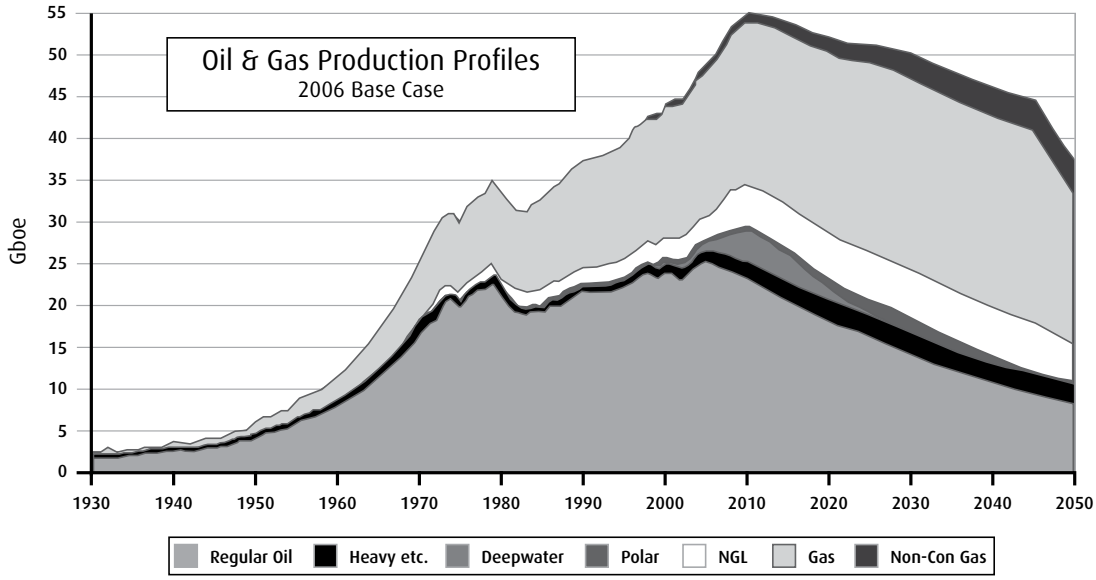
...a 'business as usual' path means that we are heading for a major economic crisis in a few years, with demand for oil permanently exceeding supply and with the gap increasing year after year.

Campbell's argument is that the international community should plan well in advance for the coming period of oil descent in order to minimize the disruption, preferably beginning ten years before the peak. The basic idea of his proposed protocol is that we should ration our production and use of oil in a planned decline such that we decrease our oil usage faster than the predicted depletion rate of approximately 3% per year after the peak is reached. If we do not, he warns that we may be in for a period of very volatile price swings and panic reactions by unprepared governments, with devastating effects on the economy. Air and road transportation in particular will be hard hit, as there is no comparable substitute for oil. To

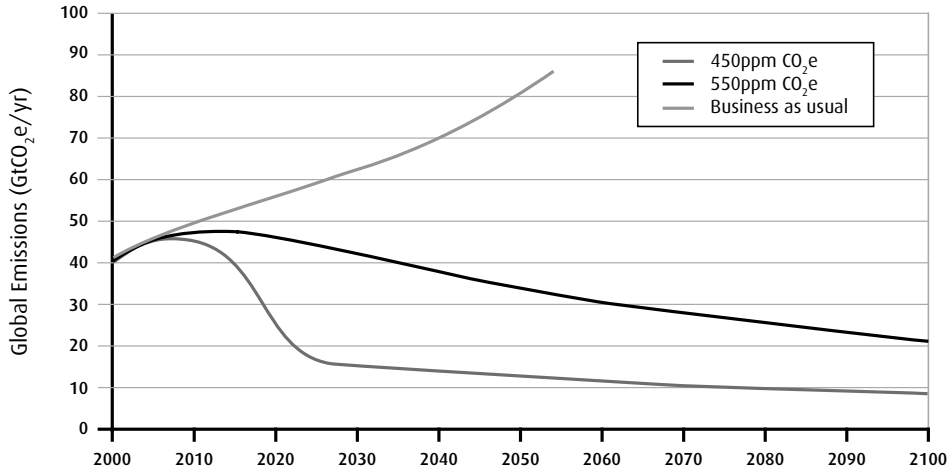
put the descent into perspective, the Kyoto Protocol calls for an average reduction of emissions of only 5.2% over 22 years (1990-2012), and even that modest goal is unlikely to be met.

Unfortunately, the peak oil concept has not penetrated into the mindset of our political leadership. Warnings by Campbell and other leading oil industry experts have not made much of an impression, perhaps because the consequences are too painful to consider, perhaps because politicians would rather believe the oil optimists and leave the problem to their successors. What then does peak oil mean for solutions to global warming? I mentioned in the introduction that hitting the target of 445 ppm CO_2-eq in 2050, thus keeping the temperature rise to less than two degrees Celsius, will require a reduction in total emissions (including oil, natural gas and coal) of about 85% relative to 2004. Campbell projects a supply-based decline of about 59% in oil (which includes all conventional and non-conventional sources, but is exclusive of natural gas) in the period after the peak from 2010-2050 – from 34 Giga barrels of oil equivalent (Gboe) to 14 Gboe, as shown in the diagram below. Note that natural gas production is expected to peak soon after the oil peak and go into a similar, but slightly slower decline.[18]

The IPCC target is thus stricter than Campbell's supply-based limit, but the supply constraint does at least offer the consolation that there are physical limits to how much damage can be done by an inferior climate agreement. Put another way: if we do not get our act together, nature will do it for us. It would be most interesting if the IPCC could calculate the temperature increase under the quite likely scenario that the world follows Campbell's supply-based path of fossil fuel burning (i.e we burn everything that we can).



	1	2	3	4	5	6
Contraction & Convergence	yes	no	*a	*a	yes	no
Kyoto Protocol	no	no	*b	no	no	yes
EU's Emission Trading System	no	no	*b	no	no	no
Carbon Tax	no	yes	no	*a	*a	no
Tradable Energy Quotes	yes	yes	yes	no	*c	no
FEASTA	yes	yes	no	no	*c	no
Earth Atmosphere Trust	yes	yes	no	yes	*c	yes
Kyoto2	yes	yes	yes	yes	no	yes



Meeting the Criteria

Let us now compare the various schemes.

1. Will the target be met with certainty?
2. Are permits paid for?
3. Are permits tradable among industrial users?
4. Is administration simple?
5. Would the scheme be perceived as equitable by citizens?
6. Is the scheme intrinsically global (as opposed to piecewise global)?

*a: Depends on how national governments administer it.
*b: Only on a very limited basis.
*c: Maybe: Part of the revenue goes to governments.

Three scenarios

The authors of the EAT article illustrate three alternative paths that we can choose as shown in the diagram below. Note that 550 ppm, which some politicians seem to think is a realistic target, has a significantly higher probability of runaway warming than 450 ppm CO_2-eq.[23]

It should be noted that one of the leading climate research leaders, NASA's James Hansen, who originally supported the 450 ppm target, now believes that even 450 ppm is a 'guaranteed disaster' due to previously overlooked positive feedback mechanisms. He, like many others, now believes that we ought to aim for a maximum of 350 ppm.[19]

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Climate Solutions: Part II
The Carbon Board

Ross Jackson

Introduction

Of the existing proposals mentioned in Part I, the Earth Atmospheric Trust and Kyoto2 are the two best. They both fulfil two important criteria that many of the other proposals do not, namely (1) a guarantee of success because they are both based on rationing the total allowable fossil fuel burning each year in the descent period (2) they are both efficient in the sense of allowing competitive global auctions and trading of emission permits, which means the companies that are best at developing products with low CO_2 emissions will get the business and the market share in their business sectors, for the benefit of the climate and every world citizen.

Both schemes are 'cap and trade' systems, and thus consistent with the 'Washington Declaration' of February 2007, where the USA, Canada, France, Germany, Italy, Russia, Great Britain, China, India, Mexico and South Africa were all in principle agreement that the successor to the Kyoto Protocol in 2012 should be a 'cap and trade' system, which includes both industrialised and developing countries.[4]

So far so good. However, in spite of their many positive virtues, both schemes have, in my opinion, two weaknesses, which could be improved upon. Let us look at these.

Who buys the permits?

Both schemes suggest that primary producers should be included in the auctions (although Kyoto2 is not entirely clear on this point). However, we cannot have both the relatively few primary producers and their customers bidding on the same permissions. We have to make a choice, and the better choice by far is the customers – the introducers of fossil fuels into the economy (oil importers, power plants, refineries, etc.) because there are many

more of them – many thousands in fact, which guarantees a competitive auction, greater liquidity, more stable market prices and less risk of manipulation and corruption. On the other hand there are not more than can easily be handled in a modern computer-based global trading operation.

Who gets the income from permit sales?

Both schemes suggest that some (EAT) or all (Kyoto2) of the revenues should be used for climate mitigation projects, such as research and technological innovation. I do not think this would be wise for three reasons. Firstly, it would not appeal sufficiently to the developing countries, nor would individual citizens anywhere feel a personal interest in the proposal. If the biosphere is truly a common good, then the revenues should go to the individual citizens. Remember that this plan is going to make almost all everyday products, particularly food and transport, more expensive. Individual citizens deserve some compensation for this to get them on board.

Secondly, massive publicly sponsored R&D should not be necessary. Government subsidies are normally justified in important research areas that the private sector would not normally undertake itself. But the reason it would not in the past is that pricing in our traditional economic system has never reflected the true environmental costs of production to society. With an effective climate agreement in place, the environmental costs of CO_2 emissions will become part of the cost of doing business. Dealing with this new reality will become a matter for survival for private companies. They will invest in CO_2 reduction or disappear, and without government help.

In The Carbon Board scheme, the revenue received from permit sales is distributed equally to all world citizens in equal amounts, reflecting the principle that the atmosphere is a common good.

Thirdly, an authoritarian regime making global decisions on climate mitigation projects would be a hornets' nest of political positioning, special interests, horse trading and widespread feelings of anger and frustration. The nice thing about the two positive aspects of the two schemes mentioned above is that they circumvent the issue of political negotiations, positioning and special interests. Let us by all means not ruin this very positive characteristic by introducing new issues to haggle over. If an individual government wants to offer research subsidies, it can finance them by traditional means or new green taxes. It is best to separate the financing of national environmental problems and the use of revenues from global CO_2 permits, which concern the biosphere rights of all world citizens.

If we modify these two schemes accordingly, we then have a new scheme, which for the sake of reference I will call The Carbon Board.

The Carbon Board Scheme

Permits to purchase CO_2 – emitting fossil fuels (oil, natural gas, coal) are sold competitively and globally by The Carbon Board and only by The Carbon Board to companies functioning at the point of entry into the economic system (refineries, natural gas transport firms, coal processors, importers of fossil fuel directly from primary producers, etc.). In the USA alone, there are

roughly 1400 such firms.[3] Thus a competitive price and sufficient liquidity is quite certain. These sales should take place well in advance of the year in question in order to facilitate company planning (starting minimum 18 months before).

Permits once purchased could be sold again through The Carbon Board as long as they were valid. This trading guarantees maximum efficiency, so permits go to the firms that are most CO_2 efficient in every branch of business.

In The Carbon Board scheme, the revenue received from permit sales is distributed equally to all world citizens in equal amounts, reflecting the principle that the atmosphere is a common good. This means, in effect, a transfer from the wealthier to the poorer countries. In addition, in the richer countries, it means a relatively larger payment to the poorest citizens, who typically have larger energy costs in percentage terms. Some such redistribution is necessary to get broad backing for any proposal.

A general characteristic of this scheme is that there are many aspects that are subject to international and national negotiations, provided, of course, that the essential characteristics of the overall scheme remain intact.

Control of The Carbon Board

It is vital that The Carbon Board is beyond the influence of individual countries or commercial interests, and is responsible in effect to the entire global population of some 6.5 billion people. I would suggest that The Carbon Board directors be appointed by and be accountable to the General Assembly of the United Nations (not the Security Council, which represents narrower interests).

The Role of Primary Producers

The relationship with the primary producers is open to negotiation. They have an interest in not producing more than the agreed yearly quota as there would be no customers for excess production. But by how much should each producer reduce production?

A reasonable solution would be for the primary producers to work closely with The Carbon Board, which would allocate quotas to the individual producers based on their production capacities and the total quota for the year. A reduction proportional to capacity would be a reasonable starting point. In any case, it is vital to monitor the primary producers to hinder development of a black market. There is room for some flexibility here, provided that total production is under control. A country that is a primary producer cannot demand priority on its domestic production. All should be treated equally. Nor should a vertically integrated oil producer be allowed to favour its own refineries and daughter import companies, which must purchase permits in open competition with others.

An authoritarian regime making global decisions on climate mitigation projects would be a hornets' nest of political positioning, special interests, horse trading and widespread feelings of anger and frustration.

The risk is that in a few years' time, the world will find itself in an even deeper crisis, and the political leadership will be pressured by civil society to take truly effective action. When that time comes, it may be useful to have the outline of an effective solution in the drawer.

Permit costs

Paying for permits is essential for two reasons. One is to provide the income to satisfy the equity requirement. The other is to create the economic incentive for research and development that will lead to technologically more energy-efficient products. The authors of The Earth Atmospheric Trust scheme estimate that the cost of a permit will probably be in the range of $20 to $80 per ton CO_2-equivalent, corresponding to an income of $1000 billion to $4000 billion at current emission levels.[5]

Trading permits

It is important that a global market for on-line trading in permits administered by The Carbon Board be established, somewhat similar to a Central Bank currency trading desk. The actors allowed to buy and sell permits to each other would be limited to a list of approved importers and others who introduce fossil fuels into the economy. To minimize corruption and/or leakage, all transactions would be booked through The Carbon Board, which would maintain a stable and liquid market just as a Central Bank would do.

It is a question for discussion as to whether permits should be valid for only one year or whether they could be kept for latter use. Auction expert Peter Cramton of the University of Maryland recommends the latter, but such a system could lead to substantial speculation and hoarding, which would be harmful to society (as prices for permits will probably increase from year to year).[6] This issue requires further analysis and debate.

Once all permits have been sold, The Carbon Board should again be the middleman to link buyers with permits to specific primary producers of various categories of oil, natural gas and coal. In this way, risk of leakage or corruption can be kept to a minimum and control of the primary producers' quotas is maintained. The Carbon Board will at all times know exactly where all used and unused permits are and what quotas remain available at each primary producer.

Individual companies will naturally pass on as much as possible of their added costs to their downstream customers in competition with other sellers. Those companies that are quickest and cleverest to innovate and save the most CO_2 emissions will profit most.

National variants

There is a possibility of national variations here. For example, if a country's government wanted more control over the process within its borders, it could set up a single account with The Carbon Board instead of individual accounts with its domestic fossil fuel introducers. Then the government could use whatever internal system it wished for distributing the permits that it purchased, provided the other components of the scheme were upheld.

For example, if a particular country wished to use a 'downstream' model or a carbon tax, this could be done. Some may see this as a positive way to

involve individual citizens directly in the process or to satisfy other political goals. There would be extra administrative costs and some loss of efficiency globally, but it could work.

Fairness issues

Based on the estimated range mentioned above for sales of permits, this would currently amount to an income of $156-625 per person per year ($0.43-$1.71 per day). For the poorest citizens in many developing countries, this is very significant. The total amounts transferred to many poor countries will be far greater than their current foreign aid (ca $54 billion). This prospect will hopefully provide a sufficient incentive for all countries to accept the scheme.

There is a risk of abuse in revenue distribution. For example, a corrupt government might be attracted by the idea of keeping those very substantial funds for the local elite, or for the general treasury or for other pet projects. Therefore it is imperative that the Carbon Board, as protectors of the interests of 6.5 billion world citizens, approve of the revenue distribution proposal for each country, and have the power to withhold funds in case of unsatisfactory terms or abuse of agreements.

Non-fuel emissions

The Kyoto2 scheme correctly noted the need to deal with the non-fuel CO_2 emissions, such as deforestation and certain industrial processes such as the calcination of lime in cement production. This should, of course, be dealt with in any agreement. However, the tools and organisation needed to control these kinds of emissions are quite different from The Carbon Board's main structure and operation. Therefore the administrative agent could be either a special department of the Carbon Board or a separate but cooperating agency. The best solution for control of non-fuel CO_2 emissions is subject to further study and negotiation and is beyond the scope of this article.

Is the scheme realistic?

Based on the current dialogue in the international media, it seems unlikely that any kind of rationing scheme will be adopted in the foreseeable future. This is understandable from a political point of view as rationing is normally undertaken only when dictated by supply constraints. It is more likely that some less painful but ineffective approach of voluntary guidelines and new technology research and development will be attempted first. In this sense, The Carbon Board proposal, like all other rationing proposals, is probably not realistic in the short run.

However, the long run is a different story. It is highly likely that we will see either no deal or a bad deal in Mexico at COP-16, followed by continued increases in CO_2 emissions after 2012, or too slow a decline to stop a runaway global warming. The risk is that in a few years' time, the

world will find itself in an even deeper crisis, and the political leadership will be pressured by civil society to take truly effective action. When that time comes, it may be useful to have the outline of an effective solution in the drawer that can actually deal with the problem. In the long run, if we truly want to deal with climate change effectively, The Carbon Board scheme, or something very similar, will probably be necessary.

What if some nations will not participate?

WTO rules are a major reason for the degradation of the environment in general and the climate in particular, because environmental costs such as CO_2 emissions, are "externalized" from corporate balance sheets.

What if a substantial majority of nations are prepared to accept a scheme and others will not join, as was the case with the Kyoto Protocol? Nations that stay outside such a scheme are not only abdicating their moral responsibilities, but they are getting a competitive advantage in that they can produce goods cheaper without the cost of emission permits. Therefore, to level the playing field, the signatories could agree to place tariffs on any and all goods exported from those countries that do not join, thereby eliminating any competitive advantage. French president Nicolas Sarcozy raised this very possibility in the autumn of 2007. [7]

The point may be raised by some observers that such tariffs would be against the rules of the World Trade Organization (WTO), which is absolutely correct. This observation ought to wake up a lot of people to the fact that the WTO rules are a major reason for the degradation of the environment in general and the climate in particular, because environmental costs such as CO_2 emissions, are 'externalized' from corporate balance sheets. These very real costs to society, which ought to be included in product prices, are currently passed on to the 6.5 billion taxpayers to deal with. The problem of the WTO and environmental degradation is dealt with in another article of mine in this volume.[8]

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MODULE 2

Community Banks & Currencies

We rarely pay much attention to how money works; most take it for granted as a necessary but largely neutral lubricant of economic transactions. In fact nothing could be further from the truth: the distinctive way in which money works has a profound influence on almost all aspects of our economic life.

This Module explores different ways in which our money systems condition economic behaviour and proposes changes that have been made for monetary reform with the aim of enabling money to have a more benign impact on economic life. Finally, a wide range of complementary currency, savings and investment models that have been developed in recent years as tools to facilitate community economic empowerment, will be described.

Contents

Financial Stability: A Case for Complementary Currencies

The Politics of Money

Reforming the Financial Casino

The Saber: A Complementary Currency for Learning

A Tale of Two Ecovillages: Reviving the Health of Local Communities

Beyond Equality:Work, Money, and Equality in the Economic Fellowship of the Camphill Communities

The Second Foundation at The Farm

The Permaculture of Pensions: Making Savings Work for People and Planet

Freecycle: Something for Nothing

Based in Lebensgarten ecovillage in Germany, Margrit Kennedy has perhaps done more than anyone, over several decades, to critique conventional money systems and to pioneer new complementary currencies. This article provides a comprehensive analysis of the various ways in which money in its current guise is a key driver of today's unsustainable, inequitable economy. She also makes the case for regionally-based complementary currencies and describes numerous schemes that are already in operation.

Financial Stability: A Case for Complementary Currencies

Margrit Kennedy

Executive summary

This paper deals with a fundamental problem concerning one of the most ingenious inventions of mankind – money. It suggests that monetary stability and sustainability will be greatly enhanced by a diversity of currency systems rather than national or international money monopolies.

In the first part, it sums up the problems created by an almost ignored aspect of the present system, which is one of the root causes for its impetus on exponential growth: the compounding of interest. Compound interest leads to the assumption that money must and can keep growing or accumulating forever. Over the last decades – in which all barriers to the mobility of financial transactions have been removed – this has led to a global financial system in which speculation is more powerful than trade, has more financial clout, and depends on individuals who have more to gain from instability rather than stability. Inflation, monetary speculation and an uneven growth of various economic indicators – like monetary assets, GNP and the net income in real wages and salaries – are just some of the problems associated with this development.

In the second part, historic evidence as well as new examples for monetary designs show how these problems can be avoided and how some of the most pressing problems of social, financial, and ecological instability can be resolved together. It suggests that 'Complementary Currencies' (CCs) – defined as means of payment with a built-in target – offer cheaper and more effective solutions than those which can be achieved through the conventional money system. They do not intend to replace the existing national or international currencies but rather to complement them. Mainly for social, cultural and ecological programs or measures, new liquidity can be created without burdening the taxpayer or governments with additional costs. CCs can be seen as powerful tools for strengthening the economic

viability of a specific social sector or geographically limited region (defined here as an area between the local and the national), but also for economic activities on a worldwide scale. In some instances, they already have proven their potential to support and strengthen the economy over several decades.

Proposals for worldwide complementary currencies prove that more fairness and sustainability can also be achieved on a global scale. Rather than accepting monopolies for national moneys as an unquestionable given, it seems useful to enhance monetary stability by a diversity of currency systems, so that multiple and more diverse channels of monetary links and exchanges can emerge. In a time which calls for new solutions to the pressing problems we are facing globally, a move toward giving up a powerful central monopoly and cooperating with smaller partners in order to create more diversified and life enhancing monetary systems – a paradigm shift for economists and bankers – may well have a chance for the first time in recent history.

Reasons for my look at monetary sustainability

In the late seventies, environmentalists – among which I count myself – were among the first to question why economic reasoning demanded exponential growth returns that the planet could never sustain. We discovered that there was severe lack of understanding of the most basic facts about money amongst laymen as well as professional economists. Remarkably little research by economists had been devoted to the questions of money creation and functioning. Up to this day, it remains almost taboo to discuss it, both for economists and governments, as if the global monetary system was a fundamental given. However, nothing could be further from the truth.

In this paper, I will summarize my learning process, which started in 1982 when I first asked the question: Why can't the ecological renewal measures we are planning for Berlin, Germany be considered 'economical'? As most people wanted to move towards a sustainable life style in the city, I felt that there had to be something wrong with the economic system, if it was the cause for preventing us from implementing them. Looking into this issue somewhat deeper, I found that there is a basic antinomy between ecology and economy due to a well-hidden problem within our money system.

The hidden problem – compound interest

Money – as one of the most ingenious inventions of humankind – facilitates the exchange of goods and services and, thereby, overcomes the limitations of barter, and creates the possibility of specialization as the basis of civilization. Taking a more detailed view leads us to a problem that has been ignored for a long time: the availability of money – based on the payment of interest – has two sides. The useful side most people understand immediately – sees interest as the price for money, which functions as an indicator for the scarcity of products or money in our economies – and as

such, it is difficult to replace. The problematic side, which is rarely discussed, is that interest also creates an impetus for exponential growth. What we call 'Interest' not only contains the cost of the work of the bank, a risk premium and an inflationary adjustment, (i.e. costs, which cannot be eliminated), but also contains the so-called 'liquidity premium'. This is the reward for the lender who lends his money to others. And the money owners' ability to hold money back until the 'price is right' (as it produces almost no storage costs like all other goods) forces other participants in the market to pay more than their fair share for obtaining the necessary means of exchange. Money – in its present form – therefore not only provides a key but also a lock to the market. This possibility for the retention of money tends to distort all market mechanisms and, therefore, should be eliminated. Otherwise, money (and not the provision of goods and services) becomes the prime focus of all economic activities. It inevitably leads – over time – to excesses of monetary speculation, at present, for the first time in human history, on a global scale.

CCs can be seen as powerful tools for strengthening the economic viability of a specific social sector or geographically limited region (defined here as an area between the local and the national), but also for economic activities on a worldwide scale.

We now have a world financial system in which speculation is more powerful than trade, has more financial clout, and depends on people running the system who have more to gain from instability rather than stability. Foreseeing this in 1936, Keynes wrote: 'Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done'. In the meantime, the capital development of the world seems to have become a by-product of the activities of a casino. Therefore, the question arises: How can we create a money system, which avoids the compounding of interest and all its associated problems? For this it is useful to understand three – out of at least thirty – misconceptions about money, which almost everybody holds (Creutz, 2004).

Three misconceptions

1. The 'Growth Misconception' is based on the belief that money based on interest can grow forever – and this in turn is based on people not understanding two generically different types of growth (Figure 1).

   Curve (a) represents the normal physical growth pattern in nature in which everything stops growing at an optimal size. This is the only sustainable growth pattern that exists.

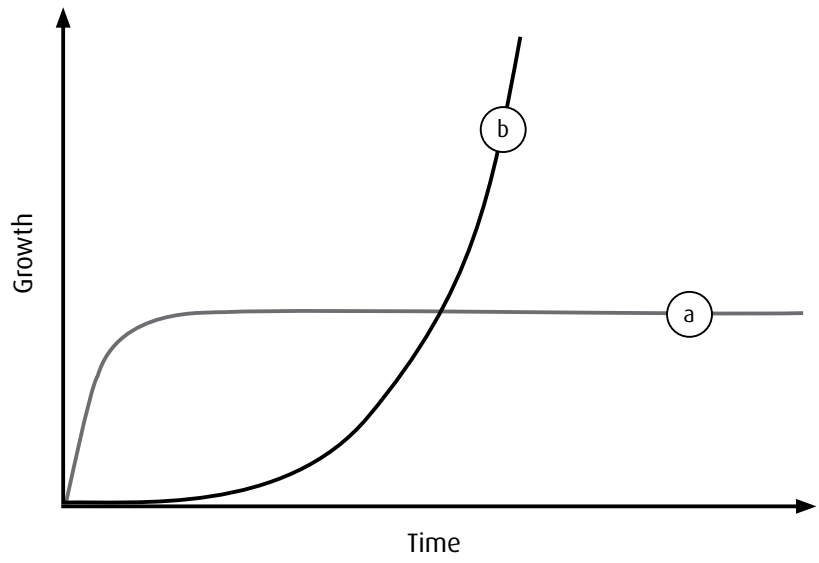
   Curve (b) represents exponential growth doubling its units at regular intervals. It may be described as the exact opposite to curve (a), in that it grows slowly in the beginning, then accelerates continually faster and, finally, grows in an almost vertical fashion.

   Based on interest and compound interest, our money follows an exponential growth pattern: at 3% compound interest it doubles in 24

years; at 6% it takes 12 years; at 12% six years. To show the impact on money in the long run, we may use the famous example of Josephs' cent invested at 5% interest in the year 0. In the year 2000 this cent would be worth over 500 billion balls of gold of the weight of the earth, at the price of gold in that year. Without the compounding of interest, the sum accumulated would have been 1,01 €. This shows that it is not interest that is the problem, but the compounding of interest. Through the use of the 'discounted cash flow', however, interest and compound interest provide the basis for all evaluations of economic efficiency for investments in conventional currencies.

2. The *Transparency Misconception* deals with the second major difficulty in fully understanding the impact of the interest mechanism on our economic system. Most people think that they pay interest only if they borrow money. They do not understand the fact that every price contains a certain amount of interest, depending on the share of capital deployed per unit of output. This relationship – together with the rate of interest – determines the interest component in prices. For the three following examples from Germany, it ranges from a 12 % interest component in the price for garbage collection (because here the share of capital costs is relatively low and the share of physical labor is particularly high) to 38% for drinking water – and up to 77% in the rent for public housing (when calculated over 100 years, which is the estimated time houses in Germany are supposed to last). On average, people in Germany pay about 45% interest in the prices of goods and services they need for their life.
3. The *Fairness Misconception* is based on the notion that everyone is treated equally in our monetary system. We all have to pay interest when borrowing money and receive interest for savings. However, when we take a closer look, there are indeed huge differences as to who profits and who pays in this system. Comparing the average interest payments and income from interest in ten equal parts of 2.5 million households in Germany, we can show that 80% of the population pay almost twice as much as they receive, 10% receive slightly more than they pay, and the remaining 10% receive more than twice as much interest as they pay. This last amount is the share that the first 80% loses (Fig.2).

Figure 2
This illustrates one of the least understood reasons why the rich get richer and the poor get poorer – and that the economists' notion that money is just a neutral measure for the economy is incorrect. In Germany, in the year 2004, about one billion Euros were transferred every day from those who work for their money to those who can make their 'money work for them' (Creutz, 2004). But money never 'works'. Only people and machines produce real value. Money can only be re-distributed from those who create that value to those who own money. In other



words, we allow the operation of a hidden redistribution mechanism in our monetary system, which continually transfers money from the large majority to a small minority, creating a social polarization that undermines any democracy over time. An Argentinean banker, who had worked in the National Central Bank for 36 years, once remarked – in regard to this figure: '…and what use is equality before the law for us, without equality before the money?'

Even more to the point, President Obasanjo of Nigeria stated after the G8 summit in Okinawa in 2000: "All that we borrowed up to 1985 or 1986 was about $5 billion. So far we have paid back about $16 billion. Yet we're being told that we still owe about $28 billion … because of foreign creditors' interest rates. If you ask me what is the worst thing in the world, I will say it is compound interest."

At that time, the developing world was spending thirteen dollars on debt repayment for every one dollar it received in foreign aid and grants (Lietaer, 2007).

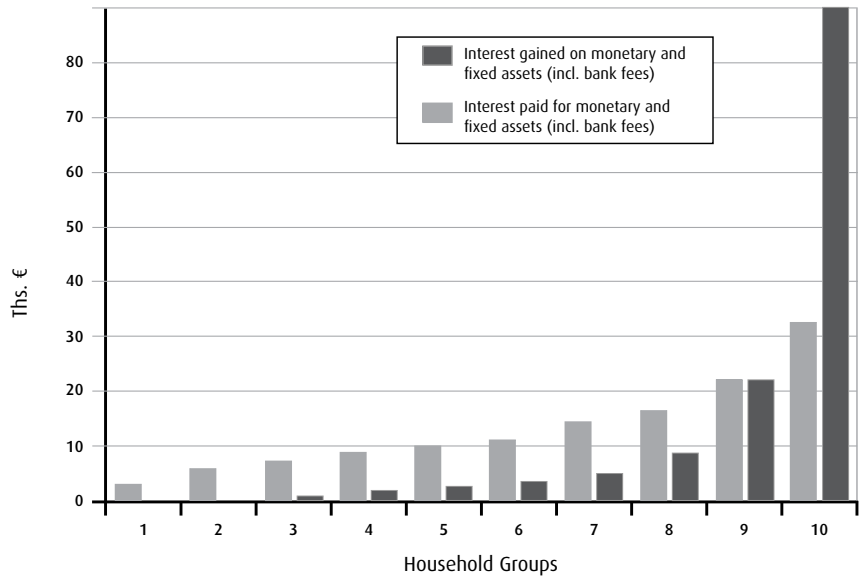
Three results

1. *Inflation*: As one result of this defect in our monetary system, every Deutsche Mark lost 80% of its value between 1950 and 2001 – and this was the most stable currency in the world. For most people, inflation seems like an integral part of any money system – almost 'natural' – since there is no country in the world without inflation. Because inflation is perceived as a given, economists and most people believe interest is needed to counteract inflation, while in fact interest is the major *cause* of inflation. True, the short-term relationship between the rate of interest

and the rate of inflation is different. It corresponds with conventional wisdom: a reduction of interest rates makes credit easier and encourages capital and consumer spending. The result is an expansion of the money supply and – in most cases – eventually a rise of the rate of inflation. Vice versa, an increase of interest rates slows down the economy, reduces the money supply and counters inflation. Empirical evidence substantiates this. But what happens in the long run? What is the relationship between interest rates and inflation over a period of – say 50 to 100 years?

Comparison of Interest Paid and Gained

In ten groups of households of 3.8 million each reference year 2000.
All values in thousands of Euros per household per year.



Empirical research doesn't give us much of a clue as it is very difficult – if not impossible – to empirically identify a clear cause and its effect and exclude the impact of other effects over such a long time span. Still, what we do know is the following: the creation of money is carried out via bank loans. Whoever receives these loans has to repay them with interest and compound interest. If we consider the world economy, it follows that the amount of money in circulation is systematically insufficient to repay all debt. Leaving aside temporary contractions, it is only by a continuous expansion of the money supply that economic actors as a whole can sustain their ability to pay. And more: In order to meet the accumulating liabilities resulting from compound interest, it even has to be an exponential expansion. Common sense tells us – and empirical data confirms – that an exponential expansion of the producing-economy is impossible over the long run. Hence, an exponential raise of M1 – that aggregate of money that is available for payments immediately – has to be avoided if hyperinflation is to be prevented.

So where is exponential growth actually taking place? The asset markets hold the answer. It is in the number of assets and in the asset evaluations – and this is especially true for the securities market that has grown exponentially over the past decades. However, unless this rise corresponds with a comparable rise in the producing-economy their surge is excessive. These overvalued assets serve as backing for creating loans. But – if the backing is getting weaker – how is the money supposed not to lose solidity? In a monetary system with compound interest, inflation cannot be prevented. At best, it can be kept at low levels for a number of decades. Ultimately, a correction – that means a massive and painful adjustment – is inevitable. We will probably see the beginnings of this process right now.

What we need today is another perspective on money in order, finally, to be able to use the full potential of one of the most ingenious inventions of mankind, and to provide everyone on this earth with the basic necessities of life.

2. *Monetary instability* is a second result of the exponential growth pattern in our money system. In contrast to measures like the meter or the kilogram, we are used to the fact that the exchange rate of our currencies varies almost daily. Cashing in on this variability, the global volume of speculative foreign currency transactions between 1974 and 2004 increased to 97% with a mere 3% of the transactions serving the exchange of goods and services, including tourism. Recent figures in 2007 show that the daily volume of trading already exceeds $3,200 billion – whereas in the 1970s it amounted to just $20-30 billion. What makes the situation so dangerous is that it creates economic instability on a global scale. In the early 1990s, for instance, speculative money flowed massively into Thailand, Malaysia and Korea, only to be withdrawn a few weeks later. Where these speculators withdrew, they left devastating effects on the culture, ecology and society.

3. *An uneven growth* of different sectors in the economy is one further result. Comparing three different indicators of net growth between 1950 and 1995 in Germany, we find that monetary assets – backed by an equivalent amount of debt – increased 461 times; the Gross National Product increased 141 times; and the net income in real wages and salaries (after tax) rose only 18 times (it actually declined after 1980 to the level of the 1970s). Few people understand that these figures drifting further and further apart indicate a severe sickness of our economic system and a growing polarization of our societies. Many believe that those 10% who profit from the system are the culprits who will not allow any change. However, even the rich are just as helpless to change it as the poor who pay more than their fair share. The late billionaire Sir James Goldsmith once said: "What use is more money to me when I will be surrounded by more and more poor and suffering people who hate me? I feel as if I have won a game of poker on the Titanic!".

A recent study of the Club of Rome proves that money is anything but neutral (Brunnhuber, Klimenta, 2003). It changes the kind of trades being performed as well as the relationships among the people using it. What we need today is another perspective on money in order,

finally, to be able to use the full potential of one of the most ingenious inventions of mankind, and to provide everyone on this earth with the basic necessities of life.

Three historical solutions

The religious leaders of Judaism, Islam and Christianity understood the problems of compounding interest and left us solutions for how to deal with it: In Islamic people who follow the Sharia observe a complex set of rules to prevent interest from compounding. It forbids not only investments in morally or socially prohibitive activities but also speculation and excessive costs of loans and, consequently, makes the moneylenders – whether private or professional – a part of the project which they are financing. Therefore, they have a strong sense of responsibility for its continuity and success.

Judaism used to resolve the problem of compounding interest by waiving all debt regularly every seven years in the so-called 'jubilee year'. After 7 x 7 or 49 years not only were debts 'for-given' and debt-slaves were freed, private land was also given back to the community.

The Christian churches in Europe, mainly during the Middle Ages between 900 and 1400 AD, imposed strict interest prohibition laws. They punished those who levied interest on loans, severely excluding them from the Christian community and Christian funerals. Money was kept in circulation by regularly re-calling and re-minting the thin metal coins – in some areas called Brakteaten – every three to four years and by levying a fee of 30 – 40% in the renewal process. This was a way of collecting taxes. The use of the old coins was forbidden by law and sanctioned by prison sentences. This time–related charge on money, called 'demurrage', acted as a 'circulation incentive' and meant that nobody was able to hoard money without risking a loss. Instead of charging interest, people usually accepted loans that guaranteed the equivalent value after some months or years – and thus they eliminated the 'liquidity premium' or reward for the lender, which causes the compounding of interest. In terms of modern banking practices, leaving out this share in the cost of interest would halve the costs for loans and subsequently, over time, the 45% share of interest in prices.

All three historic solutions have remained alive up to this day. The Islamic model is finding more and more acceptance among the Muslim population in view of the failure of the capitalist money system to provide for systemic stability and fairness. The Jewish model of waiving the debts has been advocated to counteract the capitalist money systems' inability to deal with social justice – in terms of waiving the outstanding loans of the less developed countries. And many of the complementary currencies now running in Germany are using demurrage as a circulation incentive.

Where these solutions have not been applied, three historic consequences have arisen: hyperinflation (or crash), social revolution and war. However, neither the 87 monetary crashes over the last 25 years (Lietaer 2007), nor both World Wars, nor social revolutions (like the French, Russian

or Chinese), have changed anything fundamental in terms of the money system.

Most of the complementary currencies do not charge interest but use a circulation incentive or a demurrage mechanism to keep the currency 'on the move'; thus they avoid all the dire consequences associated with interest.

Various complementary currency models have tried to resolve the problem of compound interest through a time-related fee in order to keep money in circulation. They proved their potential to create employment and solve social problems in the 1930s in Austria and Germany – just before Hitler gained power. However, they were discontinued on 'legal' grounds as they threatened the monopoly of central banks. It is, therefore, of paramount importance to start communicating with central banks, now, in order to create a sustainable legal framework for complementary currency systems on a scale that counts. Otherwise, we are heading for the abyss yet again. This time the options seem to be crash or war.

One additional approach for 'taming' the economy comes from a Buddhist perspective. In contrast to Adam Smith's 'invisible hand' – and the liberal and neo-liberal acceptance of the profit motive in all individuals, Brodbeck (2007) points out that the starting point of a Buddhist economy is every individual's freedom to recognize what is true for enhancing life and to change its behavior accordingly. Thus, we can overcome the three 'poisons' that are part of the accepted theoretical and practical basis of the global market economy: ignorance, greed and aggression.

Complementary currencies and the use of demurrage

Complementary Currencies (CCs) may be defined as means of payment with a built-in target. They are not meant to replace the existing national or international currencies but to complement them. Mainly in social, cultural and ecological areas in which the present system does not work very well, new liquidity can be created without burdening the taxpayer or governments with additional costs. CCs can be seen as a powerful tool for strengthening the economic viability of a specific social sector or geographically limited region (defined here as an area between the local and the national). In many instances, they have proven their potential to support and strengthen the economy – especially in economically difficult periods. The Fureai Kippu Care Ticket in Japan, for instance, helps to provide care for millions of elderly people, based on hours of service. The WIR Wirtschaftsring in Switzerland is a parallel currency to the Swiss Franc and strengthens the economic viability of 20% of the small and medium sized businesses, which in turn create over 80% of all jobs. And the Saber (a proposed educational voucher system for Brazil) is designed to strengthen the educational system.

The Brazilian 'Saber' demonstrates clearly the different design features of complementary currencies in comparison to conventional currencies. That is the reason why I want to describe it here in more detail. In Brazil 40% of the population is less than 15 years of age. This causes an enormous educational problem. When the mobile phone industry was privatized, the government levied a 1% surcharge for education on all mobile phone bills. This resulted in a fund of one billion US$ or three billion Reals for education

in 2004. Bernard Lietaer proposed the introduction of a voucher system called 'Saber' in order to increase the number of students that could afford a college level education. The vouchers would be given to schools for the youngest (e.g. the seven year-old) pupils, on the condition that they would choose a mentor from an older class to strengthen their weaker subjects. The Saber would then move to the older schoolchildren, and so on until, at last, seniors of 17 years (who want to go to university) would use the Sabers to pay a part of their tuition. While the value of the Saber would be the same as the Real, nominally, it would only be redeemable for tuition payments for higher education. In addition, it would lose 20% per year as an incentive to pass it on – unless it had reached the universities. Thus (including a reduced tuition rate for those subjects with free spaces in the universities), the Saber system would multiply by ten times what a direct allocation of the resources for education would otherwise allow and, thereby, create ten times the amount of education services.

Differences between complementary and traditional currencies

The differences between complementary and traditional currencies are marked indeed:

Instead of being profit-oriented they are use-oriented – their primary goal is to connect underutilized resources with unmet demands. They are clearly marked as not being legal tender – thus their acceptance is entirely voluntary. Their limited – instead of general – acceptance provides a 'semi-permeable membrane' around the function (or the region) for which they are designed; they cannot be used to buy products from abroad or to speculate on the international financial markets.

Most of the complementary currencies do not charge interest but use a circulation incentive or a demurrage mechanism to keep the currency 'on the move'; thus they avoid all the dire consequences associated with interest. They can be established through a transparent process and, therefore, can be democratically controlled by the users.

As they are always 100% covered by services or products, they are not inflating. They are a proven means to counteract economic boom and bust cycles in contrast to conventional currencies, and thus support the policies of central banks and governments (Stodder, 1998). They can stop the drain of financial resources from low-wage countries, thereby calling a halt to the resulting loss of wealth and job opportunities, and promoting community instead of destroying it. They create a win-win situation for everybody: from an expansion of educational benefits to solving the problems of the increasing numbers of elderly; from the protection of cultural identity to marketing regionally grown foods; from an ecologically sensible use of the shortest transportation routes to exercising ethical concerns when utilizing non-renewable resources, providing closer links between consumers and producers and helping to re-animate local and regional identity and diversity.

One additional difference and reason for the introduction of complementary currencies on a scale that counts, would be the massive redemption of tax revenue that is, at present, evaded due to multinational companies playing off national tax authorities against each other in such a way that many of them pay very little or no tax in their home economies. Somewhere between a sixth and a third of all the money in the world – is now lodged offshore, and though it re-enters the economy, it does so mostly in the form of short-term speculation in the growth centres of the world (Doyle and Kanoor, 2006).

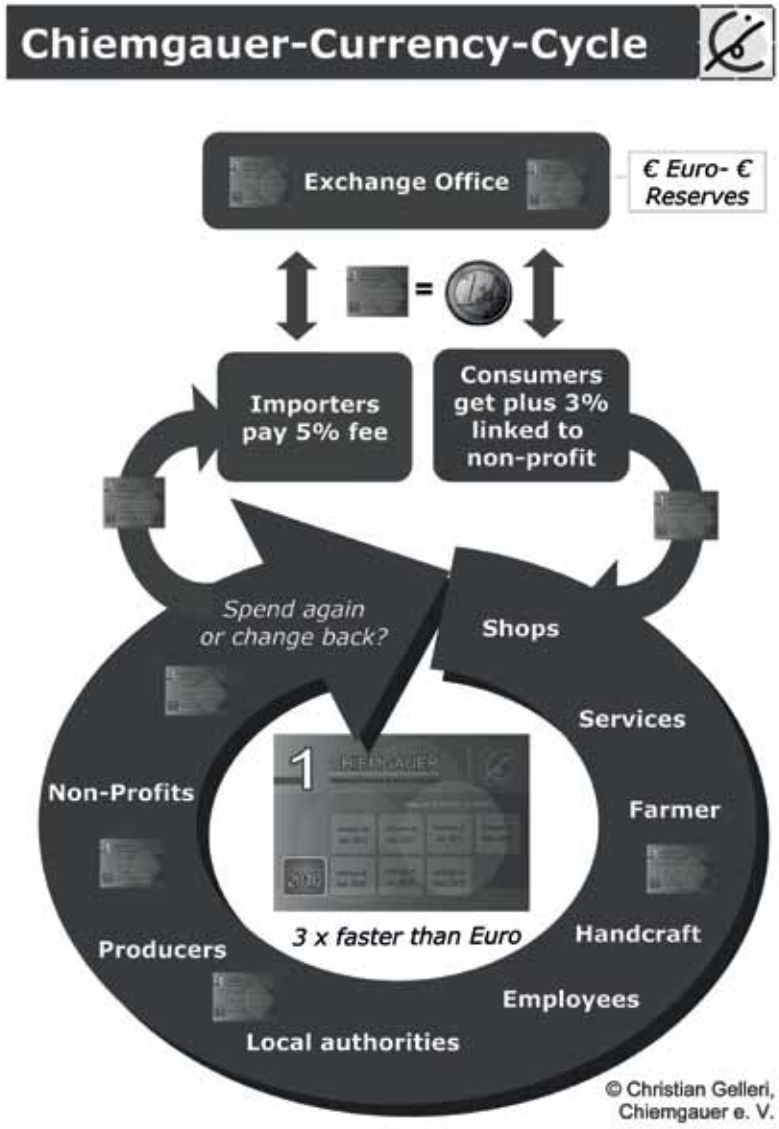
Regional complementary currencies

...monetary sustainability will be enhanced by a diversity of currency systems, so that multiple and more diverse channels of monetary links and exchanges can emerge.

In addition to the above list of advantages, regional currencies offer a feasible way to counteract the negative consequences of financial globalization. They allow a partial decoupling from the global financial system, and thus may become an effective life raft in the case of a global financial meltdown. Everyone who accepts 'Regios' – as they are often called – will pass them on to another person who shops with it in the region.

Of altogether 22 practical examples of regional currencies that are, presently, up and running in Germany – one of the first is the Chiemgauer, circulating in the region around Lake Chiem, Bavaria. Initiated in January 2003, it uses a voucher model. A bonus of 3 % is given to selected regional associations for purchasing Chiemgauer vouchers. The associations in turn sell one Chiemgauer for one Euro to their members, who profit by supporting their association without paying for it. The members can spend it in over 560 participating shops. The 2000 participants accept an annual fee of 8% to guarantee circulation. Four times a year a stamp (worth 2% of the value of the voucher) has to be attached to Chiemgauer notes in order for them to retain their nominal value. The businesses that accept the vouchers can either exchange them for Euros at a 5% fee – or can use them for paying other businesses. If they pass the vouchers on, they do not have to pay the fee. Both exchange fee and circulation incentive are tax deductible, because they are seen as customer loyalty schemes. Since August 2006, an electronic version of the Chiemgauer is being used in Wasserburg/Inn, which makes it easier to deduct this time-related fee. The 550.000 Chiemgauer that were issued in 2006 circulated about three times as fast as the Euro. They changed hands over 20 times, while the Euro changed hands on average seven times per year, thus creating and keeping the added value in the region (www.Chiemgauer.Info).

A new model amongst the complementary regional currencies in Germany is the 'SonnenSchein' (translates as sun-note and sun-shine) a currency backed 100% by kilowatt-hours from renewable energy production. It combines two recent innovations and synergizes their effects: firstly, the German feed-in legislation that allows those who invest in the provision of solar energy a secure return on their investment at the expense of all the customers of electricity (a model which is now copied by over 40



countries around the world), and secondly, the experiences of 22 initiatives in Germany, which have already issued their own regional complementary currency. The 'SonnenSchein' is designed to enhance the use of renewable energy and create the backing for a complementary regional currency through the 'kWh-harvest' which is going to appreciate in value as fossil fuels get more expensive. Thus, the inhabitants of the region can acquire a stable, inflation-proof and crash-resistant currency. Unless necessary – as in the case of a crash or hyperinflation of the Euro – it will not be subject to a fee or demurrage, as the initiators believe that the limited acceptance in the region provides enough of an incentive to use it before spending the Euro.

Conclusions

While complementary sectoral and regional currencies can show how applying relatively small amounts of energy and resources at the right time and place can produce maximum advantageous change, it should be made clear that their basic tenets can also be applied on a larger scale. At least two solutions for complementary currencies that are meant to operate on a worldwide scale should be mentioned: the emissions-backed currency unit called 'EBCU' (Douthwaite, 1998); and the 'Terra', a global Trade Reference Currency (Lietaer, 2007). Both aim at adding more fairness, sustainability and stability to our international monetary systems.

The solutions for monetary sustainability and financial stability, presented here, will be a surprise for conventional economic thinking, which invariably assumes monopolies for national moneys as an unquestionable given. What the above examples are trying to show is that monetary sustainability will be enhanced by a diversity of currency systems, so that multiple and more diverse channels of monetary links and exchanges can emerge. We have all the technologies to make the use of multiple currencies feasible. However, complementary currencies operate as yet at the margins of the official system. While they are proving their capacity to play a stabilizing role on a small scale, it is urgent to recognize that they can contribute to sustaining the global economic system tomorrow, if they are able to grow to a scale necessary for them to make a difference. For allowing this to happen, a co-operation between central banks and federations of complementary currency associations – which formulate quality criteria and observe their implementation – is an essential pre-condition.

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Celebrated green economist, Hazel Henderson, draws upon her extensive experience of complementary currencies to pinpoint the manifold weaknesses with current monetary systems and to describe various alternatives. She provides a good historical contextualisation of the emergence of alternative money systems.

The Politics of Money

Hazel Henderson

The word is out that economics, never a science, has always been politics in disguise. I have explored how the economics profession grew to dominate public policy and trump so many other academic disciplines and values in our daily lives. Economics and economists view reality through the lens of money. Everything has its price, they believe, from rain forests to human labour to the air we breathe. Economic textbooks, Gross National Product (GNP) and the statistics on employment, productivity, investment, and globalization – all follow the money. Happily, all this focus on money is leading to the widespread awareness of ways money is designed, created and manipulated. This politics of money is at last unravelling centuries of mystification.

Civic action with local currencies, barter, community credit and the more dubious rash of digital cybermoney all reveal the politics of money. Economics is now widely seen as the faulty source-code deep in societies' hard drives… replicating unsustainability: booms, busts, bubbles, recessions, poverty, trade wars, pollution, disruption of communities, loss of cultural diversity and bio-diversity. Citizens all over the world are rejecting this malfunctioning economic source-code and its operating systems: the World Bank, the IMF, the WTO and imperious central banks. Its hard-wired program, the now derided 'Washington Consensus' recipe for hyping GNP-growth, is challenged by the Human Development Index (HDI), Ecological Footprint Analysis, the Living Planet Index, the Calvert-Henderson Quality of Life Indicators, the Genuine Progress Index and Bhutan's Gross National Happiness… not to mention scores of local city indices such as Jacksonville, Florida's Quality Indicators for Progress, pioneered by the late Marian Chambers in 1983.

As with politics, all real money is local, created by people to facilitate exchange and transactions, and it is based on trust. The story of how this useful invention, money, grew into abstract national fiat currencies backed only by the promises of rulers and central bankers is being told anew. We witness how information technology and deregulation of banking and

finance in the 1980s helped create today's monstrous global casino where $1.5 trillion worth of fiat currencies slosh around the planet daily via mouse clicks on electronic exchanges, 90% in purely speculative trading.

New Fed Chairman, Ben Bernanke opined that the mystery of low bond yields and interest rates was due to a 'global savings glut'. Former Fed Chairman Greenspan, whose zero real interest rates flooded the US economy with excess liquidity and helped create the dot-com, housing, and global asset bubbles, declared himself 'perplexed'. The anomaly involves the global economic imbalances between the USA, the world's largest debtor – borrowing the lion's share of global capital – and the developing countries of Asia and those exporting oil as the world's new lenders. I doubt there is a 'global savings glut' or a 'Shift of Thrift' from indebted U.S. household's zero saving rates to thrifty Asian savers as claimed in The Economist editorial of Sept. 24, 2005. My view is that there's a global flood of fiat paper money – mostly trillions of US dollars – amplified by the pyramiding of financial 'innovations' (derivatives, hedge funds, offshore 'special purpose entities', currency speculation, and tax havens) vis-à-vis real production of goods and services in the real world.

… the defrocking of economics, the deconstructing of money systems and the growth of all the healthy local, real world alternatives is propagating widely.

Today, we see worldwide experimentation with local exchange, barter and swap clubs, such as Deli-Dollars, LETS, Ithaca Hours and other scrip currencies in the USA and Canada. Billions of people still live in traditional non-money societies and the world's mostly female voluntary sectors. I have described these huge uncharted sectors as the 'Love Economy' estimated by the Human Development Report (United Nations Development Program 1995) as $16 trillion simply missing from economists' global GDP that year, of $24 trillion. Others have described these non-money sectors, notably Karl Polanyi in *Primitive, Archaic and Modern Economies* (1968); Lewis Hyde in *The Gift* (1979); Genevieve Vaughan in *For-Giving* (1997); Dallas Morning News financial editor, Scott Burns in *Home, Inc* (1975); Edgar Cahn's *No More Throw Away People* (2004) and his time-banking programs now emulated worldwide (*The Time Dollar How To Manual,* www.timedollar.org).

All this hands-on experimenting resulted in an explosion of grassroots awareness about the nature of money itself. As local groups and communities created their own local scrip currencies and exchange systems, they learned about economists' deepest secret: money and information are equivalent – and neither is scarce! As money morphed from stone tablets, metal coins, gold and paper to electronic blips of pure information – the economic theories of scarcity and competition began to be bypassed by electronic sharing and community cooperation. Barter, dismissed in economic textbooks as a primitive relic – went hi-tech. eBay, the world's largest garage sale, is an example of how to bypass existing markets.

People began to see how central banks and national money-systems control populations by macro-economic managing of scarcity, employment levels, availability of mortgages and car loans, via the money-supply, credit, interest rates and all the secretive levers and spigots used by central bankers. Even Nobel prizes were politicized as mathematicians in 2004 challenged

the so-called 'Nobel Memorial Prize in Economics' demanding its de-linking from the Nobel prizes and to confess its real name, 'The Bank of Sweden Prize in Economics'. The mathematicians, Peter Nobel, grandson of Nobel, and many other scientists object that economists misuse mathematics to hide their faulty assumptions – and that economics is not a science but a profession. The row over the 2004 Bank of Sweden Prize was because its recipients had authored a 1977 paper with a mathematical model purporting to 'prove' why central banks should be independent of political control – even in democracies. Central banking too, is politics in even deeper disguise, as I describe in '21st Century Strategies for Sustainability'.

Today, rapid social learning about the politics of money and how it functions is revealing this key mythology underlying our current societies and its transmission belt: that faulty economic source-code is still replicating today's unsustainable poverty gaps, energy crises, and resource depletion. Climate change creeping upon us for 25 years is the latest media wake up call, and predictably economists quickly 'captured this issue for our profession', as a UK economics group put it (Henderson, 1996), to promote their pollution and CO_2 trading 'markets'. In spite of such efforts, the defrocking of economics, the deconstructing of money systems and the growth of all the healthy local, real world alternatives is propagating widely. The World Social Forum launched in sunny Porto Alegre in 2000 by Brazilian reformers is one of many such worldwide movements. Argentina's default in 2001 taught its citizens that they could trust their own local scrip, flea markets and electronic swap systems more than the country's official currency: the peso. Argentina, Brazil and Venezuela have announced they will repay their IMF loans in full – to free their economies from 'Washington Consensus' prescriptions.

The story of how this useful invention, money, grew into abstract national fiat currencies backed only by the promises of rulers and central bankers is being told anew.

I have documented over the years many of the pioneers of money reform: the Time Store in Cincinnati in the 1890s; Ralph Borsodi's 'Constants' in Exeter; NH in 1972, and during the 1930s 'bank holiday'; Vermont's own Malted Cereals Company scrip, issued in Burlington; and the Wolfboro Chamber of Commerce's scrip in New Hampshire. The Chicago Plan, promoted in the 1930s by University of Chicago economists, sought to reform money-creation by private banks as debt. Through this fractional reserve system, banks are only required to keep less than 10% of their capital in reserve. Banks can lend out the rest at interest, simply creating money out of thin air as loans in their accounting entries! The American Monetary Institute (www.monetary.org) founded by Stephen Zarlenga, has revived the Chicago Plan, which would raise the fraction of reserves banks must hold – and return the national money-creation function to the federal government. Money would be created and spent into circulation through building and maintaining public infrastructure, roads, education and vital services. Such interest-free money would save municipalities and states billions in interest payments on their bonds and prevent accumulation of debts that lead to bubbles, booms and busts. Ken Bohnsack's Sovereignty Bill promotes these reforms, all summarized in Zarlanga's *The Lost Science of Money* (2004) and

Today's global imbalances, deficits, bouncing currencies, poverty and debt crises require a systemic redesign of that faulty economic source code.

The Truth in Money Book by Theodore R. Thoren and Richard F. Warner.

Other perennials – E. F. Schumacher's *Small is Beautiful* (1973), James Robertson's *Future Wealth* (1989), Margrit Kennedy's tireless teachings, and a record of Robert Swann's work and papers on community economics – are all available at the E. F. Schumacher Society's Library (www.smallisbeautiful.org). The Society, engaged in both theory and practice, founded the SHARE micro-credit system in 1981, created Deli Dollars and other customer financing methods in 1989, and is about to help launch the BerkShare local currency program. Since its founding in 1980, the Society has documented other community credit pioneering, such as Michael Linton's LETS experiments, Paul Glover's Ithaca Hours, and other projects all highlighted at its 2004 conference Local Currencies in the Twenty-First Century. Bernard Lietaer's The Future of Money (2001); Lynn Twist's The Soul of Money (2004); William Krehm's COMER Newsletter (www.comer.org) and James Robertson and Josef Huber's Creating New Money (2004) continue to inform us.

My bookshelf on alternative economics, barter, credit and currency system continues to grow, and includes Ralph A. Mitchell and Neil Shafer's indispensable, eye-opening self-published *Standard Catalogue of Depression* Scrip of the United States in the 1930s (Krause Publications, Iola, WI, 1984). It contains thousands of pictures of alternative scrip currencies issued in almost every US state and city (many in Canada and Mexico after the Great Crash of 1929) and the bank failures that followed. During the 1980s in all my talks across North America advocating local self-reliance and alternatives to fiat money, I carried this heavy volume along to show how local inventiveness helped overcome the failures of national banking and finance. People would raise their hands in recognition as I would show on overheads the scrip used in their state. "I remember these in my Dad's bureau!" "My Mom used that to buy our groceries!"

So, today, as the global casino again reaches crises of abstraction, derivatives, currency futures, and financial bubbles – we have been here before. Today's global imbalances, deficits, bouncing currencies, poverty and debt crises require a systemic redesign of that faulty economic source code. Worried finance ministers and central bankers call vainly for a 'new international financial architecture'. They do little but fret about this behind closed doors, at meetings of the G-8, WTO, and in Jackson Hole and Davos. Some clever libertarians try to beat the bankers at their own game with global digital currencies backed by gold, including e-gold Ltd, Gold Money and Web Money. Based in offshore havens, Nevis, Jersey, Moscow, and Panama, they have become platforms for cyber-crooks (*Business Wee*k, January 9, 2006). The rest of us are redesigning healthy home-grown sustainable local economies – all over the world.

Before we fall into 'either/or' errors, we should avoid doctrinaire 'smallness', ideological localism, and knee-jerk libertarianism. None can protect local communities from the ravages of market fundamentalist-driven globalization. Like it or not, we are all 'glocal' now. Communities,

like cells in the body-politic and the body, need boundaries or membranes to keep out elements destructive to the cell's integrity. But all cell membranes are semi-permeable to allow needed elements, information and energy exchanges from the environment to pass through. In today's information saturated world, communities need to understand anew which elements to reject and which to embrace. Wholesale rejection can lead to rigidity, xenophobia, and misreading of history. Wholesale acceptance of current unsustainable economic global trends will surely lead to loss of local culture and biodiversity and to resource-depletion. We humans have been adept at creating new scenarios and technologies that mirror our lack of systemic knowledge and foresight. From such social changes and unanticipated consequences, we must then learn and evolve – or suffer ecological collapse.

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Ross Jackson was for many years a management consultant specializing in the area of international finance, investments, portfolio theory and currency markets, where his clients included many of the international banks which found themselves in severe difficulties in the financial crisis of 2008. Ross is founder/chair of Gaia Trust, Denmark and majority shareholder in organic foods wholesaler Urtekram A/S, Denmark.

Reforming the Financial Casino

Ross Jackson

> People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public.
>
> Adam Smith, author of *The Wealth of Nations* (1776)

The 2007/08 financial crisis demands the adoption of urgent reforms that will minimize the likelihood of a repetition. If reforms similar to those recommended below are not taken, we can expect new crises to appear every few years, each one differing from the last (as the financial community is very innovative), but always due to the same underlying cause – a lack of adequate financial regulation and supervision. Ironically, the need for such regulation was advised by the 'father' of modern economic theory, Adam Smith, whose principle of the 'invisible hand' is often used as a justification for corporate deregulation by the neo-liberals who brought about the financial crisis of 2007/08.

Smith's principle states that an individual acting in his self interest will also be benefiting the greater society. This was a reasonable theory in the 1770s of England when capital was local, businesses were relatively small and decentralised, and agriculture was the major industry, characterized by many small producers who were unable to affect market prices, and who operated under a set of government regulations which Smith deemed 'just and equitable'. Adam Smith was very conscious of the human and social impacts of his economic theories, and of the morals of the merchant class, having no confidence whatsoever in their ability to regulate themselves. He would never have approved of the deregulation regime of the last quarter century. Indeed, he warned of the dangers of relaxing government regulation of the private sector, which he feared would lead to abuse of the public interest and inequalities of wealth that would be socially unstable.

What we have experienced in the 'free market' regime of 1980-2008 is a direct consequence of ignoring Adam Smith's warning. The modern economy is very different from 18th century England, particularly regarding the

concentration of capital in enormous oligarchies, whose owners are able to affect not only prices, but the whole political process, including how they themselves are regulated. But the morals are the same. It is not surprising then that this political leverage was used in the 1980s to push the neo-liberal Reagan/Thatcher governments and their successors to deregulate private business to an extent never seen before. The most glaring example of this was George W. Bush's policy of letting the foxes guard the chickens, as he filled leading positions in government agencies, which are supposed to protect the public from corporate abuses, with campaign-contributing cronies from the industries to be regulated.

Thus the major cause of the crisis can be summed up in one word – deregulation.

Deregulation

The post 1999 financial world became a casino unrelated to the underlying economy.

In my opinion, a major tipping point of the crisis was the repeal of the American Glass-Seagall Act in 1999. This act was passed back in 1934 to prevent the kinds of irresponsible and unregulated speculation that was identified at that time as a major cause of the 1929 stock market crash. The effect of the original act was to separate normal retail banking functions from all other financial activities such as asset management, investment advising, trading on own account, stock brokerage and insurance, and to introduce a stricter regulative regime in all these sectors. When this Act was repealed in 1999 after pressure from the neo-liberals, the way was opened for unregulated speculation, often off the banks' balance sheets. The post 1999 financial world became a casino unrelated to the underlying economy. The use of highly-geared derivates like options and credit default swaps (CDS), which did not exist in the 1930s, made the risks even higher than in earlier days.

Credit default swaps

Take the example of Credit Default Swaps. A CDS resembles an insurance policy between investors in a particular company's corporate bonds and an insurance company, which will cover any deficit if the company defaults on its debt. However, a CDS is not classified as insurance, and therefore is unregulated. On a small scale, this is not a big problem. But what happened historically from 1995 onwards, was that CDS contracts were entered into between speculators (the deregulated financial institutions) on many major companies' corporate bonds even though neither party had any connection to the companies involved. These contracts, entered into on an individual basis via the largest commercial and investment banks, might as well have been bets on a horse race. They play no role whatsoever in the real economy. There is no limit to how many contracts might exist for any particular company. It was recently estimated that CDS contracts for over $60 trillion are in circulation, greater than the total GDP of the entire world. The major players in the speculation are unregulated hedge funds, private equity funds

and the world's largest commercial and investment banks, most of which have sold risky CDS contracts on very low margin.

As long as the economy evolved without any major shocks, both the sellers and buyers had a common interest in doing CDS deals. The sellers could see a steady inflow of premium income with only a small deposit as margin and an apparently low risk, while the buyers could inflate their current profits and management bonuses (and thus exploit their investors) by revaluing their bond holdings to par value, since they were now guaranteed, while the costs would be booked in later years (somebody else's problem). The whole structure was very fragile due to the enormous positions taken on very low margin – an accident waiting to happen.

The collapse of the over-geared US housing market was the trigger that started the avalanche. Many CDSs included contracts on packages of subprime debt, resulting in enormous unrealized losses on and off many balance sheets. To make matters worse, the ability of the sellers of CDS contracts to pay up in case of a default was often unknown to the buyers. This was one of the major reasons for the 'freeze-up' where financial institutions were reluctant to deal with each other due to the lack of transparency and unknown off balance sheet risks. Super investor Warren Buffet correctly called this type of geared derivative a 'financial weapon of mass destruction'. A chain reaction started by the bankruptcy of a major bank or corporation like troubled General Motors could wipe out trillions of dollars of capital and send the real economy into a long depression. This is the background for all the rescue packages.

The numbers became grotesque. In the 1950s the typical ratio of a CEO salary to the average worker was about 12:1. Today, in the USA it is closer to 400:1 and the trend is the same everywhere.

Local banking undermined

One of the results of the consolidation of different financial services in the same institution has been the weakening of traditional regional banking. Without their knowledge and approval, the savings of many local citizens was being siphoned off to far away financial behemoths that used the unsuspecting local citizens' money for speculative ends rather than for productive loans to citizens and real businesses.

The rich get richer

A by-product of deregulation has been an explosion of salaries and bonuses in the private sector, especially in financial institutions. The 'greed is good' mentality went to extremes. The numbers became grotesque. In the 1950s the typical ratio of a CEO salary to the average worker was about 12:1. Today, in the USA it is closer to 400:1 and the trend is the same everywhere. Such large differences are socially unstable and have historically often been the trigger for revolution. Obscene bonuses encourage managers to take unnecessarily high risks with other people's money. In addition, the system attracts the wrong kind of people to jobs which require prudence and a sense of social responsibility.

But it is not only CEOs that have benefited. The general result of a quarter century of so-called 'free markets' (that are not at all free) and deregulation has been that the gap between rich and poor has widened dramatically, not only within the Western industrial states, but between the rich and poor countries. This too was predicted by Adam Smith to happen if government regulations should be relaxed.

...it might be possible to shift status in society away from an 'earnings scorecard' and towards personal contributions to the greater society.

Recommendations

The following recommendation should be adopted by an international group such as the G-20 and implemented world-wide on an urgent basis.

1. Every country should implement a new Glass-Seagall-type law in an updated form, this time to include hedge funds, private equity funds and derivative trading. We must separate financial activities once again into independent commercial entities and regulate them closely to protect the public interest.

2. Purchases of geared derivates should be limited in practice to investors who have a direct underlying interest. Speculators with no direct interest should be required to put up a much higher margin, even up to 100%. (Today they typically put up less than 10%, which makes speculation too tempting.) This would decimate risky speculation with other people's money without harming the hedging activities of legitimate businesses.

3. The enormous 2008 taxpayer rescues of major banks across the world due to uncontrolled speculation has demonstrated once and for all that banking is too important for the health of society to be left to the whims of bank managers, bent on taking high risks for personal gain at the expense of shareholders and taxpayers, who end up paying the bills when things go wrong. The lesson learned is that TOO BIG TO FAIL (TBTF) means TOO BIG TO PRIVATIZE (TBTP). In future the state should have a 'golden share' in all banks, bestowing the right to a seat on the board and a veto right over any board decision. The state's representative should have the obligation to protect the public interest, including vetoing any non-transparent or potentially dangerous speculative scheme at an early stage.

4. The concept of 'off balance sheet' risk must be eliminated. All exposure and potential losses must be reflected in the standard accounts.

5. All US hedge funds and private equity funds should be required to register with the SEC and become taxable under domestic laws. Similar laws should be implemented in all other countries. Incorporation in tax havens should as a rule be considered tax evasion by the owners unless proven otherwise (e.g. local businesses).

Two additional reforms should be considered on a less urgent basis:

1. The importance of local retail banking should be re-established. Tax incentives should be granted to banks which are owned locally and which lend over 80 percent of their funds locally. Complementary currencies should be legalized and encouraged to promote the building of local wealth.
2. To get greed under control, the principle of 'mandatory philanthropy' should be considered. Anyone earning more than, say, 12 times the average worker wage would be taxed at 100%, however with the condition that the person can have an influence on how his or her tax money is used by prioritizing a list of government approved projects, which need funding. These could be environmental restoration projects, fundamental research, charitable activities, etc. In this way it might be possible to shift status in society away from an 'earnings scorecard' and towards personal contributions to the greater society. A more egalitarian society would be a far more stable and enjoyable place for the great majority.

Bernard Lietaer, renowned international expert in currency systems, both conventional and complementary, describes an ingenious proposal he has come up with for an educational currency in Brazil. His proposal would enable the benefits of a complementary currency to ripple through the entire educational system.

The Saber: A Complementary Currency for Learning

Bernard Lietaer

One of the few certainties we have about our future is that it will require a massive amount of learning, by just about everybody, everywhere. In addition, over the past three decades an avalanche of scientific data has been pouring in which reveal that learning – and even more importantly, learning retention – depends less on the person or the topics involved, but on the delivery system of the knowledge. Indeed, average learning retention rates of children or adults are dramatically different depending on the process through which learning occurs. The result is the learning pyramid shown next.

What is striking is that our formal education system seems stuck on using mainly the two least effective methods available: lecturing and reading through which respectively only 5% and 10% of what is being taught will be remembered. At the other end of the spectrum a whopping 90% retention rate applies to whatever one teaches oneself to others!

Question: Can one imagine what would become possible if we managed to reverse our entry into the learning pyramid by designing an incentive system that would encourage the emergence of chains of 'learning through teaching'? Such a system could be designed to operate in parallel with the official schooling, as a special kind of extracurricular intergenerational game, so that it doesn't have to deal with teacher's unions, or ordinary school procedures… Although this concept was initially designed for Brazil, there is no reason to believe it wouldn't be applicable elsewhere.

The Brazilian Saber

When Brazil privatized its mobile telephone industry, it introduced a 1% special tax earmarked for higher educational purposes. By 2004, this Education Fund had grown to more than U.S. $1 billion. The conventional solution would be to copy the 'GI Bill' approach used in the United States after World War II, through which government funds were used directly for

student scholarships. However, by introducing a complementary education currency, a substantial 'learning multiplier' can be set in motion, so that a given amount of money can facilitate substantially more learning for a greater number of students. And the currency would fuel this learning multiplier without creating any new financial pressure on the economy.[1]

The initiator of the project, hereafter called the 'Saber administrator' could be a non-profit organization or the Ministry of Education itself. This Saber administrator would issue a specialized paper currency, the 'Saber' (pronounced saa-bear, meaning 'knowledge' in Portuguese), which could only be redeemed to pay for tuition fees at participating universities for the academic year printed on the Saber itself – for example, year 2010. If they were not used to pay for tuition during that year, they could be exchanged for Sabers of the following year – the year 2011 – but with a penalty of 20%, giving a strong incentive to use the currency on or before the 2010 deadline.

Let us assume that the additional enrolment capacity at participating universities is estimated at 10,000 students per year and that the average tuition amounts to 3,000 national money units per trimester. The Saber administrator would then make available 30 million Sabers per trimester, earmarked for each specific year concerned. These Sabers would be allocated to primary schools in economically depressed areas where funding typically is not be available for higher education. They are given to the youngest students (seven-year-olds) on the condition that they choose a mentor from an older class (a ten-year-old) to work with the younger student on his or her weakest school subjects. The Sabers are transferred to the older student in compensation for the hours spent mentoring. The ten-year-old can do the same thing with a 12-year-old, and the latter with a 15-year-old, and so forth. Up to this point, this process has already been tested with Time Dollars in the U.S. school system with great success.

However, by introducing a complementary education currency, a substantial "learning multiplier" can be set in motion, so that a given amount of money can facilitate substantially more learning for a greater number of students.

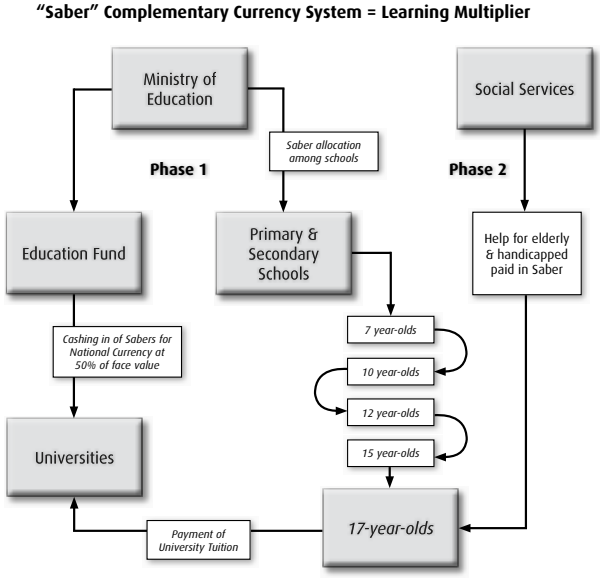
At the end of this 'learning chain', the Saber would go to a 17-year-old who would then be able to use his or her accumulated Sabers to pay all or part of university tuition. The university in turn would be able to exchange the Sabers for conventional money through the Education Fund (see Figure 13.1), but at a discount of say 50%. This process is possible because most of the costs at a university are fixed and the marginal cost of an additional student has little impact on those expenses. In the above example, we have assumed that the Saber circulates five times before it reaches the university. The total learning multiplier for the education budget allocated to this project would then be a factor of ten (five times for the exchanges among students of different ages, multiplied by two times for the arrangement between the Ministry of Education and the university). In this way, many more children would benefit from a better education, from a greater involvement with the learning process, and from the chance to go to university, than would have been possible if the Education Fund was used only for direct student scholarships.

Notice that this process would automatically encourage the spontaneous emergence of chains of 'learning by teaching' from the bottom up among

kids of all ages. When we refer to a learning multiplier of ten, we were only referring to the narrow financial effect: $1 Billion spent through the Saber system would deliver a total learning of an order of magnitude of $10 Billion spending on the conventional scholarship model. Furthermore, factoring in the change of the learning retention rate from 5-10% (normal education procedure) to 90% (teaching others), another tenfold effect becomes available, bringing the total multiplier of 'retained learning' to one hundred! In other words, spending $1 Billion through the Saber system could be roughly estimated to produce the same amount of retained learning equivalent to $100 Billion spent through conventional means…

As this system develops, other ways of earning Sabers could be introduced. For example, why not eradicate analphabetism on a planetary level in one decade? Can you visualize an army of eight year olds proudly teaching their freshly learned reading and writing skills to someone else's grandparents? Why not have young people earn Sabers by helping the elderly or handicapped, even in other ways than teaching: reading to the blind, helping with shopping? Learning beyond schools could become a vast and rich intergenerational game… All this would encourage intergenerational relationships and further learning, not to mention creating extra aid for the elderly without burdening governmental budgets. Given that all countries are expecting a higher percentage of elderly people to take care of, would it not make sense to connect domains of problems – education and elderly care – into one integrated system solution?

Given that all countries are expecting a higher percentage of elderly people to take care of, would it not make sense to connect domains of problems – education and elderly care – into one integrated system solution?



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Jonathan Dawson is a resident of the Findhorn Foundation ecovillage in Scotland. In this piece, he describes the community economies of both Findhorn and the Italian ecovillage, Damanhur. Both communities have developed distinctively dynamic and diverse economies at least in part because they have their own community currencies and systems for enabling members to invest in community enterprises.

A Tale of Two Ecovillages:
Reviving the Health of Local Communities

Jonathan Dawson

There are signs of a growing awareness of the multiple dangers entailed in the loss of small-scale, locally based production systems. This is reflected in the growth in popularity of farmers' markets, community-supported agriculture schemes, credit unions, buy-local campaigns. Fair trade link-ups, and other initiatives to win back some community control over the processes of production and consumption. For the most part, these remain isolated initiatives: subscribers to organic box schemes, to give but one example, may have gone some way towards localising their food supply, but more than likely, in most other areas of their lives, they remain as dependent as ever on the global corporate economy.

Damanhur in Italy and the Findhorn Community in Scotland have consciously set out to reduce their dependence on the global corporate economy and to re-weave the web of a more complex, locally based social economy.

For the individual, for the household, even for groups of households the system is very hard to short-circuit. For a community of several hundred or more, however, especially if that community has a shared vision of creating an alternative to the global economy, the chance of success is significantly increased. And this is where the ecovillage model comes into its own as a seedbed for experimentation and innovation. Damanhur in Italy and the Findhorn Community in Scotland have consciously set out to reduce their dependence on the global corporate economy and to re-weave the web of a more complex, locally based social economy. In an era where local shops, post offices, schools and other facilities are closing down in unprecedented numbers across Europe, these two communities are experiencing substantial growth and diversification, opening new enterprises and generating new employment.

Findhorn and Damanhur have much in common. Both started as small initiatives in the 1960s and early 1970s. Both had, and continue to have, a strong spiritual focus to their activities. Both located themselves in economically marginalised areas: Damanhur in the alpine foothills of Piedmont; Findhorn in northern Scotland. Finally, both have experienced substantial growth in size over the decades: today, Damanhur is a federation

of communities of more than 900 people, with many more supporters in the surrounding areas and indeed throughout Europe and the world; the Findhorn Community is home to around 450 people, with an extended international family of friends and partners. What is immediately striking on entering both ecovillages is the tangible feeling of activity and vitality. New buildings are being constructed, generally by companies owned by and employing community members.

There are bakeries, theatres, shops and cafés that draw in visitors from far and wide. Local and organic cheeses, fruit and vegetables combine great quality with very low food miles. Crafts studios turn out beautiful ceramics, textiles, carvings and candles. Schools and training centres for both children and adults are flourishing. Publishing houses, printing presses, solar-panel manufacturers, waste-water system designers and consulting companies abound. Everywhere there is evidence of economic vitality and diversification.

In both communities, all goods and services – for instance educational courses, building services, books, food, theatre tickets and printing – can be bought with the community currency.

At the heart of these success stories lies an astute understanding of the true nature of money and of how the rules that govern its movement can be managed so as to benefit the local economy. Damanhur and Findhorn have found a dual response to money management: to set up their own banks to retain their members' savings within the community; and to create their own currencies to keep money circulating locally. Within Damanhur, the role of banker is taken on by the community's real estate co-operative. This body was created as a vehicle for investing the savings of community members in the purchase of land and the building of accommodation, workshop and office space for community members and businesses. More recently, it has also come to play a role more akin to that of a mainstream bank, helping to identify business opportunities and providing loans and advice to community members who take them on. At the end of every year, the real-estate cooperative undertakes a study of the community economy, identifying which goods and services still need to be bought in from the outside, and seeking to promote new community enterprises to fill these gaps.

The Findhorn Community has created Ekopia, a body with the status of an industrial provident society, to recycle locally the savings of its members. Here, projects in need of investment are identified, and share issues are raised against them. Each investor has one voting share only, irrespective of how much he or she invests, thus promoting a strongly communitarian ethic. This has enabled the community to draw on the financial resources of both current members and the wider Findhorn family, many of whom were previously members and all of whom share the community's vision to create a more self-reliant and low impact human settlement. Both communities have also created their own currencies: the Credito in Damanhur and the Eko in Findhorn, each of which trades at parity with the national currency.

While all transactions within Damanhur are undertaken using Creditos, residents and visitors to Findhorn have a choice and most use both national and community currencies. In both communities, all goods and services – for instance educational courses, building services, books, food, theatre tickets

and printing – can be bought with the community currency. The beauty of these currencies from the point of view of the community economy is that they can only be spent locally and thus remain available to community members wishing to trade with each other. They are, in this sense, identical to Ithaca Hours, the currency system created by the social activist Paul Glover in the New York State town of Ithaca, in that they represent, in Paul's words, money "with a boundary around it, so it stays in our community. It doesn't come to town, shake a few hands and then wander out across the globe. It reinforces trading locally…they are untravellers' cheques because you have to use them here – you cannot take them away".

The use of the Eko has prevented a substantial leakage of purchasing power, making it much easier for genuinely local enterprises to emerge.

So much for the theory. To see how the system works in practice, let us look in a little more detail at the Findhorn Community economy. The first of the share issues raised by Ekopia involved 220 individuals investing a total of £225,000 in a community-led buy-out of the community store, the Phoenix shop, which had previously been owned by the Findhorn Foundation. Share issues have also been raised to provide finance for the Findhorn Foundation (£100,000 has been raised) and the community educational facility, Newbold House (£25,000). Further community-based projects to finance the purchase of new wind turbines and affordable, eco-friendly houses are in the pipeline. This system delivers several benefits to the community. Investors become co-owners of the businesses in which they buy shares; they gain a five per cent discount on all purchases in the Phoenix shop, and they receive a dividend reflecting the growth in the value of the business. Ekopia calculates that, together, these various benefits equal a return of £100 per annum on an investment of one £500 share, compared to around £10 interest payments on £500 deposited in the bank.

Secondly, community businesses are able to draw on the monetary savings of community members without needing to pay commercial bank fees and interest rates to do so. With bank interest rates at historically low levels, this factor is less important today than it is likely to be in the future; however, community businesses still make a saving of around £2,000 per annum on bank charges. Meanwhile, the Eko was launched in 2001 with an initial issue of 18,500 Ekos and a second issue of 20,000 Ekos. It is estimated that the first issue of Ekos generated a turnover of £150,000 in the first year of the scheme; almost ten full spending cycles. This is money that has stuck around, shaken plenty of hands and provided much valuable lubrication to the community economy. For sure, many of the products for sale within the community shop and other businesses originate outside the community and so money will necessarily leave the system to pay for them. Nonetheless, the use of the Eko has prevented a substantial leakage of purchasing power, making it much easier for genuinely local enterprises to emerge. Ekos are purchased from Ekopia with pounds sterling, one Eko to one pound, thus creating a loan fund for community businesses. The first of these loans, to the Phoenix shop for the renovation of its crafts department, generated enough in interest payments to pay for the printing of the first issue of Eko notes and the purchase of a marquee for community gatherings.

The creation of Ekopia and of the Eko in the Findhorn Community and of the real-estate co-operative and the Credito in Damanhur have gone some way towards setting up a virtuous circle in which everyone wins. Investors gain more in terms of both financial returns and ownership of community businesses. Businesses get access to credit at a cheaper rate than through the conventional banking system. Expanding local businesses generate extra employment and purchasing power. And more of that purchasing power remains within the community. Last, but far from least, and less easy to measure in purely economic terms, is the strong social dividend inherent in the strong feelings of ownership and participation felt by members of the community towards their own economy. Decisions relating to consumption, investment and work cease to be made purely according to criteria of profit maximisation. The divorce between head and heart that the current global economy enforces (whereby people often make consumer choices that they know to be socially or ecologically exploitative because of financial implications) is, to some degree at least, overcome. This ecovillage model thereby enables people to bring their desire for justice and sustainability back into alignment with their aspiration to live well and happily.

Converting the vicious cycle of today's global economy, which affects such a strong and divisive fracture within the human heart and mind, into a virtuous and nourishing cycle will be no easy task.

For proof that the model works in practice, one need look no further than a 2002 study undertaken by the local enterprise company Moray, Badenoch and Strathspey Enterprise into the economic impact of the Findhorn community on that of the north of Scotland. This study calculated that the community generates 400 jobs and over £5 million of business annually and commented on the value to the Scottish economy of the community's diversification into economic activities beyond its original educational heartland.

Meanwhile, the Damanhurian economy goes from strength to strength; its latest expansion being the purchase of a former Olivetti factory located nearby, a metaphor, perhaps, for the evolution from a corporate to an ecovillage-based society. These experiments demonstrate that it is, in practice, possible for local communities to short-circuit the global economy and to take back a good measure of control over their own economic destinies. They also suggest that at least three complementary elements need to be in place to permit them to do so. First, there needs to be a strong, shared vision and community of interest within a defined population to engage with the task. A population of around 200 people suggests itself as the minimum necessary to create an economic unit with sufficient diversity of enterprises and adequate purchasing power to make this viable. Secondly, leakages of monetary wealth out of the local economy need to be carefully identified and, where possible, staunched. And finally, following the observation of Michael Shuman, the success of the model appears to be dependent on the synergies that emerge when local investment is combined with local ownership, local production and local employment.

Converting the vicious cycle of today's global economy, which affects such a strong and divisive fracture within the human heart and mind, into

a virtuous and nourishing cycle will be no easy task. Community-based action in an economics of solidarity is required. The ecovillage movement has begun to develop interesting and strikingly effective models. The next task is to transfer these out of the intentional community seedbed and into the wider society.

From *Resurgence* magazine, No. 227, November/December 2004.

Long-time communard and author, Jan Martin Bang of Norway describes the workings of the economies of Camphill communities. These are communities in which people with and without special needs live side by side. Though not formally part of the ecovillage family, they share many characteristics. Jan describes how it is possible to create webs of mutuality and interdependence within communities so that money is little required for the provision of needs.

Beyond Equality:
Work, Money, and Equality in the Economic Fellowship of the Camphill Communities

Jan Martin Bang

Work

Work is a service to others, freely done and freely given.

I'm having breakfast, at our table with about a dozen other people. Four are mentally handicapped 'villagers'. The rest of us think we're normal co-workers, whatever that means! We talk about where we are going to work today. Everyone works, that's one of the ground rules in our small village of about forty people. It's school holiday time, our two oldest kids are working on the farm, and our youngest daughter is in the vegetable gardens. The village baker lives in our house, he is a young volunteer co-worker from Israel, and three of our villagers also work there. What are they doing today?

- It's Wednesday, we're making pizza and white bread.
- Great! So let me guess what we're having for lunch...
- Wrong, we're freezing the pizza, and keeping it for the weekend. It'll save us making a whole meal, and there's a lot happening this weekend.

I work in the office, and have to go into town for a meeting with the local municipality planning department. Ruth, my wife, deals with culture and health in the village. As we finish eating, we hold hands round the table and give thanks for the food. Each person has something to do, one rinses the dishes, one stacks into the dishwasher, another wipes down the table, three of us clear away the food and deal with leftovers.

In many countries, mentally handicapped people are 'looked after' in various ways, sometimes really well by caring people, in other countries kept in terrible institutions where they are hardly treated as human beings

at all. In our Camphill Villages we try to find a suitable job for each person according to their ability, something useful and tangible that they can do, which contributes to the well being of others. We try to create a community where we all look after each other. And the way to do that is for everyone to work for the good of the community. Sometimes I feel that life here revolves around work, there is always too much that needs to be done, never enough people to do it. On the other hand, a sense of useful purpose is an asset, certainly the concept of unemployment has no relevance in our community! Unemployment is a curse because it tells someone that he or she is not needed. We all have a basic need to be loved, to be appreciated, to be of use to someone, and we express it by doing things for other people, giving the gifts of our work to those we love. When someone is told that they are no longer useful, just told to sit quietly and look at the wall for the rest of their life, they will experience major trauma. Work is done both for other people, but also for yourself.

In our Camphill Villages we try to find a suitable job for each person according to their ability, something useful and tangible that they can do, which contributes to the well being of others.

We eat together as an extended family three times a day, and that is a daily reminder of how various tasks are their own rewards. One of our villagers has responsibility for the chickens, collecting and counting the eggs, feeding them and closing them in at night. She is really proud of that job, and just as many people define themselves by their job; it is one of the first things she will tell a new visitor. We have a weaving workshop that operates during the winter months, when the gardens are deep in snow. One or two of our villagers work there, and are justly proud of the tablecloth on our table, or the waistcoat that I sometimes wear. At the moment our candlestick is one that was made from a few bits of scrap in our carpentry workshop a few weeks ago. In the summer the vegetable gardens and greenhouses produce large amounts of food, a great deal of which will last throughout the winter. These vegetables appear on our table nearly every day.

All these useful objects, and many more, are products of people's work. Made not for earnings or profits, but for the sake of making something that is a joy to make, and of use to other people. Work is a service to others, freely done and freely given. In our village we strive to get away from independence, instead we aim to create interdependence, that we are dependent upon each other. It is important for each one to experience the work of others, that not only is it freely given, but freely accepted. In this way every human being has worth and value, in that they contribute something to the general well being of the community. Of course this is all great theory, but it becomes real when someone says, "Great bread today! Thanks to you folks in the bakery!" And believe me, it is often said!

Our communities are inspired by the writings of Rudolf Steiner, and the spiritual science of Anthroposophy that he formulated in his books and lectures. In 1905 he said of society: "In a community of people working together, the well-being of the community is greater the less the individual worker claims for himself the proceeds of the work he has done and the more he makes these over to his fellow workers. Similarly he allows his own needs to be met out of the work done by others."

As a village all our income is pooled before it is divided up. Apart from a few hired people who do work that we can't manage ourselves, no-one gets a wage related to their work. This is certainly true here in Norway, and I think throughout the whole Camphill network.

Money

It is important for us to disconnect money from work. Money has its own life in our village, divorced from work, but still with a major significance in our daily lives. What is money, really? A medium of exchange? A measure of work? A value? We try and understand it as three separate things, though we use the same currency for each one.

I go into town, I need a new pair of socks, I fancy a cup of coffee, and my eye is caught by a new book. I buy all three and use the cash I have in my pocket. Literally pocket money. When I go shopping for food, or pay the electricity bill, I pay with the same kind of money, the cash we need for everyday life, running costs. This is one kind of money, living expenses.

If we live thriftily, we will save some of our income, wherever that comes from. This we don't need for everyday living expenses, and can put aside. Right now our village is about to open a shop in our local town, and we are using savings to buy shelves and paint and extra stock. Thinking about this shop has been a long creative process in our community, and this 'investment' is now another kind of money, a means to create something. This is the second kind of money, creative investment.

We try not to use all of our surplus in investment, but keep some aside for gifts. What do we believe in that we want to support? Who needs our help? What chance factors bring us into contact with people or projects that are dependent upon goodwill in order to develop? This money has been raised up into the spiritual sphere of gift money. This is the third kind of money, a spiritual gift. Personally I find it helpful to think of money in these three terms: everyday living expenses, creative investment, and spiritual gifts. Without a balance between these three, life would be a lot poorer!

All of this concerns the specific sphere of money, work and economics. We discern two more distinct spheres in our life in community, those of the spiritual, and of the social. In the slogans of the French Revolution we hear of Equality, Fraternity and Liberty. Rudolf Steiner analysed these three qualities further in social terms, and introduced the concept of the Three Folded Social Order. This was taken up by Karl Konig when he founded the Camphill Communities in 1939, and we are still developing and refining these ideas. Very briefly, in the spiritual life we require freedom to work out our own beliefs, and be responsible for our own self development. In the process of social order, in our law making, our rights and responsibilities, we will only experience a just society if we are all equal, regardless of how clever, rich or strong we might be. In the life of work and economics, we need to look after each other, to practise fraternity or fellowship.

Equality

Most of the co-workers who have made a commitment to living and working here long term have formed an Economic Fellowship and we share our income. This means that we put all our earnings into one account, and meet regularly once a month to discuss how to parcel it out. The basis is one of equality, we start off with the same basic amount of pocket money, but from then on things become unequal. I have three kids needing schooling, my neighbour has five, and the couple who live a few minutes away, and are responsible for the third large family house in the village, have no children. Clearly we three families receive quite different amounts of money in order to cover the cost of feeding, clothing, schooling and dealing with our kids.

The simple way to deal with these money issues is to invoke equality, to give each person the same, and tell them to be responsible for themselves. Another way, much harder, but much more educational, is to bring up our differences, look at them, and make sure that our very different needs are met. Living with equality is relatively simple, even mechanical, everyone gets the same; everything is fair. But as human beings we are all different, and have varying needs. Accepting that, living with that, is much harder, but opens up the possibility of learning more about other people, and our own response to them. Loving people who are nice and friendly is no big deal, fine in its own way, but not likely to challenge you. Learning to love your enemies is much more challenging, but more likely to make you yourself grow as a human being. When we share our economy, the challenge of living, working and loving someone who is greedy, lazy or 'not nice' throws you back into yourself, forcing you to take stock of your own prejudices and expectations. But it's not easy; it brings you up to face all the greedy, lazy or 'not nice' features of your own personality!

This is what I mean when I call our community life 'beyond equality'. It was certainly a tremendously progressive step when socialism and democracy combined to overthrow the old caste system in society, when individuals were defined and held in the social class they were born into. At least in Western Europe we have achieved some measure of social fairness and justice. The next step must be to go back into our differences, to learn from them, to develop the self to live with each other, not as the same, but as we are all different.

I find it helpful to think of money in these three terms, everyday living expenses, creative investment, and spiritual gifts.

Due to the generosity of provision for people with special needs in Norway, the Norwegian Camphill communities are well funded by the Government. This has enabled them to help other villages in other parts of the world. Over the past 10 to 15 years villages have been started in Poland, Estonia, Latvia and Russia. This year a new village is being established in Czech Republic, and we are about to start an exchange scheme with villages in Botswana. In addition to training co-workers, we have given gifts of equipment, buildings and direct financial support. The Bridge Building School where I work has a department of ecological building, which concentrates on building straw bale housing in Russia and Latvia.

Ecovillage elder and former President of GEN, Albert Bates, describes a cooperative economic model he has helped to design and manage at The Farm ecovillage in Tennessee. This attempts to marry the best aspects of private and communal economies into a system for mutual provision of services including pension provision, accounting and legal services and common purchases of tools and provisions.

The Second Foundation at The Farm

Albert Bates

If you just landed from Mars and began exploring the social and political systems of the world in the late 20th Century, undoubtedly you would be astonished at many of the illogical and nonsensical things you'd find. There are enough natural and human resources to feed, clothe and shelter the entire population in a nondestructive, ecologically-sensitive fashion, but the vast majority of the world's population lives in desperate poverty, while consuming natural resources at unsustainable rates and laying waste to the basic planetary systems that support all life.

The Second Foundation is an attempt to explore more harmonious and equitable social and economic systems. It starts by establishing a golden mean between those things that are best handled collectively – through group agreement or social contract – and those that are best handled individually – at a family level. The Second Foundation is a model economic system. We can, being small, play around with the form, tweak it to suit our needs, jazz it up or tone it down. We are creating a prototype based on whole systems, fair play, care and compassion, and ecological sustainability. Whether it succeeds or fizzles is entirely up to us.

How it started

The Second Foundation practices a community of goods. Because our members have decided to hold all things in common, individuals have no legal claim to the collective holdings of the group. Instead, members serve as trustees of property they manage for the benefit of everyone, not excluding themselves. Some people find this concept intimidating, antiquated, or alien. Didn't communism fall with the Berlin Wall in 1989?

The Second Foundation began with a group of people who had lived under an experimental communal system for 13 years and then abandoned it. Among the features of The Farm's early system was the vow of poverty, which was an important part of the religious fabric of the group. After economic de-collectivization at The Farm in 1983, there were a number of

people who began earning their own living, but still kept to the vows they had taken years earlier, feeling them to be life-long commitments. These few hold-outs for collectivity understood that the vow was not a commitment to constant deprivation, but rather a graceful, elegant, and efficient relationship to the material plane. With or without the larger economic collective, the inner sense of the vow compelled families to live within their means and give any surplus earnings away to others in need, both within the community and outside. Many of those who started the Second Foundation missed the efficiencies of group income sharing that had existed before 1983: the burden-sharing for family and business decisions; the tool-sharing for home construction and gardening; and most of all, the tight-knit group process. This shared sense of need to return to a measure of communal inter-dependence was the major impetus for the formation of a new economic experiment. The challenge was to design a format that minimized the drawbacks of both the communal society economy and the private family wealth system while drawing upon the advantages of both. Today we call our vow the 'vow of community', which reflects our principal goal: not to do without, but instead to live in harmony with each other, and within the natural world.

How it works

The decision to join the group is made first by the individual or family, and then by the whole group. For the individual, the challenge is to decide whether you want to give up a measure of privacy and autonomy (in your financial affairs) and to take on the added burden of a commitment to assist and participate in group decisions and the needs-fulfillment of a larger group. There are benefits, which belonging to the group will confer upon you, like accounting and legal services, group purchasing and pension plans, and access to group resources. But support is a two-way street, and this is very much a participatory system.

When a Second Foundation member receives payment for work they have performed, their paycheck is delivered to The Second Foundation's bookkeeper. The bookkeeper subtracts some percentage for the group pension fund, some percentage for administration and emergencies – or common welfare – and some percentage for whatever group purchase plans (firewood, food, health care) might be currently in effect. After those deductions, the remainder is disbursed to the member family's personal checking account and the member is issued a blank expense voucher, or 'chit' to fill in as the money is spent. When the member is ready to collect their next pay, they turn in the completed chit and the process begins again. The Second Foundation is a hybrid, developmental form of communitarian association, an adjustable exploration into quasi-communal economic group-sufficiency.

The next step must be to go back into our differences, to learn from them, to develop the self to live with each other, not as the same, but as we are all different.

The purpose of depositing all income in the Second Foundation account is to recognize that ultimately the group owns everything, and what it disburses to individual members is entirely within its discretion. This is our

common treasury, or community of goods. The purpose of the 'chit' expense vouchers is to keep track of everyone's spending, to look for economies of scale or purchasing power. The purpose of the individual rebate is to put incentive back into the system so people can directly feel the benefits of earning more, or less, within some reasonable range.

It was the sense of the Founders that one of the reasons that the communal experiment of the first 13 years failed was that it did not rebate any earnings from one's work, and that this led to an alternate, underground economy, called 'Saturday money', or 'perks' which was wholly unregulated and generated disparate standards of living, envy, and privilege. It also led to discouragement by many hard-working and creative people who never received any compensation for their added efforts. Some people simply had no incentive to work, apart from the most minimal standard required to remain in the community.

Our chit banking system changes all of that. While rates of return may change, today most of what people earn is directly refunded for their discretionary use. Most families use this money to improve their housing, start small businesses, invest in job skills or their children's education, or to otherwise improve their family security for the future. Some put the money into hobbies, travel, or entertainment, which nourish the spirit, rest the body, and provide a stronger sense of self-empowerment and direction.

There are enough natural and human resources to feed, clothe and shelter the entire population in a nondestructive, ecologically-sensitive fashion, but the vast majority of the world's population lives in desperate poverty, while consuming natural resources at unsustainable rates and laying waste to the basic planetary systems that support all life.

Our pension fund is currently appreciating at the rate of more than $2000 per month, and that money is turned around and reinvested into the community's businesses as low-interest loans. This fund doesn't just invest in Second Foundation subsidiaries, but in other Farm-based enterprises. So, while only one person in six at The Farm belongs to the Second Foundation, the Second Foundation's economic power is shared out to the whole community.

After ten years of operation, the Second Foundation appears to be a modest success. The IRS has repeatedly reviewed its accounting methods and given full approval to the system. In its second year, it achieved net annual earnings for its 30 members comparable to the earnings of The Farm when it was 800 members strong. If the entire Farm population had joined the Second Foundation when it began, the Pension Fund would now be more than $3 million dollars and interest alone would be enough to pay the running costs of the community. Dues and assessments of members could have been eliminated. As it is, the assets of the Second Foundation are today two times larger than the assets of The Foundation, even though The Foundation has five times more members. We think that may have something to say about the relative strength of communal economics.

Neither The Second Foundation nor The Farm as a large intentional community can be characterized as 'pure` communitarian systems today. What they have become are complex, multi-dimensional, economic confluences. We are pushing the frontiers of structured communitarian support systems. As strange as it is to say, that seems to be the most comfortable and reassuring place there is to be these days.

Findhorn resident Jonathan Dawson explores how conventional pension schemes represent an important source of capital for multinational business. In this respect, they are contributing to vast social and ecological destruction and moreover, represent a very risky investment for those wishing for a secure retirement. The only true security, he argues, is healthy communities and ecosystems of the type that ecovillages are helping to build. The trick for ecovillages is to design mechanisms for secure investment in ecovillage-based projects and enterprises.

The Permaculture of Pensions:
Making Savings work for People and Planet

Jonathan Dawson

I can think of no area in which the orthodox wisdom as expounded by today's political classes is at greater odds with the behaviour of most people I know as in the area of pensions. As the proportion of those in income-earning work falls to all-time lows, the need for greater savings to see us through old age is taken as axiomatic. The only question on the political agenda is how is this to be achieved. It is now a legal obligation in some European countries for working citizens to set aside savings for old age. Across the industrialised world, pension provision defines one of the critical battle lines between the state on the one side and trade unions and civil society groups on the other. Yet, within that segment of society that I inhabit, many have never had pensions and a good number of those that have (myself included) are currently seeking to cash them in. So, what is happening? How to explain this divergence of perspectives and behaviours?

Many, if not most, of the goods and services that people need in their old age would best be provided for not by way of cash transactions, but through the healthy working of functioning communities.

My own exploration into the true nature of the 'security' we seek in old age and whether pensions truly provide the best way to deliver it began several years ago. In quick order, I came to three striking discoveries. The first was that whatever type of security it is we are looking for, it is not to be found in the stock market where the bulk (over 70%) of UK pension funds are invested. Millions of people saw the value of their private investments eroded as the value of the stock market fell by 43% in the three years up to 2003: UK pension funds fell in value by £250 billion in 2002 alone.

My second insight was that many, if not most, of the goods and services that people need in their old age would best be provided for not by way of cash transactions, but through the healthy working of functioning communities. It is only the habit of loneliness and isolation that makes people today believe that care, company and well-being are best provided by the market.

The final insight was that the way in which pension funds currently operate makes the realisation of true security all but impossible. This is

because the £530 billion invested by UK pension fund managers in the stock market annually helps fuel an economic system that undermines community vitality and devours its own resource base while increasing volatility and vulnerability to shock at every level of the system. This fuels a vicious circle whose crazed workings provide its own demented logic: community dislocation means people feel the need to invest in pension funds which drive a system, one of whose impacts is to further weaken community fabric.

So, stock market financing permits the opening of more out-of-town supermarkets, resulting in the gutting of small, local shops from the town centre, a drop in local incomes and employment, a flight of youth to the cities and, eventually, the need for higher investment in pensions to pay for services that neither family nor the dislocated community are any longer able or willing to provide.

Nor is there much evidence that things are about to get better any time soon. The stock market is a giant bubble with nothing but the hot air of investor confidence keeping it afloat. The collateral for today's investment is the eternal belief in tomorrow's expansion. But Peak Oil is with us and costs associated with climate change are spiralling upwards. When we dare to look unflinchingly into the future (something that very few in the media and in mainstream politics have yet found the courage to do), we see the myth of eternal growth laid bare. But, in a system where most money is created through interest-bearing loans, without the collateral of future growth, the system folds.

When we dare to look unflinchingly into the future (something that very few in the media and in mainstream politics have yet found the courage to do), we see the myth of eternal growth laid bare.

The response of most people I know is to withdraw whatever savings they have from the pension fund scam and to seek to invest in different and more resilient and useful forms of capital. These tend to fall into two broad categories: social capital, in the form of service to one's community, and physical capital in the form of productive land or buildings. Nonetheless, as just about anyone associated with sustainable community initiatives will attest, money for such projects still tends to be very thin on the ground.

So, what can be done to move towards a system that promotes real security for those past working age while building on and protecting true wealth: our ecosystems and communities? A recent New Economics Foundation discussion paper, 'People's Pensions: New Thinking for the 21st Century' sets out a daring and imaginative proposal. It recommends the creation of 'People's Pension Funds' that would be used to build community-level infrastructure projects – schools, hospitals, community centres and so on. Each such Fund would be linked to a government department, a local authority, other statutory bodies such as an NHS Trust, an education authority or a non-profit body undertaking public works. People would have a choice between which bodies they can invest in and would be able to specify which types of project they wanted their funds to support. Pension 'dividends' would be paid from rental income on the facilities built.

This is an ingenious proposal whose impact would be to mobilise substantial financing for socially desirable infrastructure projects, promote community ownership of its own resources and base the security of those

of a pensionable age on real community assets. However, realistically, it is unlikely to come into law any time soon. Politics just does not move that quickly.

I do, however, wonder whether citizen's groups might not use the model proposed to introduce similar schemes unilaterally at a community level. Let me provide a specific example. The ecovillage where I live, Findhorn, in the north of Scotland, is currently seeking investment for several infrastructure projects. These include a new state-of-the-art sustainability training centre (around £1.5 million), three new wind turbines to complement our existing one (£0.5 million) and an ongoing programme to replace ageing caravans and bungalows with high-quality ecological housing. In addition, over the next several years, we will be building around 50 new residential houses. All of these facilities will provide revenue streams that could be used to repay dividends to investors over time.

Findhorn is just one of a large number of initiatives around the world seeking to create real and tangible wealth in the form of seed banks, renewable energy facilities, community-supported organic agriculture box schemes, sustainability training centres, buildings with high levels of insulation, biological waste-water treatment systems and so on. A lack of financing is a perennial obstacle, yet such projects, provided they are well-designed and managed, offer much more secure and life-enhancing investments than just about anything on offer on the world's stock markets.

The only real security we can have is in restoring our degraded ecosystems, keeping alive the place-specific skills that we will need as the energy famine deepens and re-weaving the fabric of our tattered communities.

The idea of creating 'Sustainability Pension Funds' that bring together into one portfolio various initiatives at ecovillages and other sustainability centres is one that is worth pursuing. Neither might it be necessary to change the way we currently operate. Here at Findhorn, for example, we have already created an industrial provident society, Ekopia, that raises financing by share issues for investment in community initiatives. This mechanism has so far permitted a community buy-out of our grocery store, the building of some eco-housing and investment in the community windfarm.

What would be new would be to link the question of investment in ecovillage infrastructure with the pensions issue. That is, by way of a planned awareness-raising programme, to demonstrate that conventional pensions are neither secure nor life-serving; it may be possible to persuade friendly investors to divert some of their financial assets towards ecovillage and other sustainability initiatives.

The only real security we can have is in restoring our degraded ecosystems, keeping alive the place-specific skills that we will need as the energy famine deepens, and re-weaving the fabric of our tattered communities. This is precisely what ecovillages across the world are seeking to do. The task that lies before us now is to find a mechanism that links up those wishing to save for a secure and happy future with those who are in the process of creating it.

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Freelance writer, Simon Bradbury, describes the Freecycle scheme that enables people to offer unwanted goods between themselves for free in a growing number of communities around the world. Simon Bradbury is a freelance journalist. He lives with his wife Jan and his children in York, England, and is part of the York Freecycle group.

Freecycle: Something for Nothing

Simon Bradbury

The Freecycle Network is made up of many individual groups across the globe. It is a grassroots and entirely non-profit movement of people who are giving (and getting) stuff for free in their own towns. Each local group is moderated by a local volunteer and membership is free. I heard of Freecycle a couple of years ago, but didn't take it any further as I didn't know of anyone in the local group where we lived at the time and, in the process of moving, the idea slipped into the recesses of my mind.

The big idea is to save unnecessary items going to landfill, but the consequences are a little further reaching than this. Freecycle deserves to be known as a community that helps people ease their daily burdens and it runs at the heart of modern sustainable thinking. Deron Beal, the originator of Freecycle in Tucson, Arizona in 2003, was working for a not-for-profit recycling company where too many useable items were going to desert landfill sites. He had the idea to drive around other not-for-profit groups, offering these things to them. An email service was soon set up between his local contacts where items could be advertised and pick up details arranged. This is basically what Freecycle is now.

What started out as a service for a few has grown in three years into a worldwide phenomenon with over two million members in over 50 countries. In my group in York, the membership exceeds 1,000 people and it is now growing at 100 per week. There is an exponential growth rate in members the world over because as more people join, the word spreads, then more people join and see for themselves how useful it is. All kinds of people are part of Freecycle. People who have too much stuff, people who for whatever reason don't have enough – all with one thing in common – we have discovered how refreshing Freecycle can be.

At a recent visit to a community furniture store I overheard a conversation whilst passing some particularly shabby looking sofas that went a bit like this: "They want how much?! You could get one at the tip for free..." A real challenge for such community minded initiatives is not to pass on the overheads to clients who are in need. It seems crazy but that is the kind of

world we live in. The astonishing simplicity of Freecycle is that there are no overheads. Often the process is genuinely helpful both ways, and both parties gain either freedom from clutter or a needed item free of the haggling and discomfort that can come with buying. The only thing that needs doing is organising a pick up date.

Our story

Often the process is genuinely helpful both ways, and both parties gain either freedom from clutter or a needed item free of the haggling and discomfort that can come with buying.

After having moved into a house with little extra cash to buy some essentials, my wife Jan and I were getting pretty disheartened until Freecycle came back into my mind. After a short search on the internet, I found the worldwide Freecycle website and within a minute I had joined the local group. Freecycle etiquette holds that your first communication should be an offer rather than a request, and our first offer was a box of old Bunsen burners that had come from a school clearout we had helped with. The taker was someone who used to work in science labs a lot and thought it would be nice to do something with them.

Our first response to an advert was a table that a young family were giving away because they had bought a new one. We had also been cooking our meals on a camping stove, so put out a request for a cooker, thinking that anything would do until we could buy a new one. We were quickly offered a number of gas and electric ones and went for a modern electric fan oven type. The people this came from had bought new and hadn't got round to moving the old one. Such a joy!

Our garden is a very heavy wet clay soil and we thought the best way to go this year would be with containers, so we put a wanted advert for any pots and were inundated. We dug a wildlife pond and received a couple of buckets of seed water, plants, snails and tadpoles from folk who had established ponds. Our daughter received a sewing machine for her clothes projects.

I am aware that we have received more than we have given, but I hope that in the future we can offer more. For me it has been about setting up home in a way that is far less stressful than if I had to buy all this stuff second hand. For us, Freecycle has been a quick and effective resource for setting up a home. I wonder how many families might feel the same way if they knew Freecycle existed.

Other remarkable stories

Here is an encouraging story from one lady: "Last year when I was suffering from an illness – I was unable to leave the house for several months – I grew quite weak with the inactivity and got tired very easily. I had to rely on friends and relatives to take my kids to and from school. One day, someone posted an exercise machine on Freecycle. I replied to the post and won the item. I used the machine to get back into shape and was able to start taking the kids to school all by myself. It gave me my life back and I thank the

lady every day I use it. Since then I have given and received many items on Freecycle. Freecycle has definitely changed my life for the better."

There have also been some interesting services provided. A while ago I noted that someone posted a wanted add for old bicycles so that he could learn bike mechanics. The bikes were then offered back through Freecycle.

How to join

Joining a group is easy. Just visit www.freecycle.org and follow the links to your home country to see if there is a local group nearby. Joining is free. If there isn't a local group consider setting one up. According to Ben Weaver, the York moderator, running a group is easy. "I was 'umming and erring' for ages on the issue, and it took a kick from a group of friends to get me to take the plunge and set up here in York, and I imagine that many other people would be in the same boat. My advice would be: just do it! At the end of the day, what's there to be scared of? Does it take up all your spare time? No. It takes a few minutes a day; and once your group gains numbers you'll probably find new friends who can help run the group. Are you going to be tied to it for life? No. (Unless you want to be!) Is it complicated? No. Are you on your own? No. There are hundreds of other moderators and group owners out there who will usually be only too pleased to help you out if you get stuck.

You occasionally get the odd problem crop up which you need to spend a bit of time on, like people asking for silly things, or someone forgetting how to post messages. But it's more than made up for by the good feeling you get when people write to say how grateful they are for their doodah or gizmo they got on Freecycle."

Setting up a group

It's a doddle. Go to freecycle.org and take it from there. There are a number of steps to go through, and your new group will have to be approved to make sure it doesn't step on the toes of other groups, but what you have to remember is that this is all done by friendly, helpful people keen to help get your group up and running.

It seems the concept is making its way into mainstream consciousness. Recently our local council sent out market researchers with questionnaires aimed at understanding public awareness of recycling issues. One of the questions was, "Have you heard of Freecycle?" BBC Radio 2's Jeremy Vine did a report on Freecycle in May, stating that it was nice to do a story for once that didn't have a downside. This is great news for Freecycle and all those who might join as a result.

So there you have it. Freecycle is definitely a force for good, sometimes life changing and almost always life enhancing.

So there you have it. Freecycle is definitely a force for good, sometimes life changing and almost always life enhancing.

First published in *Permaculture Magazine* – Solutions For Sustainable Living, issue 50, Winter 2006.

MODULE 3
Right Livelihood

Ultimately, work at the structural level alone – identifying and introducing new systems, models and technologies – is most unlikely to be enough in itself to turn our societies and economies towards sustainability. What is needed in addition is a transformation in our cultural values – specifically, in how we define the nature of true wealth.

Today, Western, consumerist culture is spreading globally. By externalising real social and ecological costs, industrial production systems are able to produce many products very cheaply – subsidised by people and the planet. In parallel, the global media and advertising industries promote the message that status and happiness are to be had through consumption.

This Module explores how we as individuals can choose meaningful work in the world and bring our behaviour as citizens, consumers and investors into greater alignment with our core values.

Contents

Buddhist Economics

Simplicity: A Cool Lifestyle for a Hot Planet

Sarvodaya means 'Everybody Wakes Up'

Designing your Local Economy

Rules for a Local Economy

In Defence of Pleasure: The Slow Food Movement

Tallying National Happiness

Economics of Happiness

This is a classic text in which E.F. Schumacher sets out the basis for a moral economics by comparing the Buddhist and Western materialist approaches to the subject. It puts people and the planet back at the heart of the matter, with 'economics' as a means towards greater health and happiness rather than as an end in itself.

Buddhist Economics

E. F. Schumacher

'Right Livelihood' is one of the requirements of the Buddha's Noble Eightfold Path. It is clear, therefore, that there must be such a thing as Buddhist economics. Buddhist countries have often stated that they wish to remain faithful to their heritage. So Burma: 'The New Burma sees no conflict between religious values and economic progress. Spiritual health and material well-being are not enemies: they are natural allies.'[1] Or: 'We can blend successfully the religious and spiritual values of our heritage with the benefits of modern technology.'[2] Or: 'We Burmans have a sacred duty to conform both our dreams and our acts to our faith. This we shall ever do.'[3]

...the ideal from the point of view of the employer is to have output without employees, and the ideal from the point of view of the employee is to have income without employment.

All the same, such countries invariably assume that they can model their economic development plans in accordance with modern economics, and they call upon modern economists from so-called advanced countries to advise them, to formulate the policies to be pursued, and to construct the grand design for development (the Five-Year Plan or whatever it might be called). No one seems to think that a Buddhist way of life would call for Buddhist economics, just as the modern materialist way of life has brought forth modern economics.

Economists themselves, like most specialists, normally suffer from a kind of metaphysical blindness, assuming that theirs is a science of absolute and invariable truths, without any presuppositions. Some go as far as to claim that economic laws are as free from 'metaphysics' or 'values' as the law of gravitation. We need not, however, get involved in arguments of methodology. Instead, let us take some fundamentals and see what they look like when viewed by a modern economist and a Buddhist economist.

There is universal agreement that a fundamental source of wealth is human labour. Now, the modern economist has been brought up to consider 'labour' or work as little more than a necessary evil. From the point of view of the employer, it is in any case simply an item of cost, to be reduced to a minimum if it can not be eliminated altogether, say, by automation. From the point of view of the workman, it is a 'disutility'; to work is to make a sacrifice of one's leisure and comfort, and wages are a kind of compensation

for the sacrifice. Hence the ideal from the point of view of the employer is to have output without employees, and the ideal from the point of view of the employee is to have income without employment.

The consequences of these attitudes both in theory and in practice are, of course, extremely far-reaching. If the ideal with regard to work is to get rid of it, every method that 'reduces the work load' is a good thing. The most potent method, short of automation, is the so-called 'division of labour' and the classical example is the pin factory eulogised in Adam Smith's *Wealth of Nations.*[4] Here it is not a matter of ordinary specialisation, which mankind has practiced from time immemorial, but of dividing up every complete process of production into minute parts, so that the final product can be produced at great speed without anyone having had to contribute more than a totally insignificant and, in most cases, unskilled movement of his limbs.

…work and leisure are complementary parts of the same living process and cannot be separated without destroying the joy of work and the bliss of leisure.

The Buddhist point of view takes the function of work to be at least threefold: to give man a chance to utilise and develop his faculties; to enable him to overcome his ego-centeredness by joining with other people in a common task; and to bring forth the goods and services needed for a becoming existence. Again, the consequences that flow from this view are endless. To organise work in such a manner that it becomes meaningless, boring, stultifying, or nerve-racking for the worker would be little short of criminal; it would indicate a greater concern with goods than with people, an evil lack of compassion and a soul-destroying degree of attachment to the most primitive side of this worldly existence. Equally, to strive for leisure as an alternative to work would be considered a complete misunderstanding of one of the basic truths of human existence, namely that work and leisure are complementary parts of the same living process and cannot be separated without destroying the joy of work and the bliss of leisure.

From the Buddhist point of view, there are therefore two types of mechanisation which must be clearly distinguished: one that enhances a man's skill and power and one that turns the work of man over to a mechanical slave, leaving man in a position of having to serve the slave. How to tell the one from the other? "The craftsman himself," says Ananda Coomaraswamy, a man equally competent to talk about the modern West as the ancient East, "can always, if allowed to, draw the delicate distinction between the machine and the tool. The carpet loom is a tool, a contrivance for holding warp threads at a stretch for the pile to be woven round them by the craftsmen's fingers; but the power loom is a machine, and its significance as a destroyer of culture lies in the fact that it does the essentially human part of the work."[5] It is clear, therefore, that Buddhist economics must be very different from the economics of modern materialism, since the Buddhist sees the essence of civilisation not in a multiplication of wants but in the purification of human character. Character, at the same time, is formed primarily by a man's work. And work, properly conducted in conditions of human dignity and freedom, blesses those who do it and equally their products. The Indian philosopher and economist J. C. Kumarappa sums the matter up as follows:

> If the nature of the work is properly appreciated and applied, it will stand in the same relation to the higher faculties as food is to the physical body. It nourishes and enlivens the higher man and urges him to produce the best he is capable of. It directs his free will along the proper course and disciplines the animal in him into progressive channels. It furnishes an excellent background for man to display his scale of values and develop his personality.[6]

If a man has no chance of obtaining work he is in a desperate position, not simply because he lacks an income but because he lacks this nourishing and enlivening factor of disciplined work which nothing can replace. A modern economist may engage in highly sophisticated calculations on whether full employment 'pays' or whether it might be more 'economic' to run an economy at less than full employment so as to insure a greater mobility of labour, a better stability of wages, and so forth. His fundamental criterion of success is simply the total quantity of goods produced during a given period of time. 'If the marginal urgency of goods is low,' says Professor Galbraith in *The Affluent Society*, 'then so is the urgency of employing the last man or the last million men in the labour force'.[7] And again: 'If… we can afford some unemployment in the interest of stability – a proposition, incidentally, of impeccably conservative antecedents – then we can afford to give those who are unemployed the goods that enable them to sustain their accustomed standard of living'.

From a Buddhist point of view, this is standing the truth on its head by considering goods as more important than people and consumption as more important than creative activity. It means shifting the emphasis from the worker to the product of work, that is, from the human to the subhuman, a surrender to the forces of evil. The very start of Buddhist economic planning would be a planning for full employment, and the primary purpose of this would in fact be employment for everyone who needs an 'outside' job: it would not be the maximisation of employment nor the maximisation of production. Women, on the whole, do not need an 'outside' job, and the large-scale employment of women in offices or factories would be considered a sign of serious economic failure. In particular, to let mothers of young children work in factories while the children run wild would be as uneconomic in the eyes of a Buddhist economist as the employment of a skilled worker as a soldier in the eyes of a modern economist.

It is not wealth that stands in the way of liberation but the attachment to wealth; not the enjoyment of pleasurable things but the craving for them.

While the materialist is mainly interested in goods, the Buddhist is mainly interested in liberation. But Buddhism is 'The Middle Way' and therefore in no way antagonistic to physical well-being. It is not wealth that stands in the way of liberation but the attachment to wealth; not the enjoyment of pleasurable things but the craving for them. The keynote of Buddhist economics, therefore, is simplicity and non-violence. From an economist's point of view, the marvel of the Buddhist way of life is the utter rationality of its pattern – amazingly small means leading to extraordinarily satisfactory results.

For the modern economist this is very difficult to understand. He is used to measuring the 'standard of living' by the amount of annual consumption,

assuming all the time that a man who consumes more is 'better off' than a man who consumes less. A Buddhist economist would consider this approach excessively irrational: since consumption is merely a means to human well-being, the aim should be to obtain the maximum of well-being with the minimum of consumption. Thus, if the purpose of clothing is a certain amount of temperature comfort and an attractive appearance, the task is to attain this purpose with the smallest possible effort, that is, with the smallest annual destruction of cloth and with the help of designs that involve the smallest possible input of toil. The less toil there is, the more time and strength is left for artistic creativity. It would be highly uneconomic, for instance, to go in for complicated tailoring, like the modern West, when a much more beautiful effect can be achieved by the skilful draping of uncut material. It would be the height of folly to make material so that it should wear out quickly and the height of barbarity to make anything ugly, shabby, or mean. What has just been said about clothing applies equally to all other human requirements. The ownership and the consumption of goods is a means to an end, and Buddhist economics is the systematic study of how to attain given ends with the minimum means.

The ownership and the consumption of goods is a means to an end, and Buddhist economics is the systematic study of how to attain given ends with the minimum means.

Modern economics, on the other hand, considers consumption to be the sole end and purpose of all economic activity, taking the factors of production, labour, and capital as the means. The former, in short, tries to maximise human satisfactions by the optimal pattern of consumption, while the latter tries to maximise consumption by the optimal pattern of productive effort. It is easy to see that the effort needed to sustain a way of life which seeks to attain the optimal pattern of consumption is likely to be much smaller than the effort needed to sustain a drive for maximum consumption. We need not be surprised, therefore, that the pressure and strain of living is very much less in say, Burma, than it is in the United States, in spite of the fact that the amount of labour-saving machinery used in the former country is only a minute fraction of the amount used in the latter.

Simplicity and non-violence are obviously closely related. The optimal pattern of consumption, producing a high degree of human satisfaction by means of a relatively low rate of consumption, allows people to live without great pressure and strain and to fulfill the primary injunction of Buddhist teaching: 'Cease to do evil; try to do good'. As physical resources are everywhere limited, people satisfying their needs by means of a modest use of resources are obviously less likely to be at each other's throats than people depending upon a high rate of use. Equally, people who live in highly self-sufficient local communities are less likely to get involved in large-scale violence than people whose existence depends on world-wide systems of trade.

From the point of view of Buddhist economics, therefore, production from local resources for local needs is the most rational way of economic life, while dependence on imports from afar and the consequent need to produce for export to unknown and distant peoples is highly uneconomic

and justifiable only in exceptional cases and on a small scale. Just as the modern economist would admit that a high rate of consumption of transport services between a man's home and his place of work signifies a misfortune and not a high standard of life, so the Buddhist would hold that to satisfy human wants from faraway sources rather than from sources nearby signifies failure rather than success. The former tends to take statistics showing an increase in the number of ton/miles per head of the population carried by a country's transport system as proof of economic progress, while to the latter – the Buddhist economist – the same statistics would indicate a highly undesirable deterioration in the pattern of consumption.

Another striking difference between modern economics and Buddhist economics arises over the use of natural resources. Bertrand de Jouvenel, the eminent French political philosopher, has characterised 'Western man' in words which may be taken as a fair description of the modern economist:

> He tends to count nothing as an expenditure, other than human effort; he does not seem to mind how much mineral matter he wastes and, far worse, how much living matter he destroys. He does not seem to realize at all that human life is a dependent part of an ecosystem of many different forms of life. As the world is ruled from towns where men are cut off from any form of life other than human, the feeling of belonging to an ecosystem is not revived. This results in a harsh and improvident treatment of things upon which we ultimately depend, such as water and trees.[8]

...people who live in highly self-sufficient local communities are less likely to get involved in large-scale violence than people whose existence depends on world-wide systems of trade.

The teaching of the Buddha, on the other hand, enjoins a reverent and non-violent attitude not only to all sentient beings but also, with great emphasis, to trees. Every follower of the Buddha ought to plant a tree every few years and look after it until it is safely established, and the Buddhist economist can demonstrate without difficulty that the universal observation of this rule would result in a high rate of genuine economic development independent of any foreign aid. Much of the economic decay of southeast Asia (as of many other parts of the world) is undoubtedly due to a heedless and shameful neglect of trees.

Modern economics does not distinguish between renewable and non-renewable materials, as its very method is to equalise and quantify everything in terms of a monetary price. Thus, taking various alternative fuels, like coal, oil, wood, or water-power: the only difference between them recognised by modern economics is relative cost per equivalent unit. The cheapest is automatically the one to be preferred, as to do otherwise would be irrational and 'uneconomic'. From a Buddhist point of view, of course, this will not do; the essential difference between non-renewable fuels like coal and oil on the one hand and renewable fuels like wood and water-power on the other cannot be simply overlooked. Non-renewable goods must be used only if they are indispensable, and then only with the greatest care and the most meticulous concern for conservation. To use them heedlessly or extravagantly is an act of violence, and while complete non-violence may

not be attainable on this Earth, there is nonetheless an ineluctable duty on man to aim at the ideal of non-violence in all he does.

Just as a modern European economist would not consider it a great achievement if all European art treasures were sold to America at attractive prices, so the Buddhist economist would insist that a population basing its economic life on non-renewable fuels is living parasitically, on capital instead of income. Such a way of life could have no permanence and could therefore be justified only as a purely temporary expedient. As the world's resources of non-renewable fuels – coal, oil, and natural gas – are exceedingly unevenly distributed over the globe and undoubtedly limited in quantity, it is clear that their exploitation at an ever-increasing rate is an act of violence against nature which must almost inevitably lead to violence between men.

the Buddhist economist would insist that a population basing its economic life on non-renewable fuels is living parasitically, on capital instead of income. Such a way of life could have no permanence and could therefore be justified only as a purely temporary expedient.

This fact alone might give food for thought even to those people in Buddhist countries who care nothing for the religious and spiritual values of their heritage and ardently desire to embrace the materialism of modern economics at the fastest possible speed. Before they dismiss Buddhist economics as nothing better than a nostalgic dream, they might wish to consider whether the path of economic development outlined by modern economics is likely to lead them to places where they really want to be. Towards the end of his courageous book *The Challenge of Man's Future*, Professor Harrison Brown of the California Institute of Technology gives the following appraisal:

> Thus we see that, just as industrial society is fundamentally unstable and subject to reversion to agrarian existence, so within it the conditions which offer individual freedom are unstable in their ability to avoid the conditions which impose rigid organisation and totalitarian control. Indeed, when we examine all the foreseeable difficulties which threaten the survival of industrial civilisation, it is difficult to see how the achievement of stability and the maintenance of individual liberty can be made compatible.[9]

Even if this were dismissed as a long-term view there is the immediate question of whether 'modernisation', as currently practised without regard to religious and spiritual values, is actually producing agreeable results. As far as the masses are concerned, the results appear to be disastrous – a collapse of the rural economy, a rising tide of unemployment in town and country, and the growth of a city proletariat without nourishment for either body or soul.

It is in the light of both immediate experience and long term prospects that the study of Buddhist economics could be recommended even to those who believe that economic growth is more important than any spiritual or religious values. For it is not a question of choosing between 'modern growth' and 'traditional stagnation'. It is a question of finding the right path of development, the Middle Way between materialist heedlessness and traditionalist immobility, in short, of finding 'Right Livelihood'.

Endnotes

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Duane Elgin is an American author, speaker, educator, consultant, and media activist. His name is especially linked to the topic of voluntary simplicity, on which he has written several publications, the latest being a revised 2nd edition of Voluntary Simplicity *(New York: Harper Collins, 2010). Based on his own experience over 30 years, Duane makes a heartfelt case for the multiple merits of cultivating a simple life.*

Simplicity: A Cool Lifestyle for a Hot Planet

Duane Elgin

Simplicity is a cool lifestyle for a hot planet. Simplicity is a lighter lifestyle that fits elegantly and sustainably into the real world of the twenty-first century. Simplicity is a smart way to live that enhances our overall health and happiness. Simplicity blossoms in community and connects us to the world with a sense of belonging and common purpose. Simplicity enhances personal freedom and choice. Simplicity means, as Gandhi said, 'my life is my message'. Simplicity nurtures our soul. Simplicity invites living with balance – inner and outer, work and family, family and community. Simplicity keeps our eyes on the prize of what matters most in our lives – the quality of our relationships with family, friends, community, nature and cosmos. Simplicity yields lasting satisfactions that more than compensate for the fleeting pleasures of consumerism. Simplicity leans toward a more relaxed relationship to life. Simplicity celebrates the beauty and intelligence of nature's designs. Simplicity reveres the wisdom of silence that 'speaks with unceasing eloquence'. Simplicity removes needless clutter and complexity and celebrates the beauty in life. Simplicity fosters the sanity of self-discovery and freedom from secondary distractions.

Simplicity removes needless clutter and complexity and celebrates the beauty in life.

Simplicity is not sacrifice. Sacrifice is a consumer lifestyle that is overstressed, overbusy, and overworked. Sacrifice is investing long hours doing work that is neither meaningful nor satisfying. Sacrifice is being away from family and community to earn a living. Sacrifice is the stress of commuting long-distances and sitting in traffic. Sacrifice is the loss of quiet and the subtle sounds of nature. Sacrifice is nature hidden behind a stream of billboard advertisements. Sacrifice is the smell of the city stronger than the smell of the Earth. Sacrifice is no longer seeing the heavens in the night sky because of light pollution. Sacrifice is carrying more than 200 toxic chemicals in our bodies with consequences that will cascade for generations ahead. Sacrifice is a dramatically diminished and impoverished range of life, both planets and animals. Sacrifice is being cut off from nature's wildness

and wisdom. Sacrifice is the loss of a relatively calm climate and the growth in extremes of droughts, heat waves, and storms. Sacrifice is the absence of feelings of neighbourliness and community. Sacrifice is the lost opportunity for soulful encounter with others. Sacrifice is feeling divided among the different parts of our lives and unsure how they work together in a coherent whole.

Consumer lifestyles offer lives of sacrifice where simplicity offers lives of opportunity. Simplicity creates the opportunity for more time with family and friends, cultivating one's 'true gifts', and contributing to the community. Simplicity also creates the opportunity for greater fulfilment in work, compassion for others, feelings of kinship with all life, and awe of living in a living universe. I find it ironic that a life-way of simplicity can take us into an opportunity-filled future and yet is often portrayed in the mass media as primitive or regressive and pulling back from opportunity. Here are three, major ways that I see the idea of 'simplicity' presented in today's media:

Cosmetic simplicity assumes that green technologies will fix our problems, give us breathing room, and allow us to continue pretty much as we have in the past without making fundamental changes in how we live and work.

1. **Crude/Regressive Simplicity:** The mainstream media often present simplicity as a path of regress instead of progress. Simplicity is viewed as anti-technology, anti-progress, and a backward looking way of life. Simplicity is an ugly lifestyle with no indoor toilet, no phone, no computer, no television, and no car. No thanks! Simplicity is presented as a throwback to an earlier time and more primitive condition. Simplicity is a cartoon lifestyle that seems naive, irrelevant, and can be easily dismissed. Seeing simplicity as regressive makes it easier to take a 'business as usual' approach to the world.

2. **Cosmetic/Superficial Simplicity:** Cosmetic simplicity covers over deep defects in our modern ways of living while giving the appearance of change. Cosmetic simplicity assumes that green technologies will fix our problems, give us breathing room, and allow us to continue pretty much as we have in the past without making fundamental changes in how we live and work. Cosmetic simplicity puts green lipstick on our unsustainable lives to give them the outward appearance of health and happiness. A superficial simplicity gives a false sense of security by implying that small measures will solve great challenges. A cosmetic simplicity perpetuates the status quo by assuming that, with use of green technologies (fuel efficient cars, fluorescent light bulbs, eating lower on the food chain, recycling paper and glass, composting food scraps) we can moderate our impact and continue along our current path of growth for another half century or more.

3. **Elegant/Deep Simplicity:** Elegant simplicity represents a deep, graceful, and sophisticated transformation in our ways of living – the work that we do, the transportation that we use, the homes and neighbourhoods in which we live, the food that we eat (both quality and locality), the clothes that we wear, and much more. An elegant simplicity seeks to heal our relationship with the ecology of the Earth, with one another,

and with the sacred universe. Elegant simplicity is not simple. It grows and flowers with a rich variety of expressions. Deep simplicity is a richly complex idea – forever clarifying, refining, opening, and growing.

Which kind of simplicity fits our world?

Which expression of simplicity – crude, cosmetic, or elegant – is most fitting in our world situation? Global trends indicate that a world storm is developing – a planetary scale systems crisis – that will push us to make deep and lasting changing in our approach to living. We now confront the simultaneous challenges of growing disruption of the global climate, an enormous increase in human populations living in gigantic cities, the depletion of vital resources such as fresh water and cheap oil, the massive and rapid extinction of animal and plant species around the world, growing disparities between the rich and the poor made starkly visible with the communications revolution, and the spread of weapons of mass destruction. Overall, we humans are over-consuming the planet and many eco-systems and social-systems around the world are close to collapse. We are being pushed to wake up and learn to live far more sustainably by making profound changes in our manner of living, consuming, working, and relating.

Magnifying the relevance of living more lightly is a disturbing assessment of humanity's future that comes from the 2007 United Nations report, Global Environment Outlook. Compiled by nearly 400 leading scientists, this highly regarded appraisal of the Earth's environment concludes that, if current trends continue, we can expect a very bleak future for humanity. A growing human population has combined with a growing appetite for consumer goods to produce a level of planetary consumption that cannot be sustained. Because humans are already living far beyond what the Earth can sustain, it means that it will be impossible for everyone to adopt lifestyles similar to those in the US and Europe. Therefore, if we are to create an 'evolutionary bounce' or leap forward, it will necessarily involve a collective shift toward simpler, more sustainable and satisfying ways of living. Simplicity is not an alternative lifestyle for a marginal few; it is a creative choice for the mainstream majority, particularly in developed nations. If we are to pull together as a human community, I believe that it will be crucial that people in affluent nations explore the choice of deep and elegant simplicity as a foundation for sustainability. Simplicity is simultaneously a personal choice, a civilizational choice, and a species choice. Even with major technological innovations in energy and transportation, it will require dramatic changes in our overall patterns of living and consuming if we are to maintain the integrity of the Earth as a living system.

Simplicity is not an alternative lifestyle for a marginal few; it is a creative choice for the mainstream majority, particularly in developed nations.

As we awaken to an endangered world, people are asking, "How can we live sustainably on the Earth when our actions are already producing dramatic climate change, species extinction, oil depletion, and more?". For more than a generation, a diverse subculture has grappled with these concerns. In the United States and a dozen or so other 'postmodern' nations, this

As global concern slowly translates into global action, we can look for leadership from pioneers of a more promising future who are crafting lives of elegant and creative simplicity.

subculture has grown from a miniscule movement in the 1960s to a respected part of the mainstream culture in the early 2000s. Glossy magazines now sell the simple life from the newsstands across the U.S. while it has become a popular theme on major television talk shows. More significantly, surveys around the world show that majorities of people support environmental protection and human development, two key themes accompanying lifeways of simplicity. Based upon three decades of research, I estimate that as of 2007, at least 10% of the U.S. adult population or roughly 20 million people are consciously crafting lives of elegant simplicity.

These changes are not confined to the U.S. and Europe. Around the world, people are awakening to the sanity of simplicity as a path to sustainability. Global surveys show there is virtually world-wide citizen awareness that our planet is indeed in poor health and great public concern for its future well-being. Surveys have also found that it makes little difference whether people live in poorer and wealthier nations – they expressed nearly equal concern for the health of the planet. As global concern slowly translates into global action, we can look for leadership from pioneers of a more promising future who are crafting lives of elegant and creative simplicity.

What does a life of voluntary 'simplicity' look like? For more than thirty years I've explored the 'simple life' and I've found such a diversity of expressions emerging in the world that the most accurate way of describing this approach to living may be with the metaphor of a garden.

A garden of simplicity

To portray the richness of simplicity, here are seven different flowerings of expression that I see growing in the 'garden of simplicity'. Although there is overlap among them, each expression of simplicity seems sufficiently distinct to warrant a separate category.

1. **Uncluttered Simplicity** – Simplicity means taking charge of lives that are too busy, too stressed, and too fragmented. Simplicity means cutting back on clutter, complexity, and trivial distractions, both material and non-material, and focusing on the essentials – whatever those may be for each of our unique lives. As Thoreau said, 'Our life is frittered away by detail. . . Simplify, simplify'. Or, as Plato wrote, 'In order to seek one's own direction, one must simplify the mechanics of ordinary, everyday life'.
2. **Ecological Simplicity** – Simplicity means to choose ways of living that touch the Earth more lightly and that reduce our ecological impact on the web of life. This life-path remembers our deep roots with the Earth, air, and water. It encourages us to connect with nature, the seasons, and the cosmos. A natural simplicity feels a deep reverence for the community of life on Earth and accepts that the non-human realms of plants and animals have their dignity and rights as well the human.

3. **Compassionate Simplicity** – Simplicity means to feel such a strong sense of kinship with others that, as Gandhi said, we 'choose to live simply so that others may simply live'. A compassionate simplicity means feeling a bond with the community of life and being drawn toward a path of reconciliation – with other species and future generations as well as, for example, between those with great differences of wealth and opportunity. A compassionate simplicity is a path of cooperation and fairness that seeks a future of mutually assured development for all.
4. **Soulful Simplicity** – Simplicity means to approach life as a meditation and to cultivate our experience of intimate connection with all that exists. By living simply, we can more directly awaken to the living universe that surrounds and sustains us, moment by moment. Soulful simplicity is more concerned with consciously tasting life in its unadorned richness than with a particular standard or manner of material living. In cultivating a soulful connection with life, we tend to look beyond surface appearances and bring our interior aliveness into relationships of all kinds.
5. **Business Simplicity** – Simplicity means a new kind of economy is growing in the world with many expressions of 'right livelihood' in the rapidly growing market for healthy and sustainable products and services of all kinds – from home-building materials and energy systems to foods and transportation. When the need for a sustainable infrastructure in developing nations is combined with the need to retrofit and redesign the homes, cities, workplaces, and transportation systems of 'developed' nations, it is clear that an enormous wave of green economic activity will unfold.
6. **Civic Simplicity** – Simplicity means a new approach to governing ourselves, recognizing that to live more lightly and sustainably on the Earth will require changes in nearly every area of public life – from transportation and education to the design of our homes, cities, and workplaces. The politics of simplicity is also a media politics as the mass media are the primary vehicle for reinforcing – or transforming – the mass consciousness of consumerism.
7. **Frugal Simplicity** – Simplicity means that, by cutting back on spending which is not truly serving our lives, and by practicing skillful management of our personal finances, we can achieve greater financial independence. Frugality and careful financial management bring increased financial freedom and the opportunity to more consciously choose our path through life. Living with less also decreases the impact of our consumption upon the Earth and frees resources for others.

Frugality and careful financial management bring increased financial freedom and the opportunity to more consciously choose our path through life.

As these seven approaches illustrate, the growing culture of simplicity contains a flourishing garden of expressions whose great diversity – and intertwined unity – are creating a resilient and hardy ecology of learning about how to live more sustainable and meaningful lives. As with other ecosystems, it is the diversity of expressions that fosters

flexibility, adaptability, and resilience. Because there are so many pathways of great relevance into the garden of simplicity, this cultural movement appears to have enormous potential to grow.

Although human societies have confronted major hurdles throughout history, the challenges of our era are unique. Never before has the human family been on the verge of devastating the Earth's biosphere and crippling its ecological foundations for countless generations to come. Never before have so many people been called upon to make such sweeping changes in so little time. Never before has the entire human family been entrusted with the task of working together to imagine and consciously build a sustainable and compassionate future. In a shift similar to one that nature makes – for example, in the jump from simple atoms to complex molecules, or from complex molecules to living cells – humanity is being challenged to make a jump to a new kind of community and life-organization. A robust garden of expressions will emerge from the combination of a culture of conscious simplicity with new forms of community adapted to the unique culture and ecology of different geographic regions. As we awaken to this new world, integrating life-ways of simplicity and new forms of community will be at the foundation of building a stewardship society and promising future. Seeds of creative simplicity, growing quietly for the past generation, are now blossoming into a garden of expressions. May the garden flourish!

Celebrated deep ecologist, Joanna Macy, describes the work and philosophy of Sarvodaya, emphasizing the spiritual roots of its activism. Sarvodaya is the largest single member of the Global Ecovillage Network, working as it does with over 10,000 communities throughout Sri Lanka.

Sarvodaya means 'Everybody Wakes Up'

Joanna Macy

I return from Sri Lanka where I saw how a country, devastated by civil war, can proceed to reunite and rebuild. Sarvodaya – the name means 'everybody wakes up' – is a Buddhist-inspired community development movement active in well over 12,000 villages in all parts of the island republic. Its campaign for peace, moving into high gear with the fragile but promising ceasefire signed in January, aims to restore not only interethnic harmony, but also the bases for economic wellbeing. These two are inseparable in Sarvodayan eyes, along with respect for the land and for the human spirit. Having loved and learned from this movement for twenty-six years, I flew to be on hand for the event of March 15th, a mammoth peace meditation kicking off their 'village-to-village, heart-to-heart' link-up program. I returned with these lessons:

1. Affirm and nourish the spiritual roots of action

By midday on March 15th figures in white filled the paths toward the great stupas and were pouring onto the grounds of the sacred ancient city of Anuradhapura. Walking along with them, I could not tell from which side of Sri Lanka's civil war these pilgrims came. No placards or shouted slogans proclaimed their identities, but place names on the buses parked back on the periphery gave a clue. They came from Hindu Tamil and Buddhist Sinhalese areas that had been pitted against each other for the last nineteen years, in a war that has cost 65,000 lives, wrecked the economy, and traumatized a generation of Sri Lankans.

This was Peace Samadhi Day, organized by Sarvodaya in support of the ceasefire recently negotiated with Norwegian help between the Sinhalese-identified government and the secessionist LTTE or Tamil Tigers. Over the last year and a half, Dr. A.T. Ariyaratne, Sarvodaya's founder, had convened public peace meditations to change the 'psychosphere'. These gatherings let

ordinary people at the grassroots level demonstrate and deepen their desire to end the war. Now, despite counsel from more cautious minds, he had reached for something huge: a meditation to include a half a million people. And despite a grenade attack on the Ariyaratne home, right before the event and just outside my bedroom, the event went forward. In what might well be the largest meditation for peace in the history of the world, 650,000 people took part.

Sitting on the grass as far as the eye could see, they made the biggest silence I ever heard. After prayers from Buddhist, Hindu and Muslim clerics, and in the intervals between Dr. Ariyaratne's words, guiding us in mindfulness of breath, in loving kindness and firm resolve for peace, the silence deepened. I thought: this is the sound of bombs and landmines not exploding, of rockets not launched and machine guns laid aside. It is possible, for us all.

2. Have practical actions people can undertake together

That day, off to the side by the ancient bodhi tree, a ceremony inaugurated Sarvodaya's Link-Up program. A thousand villages in the more devastated Tamil areas are paired with a thousand in the Sinhalese areas. The latter will bring materials and skilled and unskilled labour, so that both parties can work together to rebuild homes and schools, wells and toilets and places of worship destroyed in the fighting. I heard of a village in the South, that, just on hearing of this program, immediately loaded two lorries with roofing materials to take north.

Sarvodaya's peace plan includes grassroots development strategies for the dry zones, the most economically hard-pressed areas of Sri Lanka.

The same day, to symbolize this partnership, a village from each side had been selected, and after the temple bell was rung – at the precise moment bells were rung that day across Sri Lanka – young people from each of these two villages came forward. They bore round trays of special, festive food they had prepared, and they fed each other. The plates were then passed among the rest of us gathered there. Even if the ceasefire is sabotaged, I want to remember that taste of sweet rice and coconut. It told me that this is what we really want, most of all – to stop the fighting and feed each other.

3. To build enduring peace, restore the land

Sarvodaya's peace plan includes grassroots development strategies for the dry zones, the most economically hard-pressed areas of Sri Lanka. It features locally generated energy from biomass as well as sustainable irrigation, soil renewal, and the community-controlled microcredit schemes the Movement has pioneered in the last decade.

The aim of the Movement, as ever, is a 'no poverty, no affluence' society to reduce the disparity between rich and poor brought about by late capitalism and corporate globalization. The priority placed on care for the land reminds me of Sarvodaya's list of Basic Human Needs, the very first of which is 'a safe and beautiful environment'.

4. Think long-term

Peace does not happen with the signing of documents; the effects of war continue to fester far into the future, often to erupt again in violence. Sarvodaya points out that the seeds of Sri Lanka's civil war were planted 500 years ago with European colonization, and estimates that its healing will require an equal amount of time. So the peace plan it brings embraces the next 500 years.

To give you a rough idea: five years to put Dry Zone development measures in place; ten years to resettle all the refugees; 50 years to achieve the lowest poverty rate in the world and abolish Sri Lanka's standing army. The vision continues beyond that: by 2100, Sri Lanka becomes 'the first country to eliminate poverty, both economic and spiritual'. By the year 2500, 'Global climate warming may cause changes to Sri Lankan environment; but because of the history of working together over hundreds of years, these changes will not be disasters. In 500 years, people might be living on other planets; however, Sri Lanka will retain their image of Paradise on Earth'.

I think of the tightrope walker who, to maintain her balance and move steadily forward, must raise her eyes, keep looking ahead. When we do that in our work for peace and justice, when we feel our connections to future generations, we can stay steady and determined, despite the immediate challenges we face. My friends in the Sarvodaya Movement have shown that we ordinary humans are capable of that.

When we feel our connections to future generations, we can stay steady and determined, despite the immediate challenges we face.

From *EarthLight* magazine 45, Spring 2002.

Hildur Jackson, the primus motor of Ecovillage Design Education, and co-founder of Gaia Trust, Denmark and GEN, provides an historical contextualization for the ecovillage and engaged spirituality movements and describes the importance of strong communities in the rebuilding and designing of the 'love economy'.

Designing your Local Economy

Hildur Jackson

What is the role of community, and, in particular, how should communities design their local economic system?

Civil society is under serious pressure from business and governments. So how do we reclaim more room for self-determination in our lives? How do the informal and formal sectors of the economy together relate to the needs of civil society? What are the appropriate strategies? What is the role of community, and, in particular, how should communities design their local economic system? Let us start by looking at history and 'herstory'.

From 1900-1970

Civil society and local community made up the greatest parts of people's lives. Most people globally lived in villages and small cities. Even in 1970 a majority (75%) of people in the global South still lived in villages although they were then under pressure from urbanisation and globalisation. Businesses and companies increasingly decided how we lived and built our settlements and villages, but their influence was indirect and people still had the feeling of self-determination to some degree. Businesses were still small, local or national. You knew the local authorities.

From 1970-2000

Increasingly, civil society came under attack in this period. The trans-national corporations gained power as nation states lost theirs. Nation states tried to accommodate and regulate and came up with answers like the EU to counterbalance and regulate. The WTO was mainly written by the trans-nationals. The two sectors cooperated closely and were increasingly seen as inseparable. French sociologist, Andre Gorz, described in the 1970s how things would develop with prophetic precision. A still smaller number of trans-nationals would share the market between themselves with the support of the nation states, who saw no alternative. Civil society would come under attack from both business and government (be it supranational, national, regional or local).

Opposition to this elimination of power from civil society had for generations come from labour unions, political parties and increasingly from NGO's. As trans-nationals and nation states globalised, the opposition too had to globalise. From being single issue movements e.g. against something (like nuclear power), they changed into becoming for positive alternatives (like renewable energy). New partners, such as local community initiatives, ecovillages and engaged spirituality groups, joined the traditional protesters.

Ecovillages may be seen as a way of once again gaining more space for civil society.

21st century: ecovillages, localisation and engaged spirituality movements

The advent of the 21st century sees some new things happening. In Seattle in 1999 the NGO's, political parties and labour unions united for the first time against the increasing power of the WTO, and managed to some extent to block its development. And in the years following they have continued their work by creating global, regional and national Social Forums, first in Porto Allegre, Brazil, then all over the world. A common political agenda has not yet appeared, but many attempts have been made. What they are looking for are solutions that:

- Are globally just – eliminating injustice and poverty
- Will save four billion years of evolution and solve the ecological crises of the planet
- Recreate community and peoples rights so we become a 'communion of subjects, not a collection of objects', in the words of Thomas Berry

Ecovillages provide one solution – localisation movements and transition towns/climate towns offer another. Ecovillages are possible in all countries and in all local neighbourhoods. In the global North they are a way of sweeping in front of our own houses, creating a lifestyle with an acceptable 'ecological footprint'. In ecovillages you can live in sustainable abundance and have a simple life. Ecovillage living allows self determination and direct, participatory democracy. In the global South and East (Africa, Asia and Latin America) the ecovillage lifestyle corresponds to traditional values of co-operation and solidarity – not to speak of spirituality – and resonates with their cultural traditions. Engaged spirituality movements like Sarvodaya in Sri Lanka, Engaged Buddhism (Thailand, Burma and Laos) and 'treefolding' (Philippines) are natural partners of ecovillages.

Reclaiming civil society

Ecovillages may be seen as a way of once again gaining more space for civil society. Local people are taking back control of their local environments. They want to build their own homes, and determine their own food, energy

and waste systems. They want to make solutions for the local group, which strengthens local capacity building. They want to build a local school where what is taught stands for what they believe in. They may want to grow their own food, as what can be bought is neither fresh nor local. They may even want to create a local currency to keep the wealth created in the community instead of seeing it disappear to the nearest financial centre. They want to restore nature. These same ideas are beginning to reach local communities through the Transition Movement and 'climate towns' in Denmark and Hungary, and as seen in Sustainable Tompkins in upper New York State, at Whidbey Island in Washington State, and in initiatives like Dreaming Mallorca, Samsø Green Island (Denmark) and in many other places where local groups are organising.

Market or love economy

All of these activities could in principle happen within the formal economy. But people may also choose to place them in the informal economy. The difference is whether money is involved. The informal economy, where tasks are exchanged without money being exchanged, has many names. In the South it is usually called subsistence economy. Informal economy has been the word of women wanting recognition for free, necessary labour. Governments who feel threatened often call it the black or grey economy. I have heard it called sunshine economy by people opposing government policies. People who feel it has been a neglected area, like Ivan Illisch, call it shadow economy. I like the word love economy. Tasks are done for the people you love, your family or friends. They are done not to earn money but as an act of love and nurturing. They are needed for the survival of the children. They promote goodwill among neighbours. They beautify life. So when designing ecovillages you also have to decide whether you want to expand the love economy or whether tasks are better placed in an in-between zone – informal economy with a local currency – or in the formal economy.

Today fewer tasks are found in the informal economy and more have become a part of the welfare state.

Informal economy/subsistence economy

In many parts of the world the subsistence economy is still the main economy. People grow their own crops or survive by gathering and collecting food, like the Masai , the Ladakhis, the Eskimos – most Fourth World People. Helena Norberg-Hodge has brilliantly described what happens when the Western money culture is introduced to such societies in her book Ancient Futures, showing how greed and a feeling of being poor replaces happiness when money and Western values are introduced. But a money-based economy seems unavoidable for the time being at the level we function as humans. In the kingdom of Bhutan the government has introduced the concept of Gross National Happiness as an alternative to the Western Gross National Product. They are working at formalizing and measuring this. Three major global conferences have been held with this purpose.

In Europe, half of the tasks of society were still in the love economy when I was a girl. Women brought up children and looked after them full time, they took care of the old, they cooked, baked and preserved food, and they sewed and washed. Men built and repaired. Together they arranged celebrations. As women wanted to gain equality and independence they entered the labour market and their traditional tasks were taken over by the formal economy. Women were now paid for what they earlier did for free. While they earned wages, their children were placed in day care institutions. Women, children, the weak and old now have to obey and follow rules and regulations imposed by local or national authorities.

Today fewer tasks are found in the informal economy and more have become a part of the welfare state. This has given women a degree of independence but also taken away other freedoms and the self-determination of women, men and children. For elderly citizens, the shift often means that they are independent of their families but isolated with strangers. A recent study in Denmark showed that 25 % of people over 50 want to live in co-housings of some sort with people of their choice. In Denmark, we apparently went too far in eliminating the informal economy.

Co-housing and ecovillages as modernisations of the welfare state

The first three Danish co-housings were founded in 1970 as an answer to a newspaper article entitled, 'Children Need 100 Parents'. Co-housings were seen as an alternative to putting children in day care institutions. In Denmark, more than 200 co-housings have since been built, of which 150 are especially for the elderly. Now 35 years later I still see co-housings as really good alternatives to too much institutionalization. They offer women – and thereby men – better conditions for raising children. Children definitely have a better time in co-housings: they may roam freely without being regulated from afar and without danger from traffic, they have friends close by, there are no fences, they learn democracy by participating in meetings, cooking common meals and participating in workdays. Actually, a lot of tasks have been moved back to the informal economy creating extra welfare and fun for all involved.

When the same group celebrates together over years it becomes a learning process of being creative and fun.

Ecovillages have brought even more tasks back to the informal economy by growing food, creating local jobs, building homes and creating local currencies. So even if many people in co-housings are not as great consumers as others in the formal economy, their love economy is thriving, giving them an overall better life. People in communities know what I am talking about, but we may have to invent ways of making this more visible and better understood by the mainstream in order to have a more qualified debate in society of where we want to draw the line between the two economies in the future.

Love economy activities

The typical ecovillage community is a hive of activities with little or no cost to members, for example:

- Growing vegetables, herbs, berries, fruits; having chicken, sheep, some ponies or horses
- Using the common house for parties and a culture of celebration
- Entertaining each other for free
- Childcare is easy and mostly free
- Choirs, home theatre, bridge, cooking, etc.
- Educational meetings, seminars, etc.
- Saving greatly on transportation (sharing cars)
- Saving hotel bills for visitors

A few remarks to this hopefully self-explanatory list:

- Anybody may grow food and have animals as a single family. However, travelling becomes an issue. In a community there are always people to look after the cat, bird, dog, chickens, horses.
- Not all people eat in common houses every day. In Denmark 1-2 days a week is more usual. You also want time alone with your family – and not all cooks are equally good, though most put a lot of energy into gaining respect for their culinary skills.
- Having a common house saves a lot of money for bigger celebrations whether it is a private family event or for the group as such. Even the neighbours may want to rent the space for weddings. Being celebrated by a community instead of putting on the celebration yourself is so much more fun. When the same group celebrates together over years it becomes a learning process of being creative and fun.
- Many families spend a lot on entertainment and travels. Often it is due to a lack of local entertainment. In co-housings and ecovillages you get this for free. In co-housings and ecovillages you often have work days where you repair the old and build the new. Handymen are very popular and may teach everybody to perform semi-professional work. Respect for physical work is being restored. The CO_2 emissions and the ecological footprint is lower.

Going through this list, you will realize that when living in a co-housing or ecovillage you can greatly expand your standard of living without using more money. Existing projects demonstrate that people choose to reclaim many tasks for the love economy as they make conscious choices.

Local currencies in ecovillages

Many communities have introduced a local currency to make exchange/barter easier. If you join the food club of course you pay. So money may be involved. But it is only at cost price. In Denmark you typically pay your community about 20% of what the same meal would cost at a restaurant.

Designing for sustainable abundance

Designing your local economy and deciding on decision structures and conflict resolution procedures is an important task. It may not be visible in the same way as houses and physical structures are, and for that reason we call it the inner design as opposed to the outer design. But it is just as important. What interactions do you want outside the love economy? What should be taken care of by local currencies and where does the formal economy start? Discussing these issues may help you design the system you really want but things may also have to develop over time and through experiment. To make it visible and accountable will help you realize that you can have simple living at the same time as sustainable abundance.

A sustainable rural economy will be dependent on urban consumers loyal to local products.

Kentucky farmer, poet and essayist, Wendell Berry, sets out the key moral choices in supporting the development of living local economies.

Rules for a Local Economy

Wendell Berry

Supposing that the members of a local community wanted their community to cohere, to flourish, and to last, then they would follow a few rules:

1. Always ask of any proposed change or innovation: What will this do to our community? How will this affect our common wealth?
2. Always include local nature – the land, the water, the air, the native creatures – within the membership of the community.
3. Always ask how local needs might be supplied from local sources, including the mutual help of neighbours.
4. Always supply local needs first. (And only then think of exporting their products, first to nearby cities, and then to others.)
5. The community must understand the ultimate unsoundness of the industrial doctrine of 'labour saving' if that implies poor work, unemployment, or any kind of pollution or contamination.
6. If it is not to be merely a colony of the national or the global economy, the community must develop appropriately scaled value-adding industries for local products.
7. It must also develop small-scale industries and businesses to support the local farm or forest economy.
8. It must strive to produce as much of its own energy as possible.
9. It must strive to increase earnings (in whatever form) within the community, and decrease expenditures outside the community.
10. Money paid into the local economy should circulate within the community for as long as possible before it is paid out.
11. If it is to last, a community must be able to afford to invest in itself: it must maintain its properties, keep itself clean (without dirtying some other place), care for its old people, teach its children.

12. The old and the young must take care of one another. The young must learn from the old, not necessarily and not always in school. There must be no institutionalised 'child care' and 'homes for the aged'. The community knows and remembers itself by the association of old and young.
13. Costs now conventionally hidden or 'externalised' must be accounted for. Whenever possible they must be debited against monetary income.
14. Community members must look into the possible uses of local currency, community-funded loan programmes, systems of barter, and the like.
15. They should always be aware of the economic value of neighbourliness – as help, insurance, and so on. They must realise that in our time the costs of living are greatly increased by the loss of neighbourhood, leaving people to face their calamities alone.
16. A rural community should always be acquainted with, and complexly connected with, community-minded people in nearby towns and cities.
17. A sustainable rural economy will be dependent on urban consumers loyal to local products. Therefore, we are talking about an economy that will always be more co-operative than competitive.

Always include local nature – the land, the water, the air, the native creatures – within the membership of the community.

These rules are derived from Western political and religious traditions, from the promptings of ecologists and certain agriculturalists and from common sense. They may seem radical, but only because the modern national and global economies have been formed in almost perfect disregard of community and ecological interests.

The Slow Food movement is a celebration of the rich diversity in our food cultures worldwide and of the key role that small producers play in maintaining them. Here, Aldra Robinson describes the movement and expresses her 'gratitude for the gifts of a healthy planet and a healthy people, strong communities and the pleasure of delicious food'.

In Defence of Pleasure: The Slow Food Movement

Aldra Robinson

Our lives have become increasingly more complicated and harried, giving rise to fast food in developed countries and greater hunger in developing nations.

Every week during my childhood, my family would pile into the car for our requisite 'Sunday drive'. As the tires crunched along dirt roads, kicking up dust, I would watch the rich crimson and gold of changing leaves roll by. But over the years, I noticed a new sight along our country roads. Placards reading STOP MEGA FARMS sprouted up everywhere. Foreclosures on family farms became the norm throughout the Midwest and South. Willie Nelson hosted Farm Aid concerts to help displaced farm families. It was my first introduction to the side effects of the homogeny of mega farms and globalization. Shortly after followed Wal-Mart and other community-killing mega corporations, and with them, a mass exodus of country kids to the city, looking for work.

The crumbling of small, rural communities in the face of corporate conglomerates is now a global phenomenon. In developing nations, the farming that once supported families and entire communities now barely provides, pushing kids into cities to work in horrid factory conditions. Our once rich, diverse and locally controlled food systems that contained more than 100 species have dwindled, in the name of mass production, to no more than twelve species. Our lives have become increasingly more complicated and harried, giving rise to fast food in developed countries and greater hunger in developing nations.

Countless grassroots organizations have formed in response to the harmful trends of globalization. The United States has been particularly keen on the environmental benefits of sustainably produced, organic farming. As a result, small farms have been able to thrive again in the niche markets provided by farmer's markets and Community Supported Agriculture (CSA) programs. And in true American fashion, mega farms have jumped on the organic bandwagon, providing the illusion of sustainability to the average consumer.

Despite the growing popularity of farmer's markets and 'health food', mega farms are still harming small farmers throughout the world. We've

all seen (hell, some of us participated in) the protests in Genoa and Seattle regarding global trade issues and the increasing harm corporate greed has wrought upon the earth and humanity. Most people today have little understanding of how food ends up in our grocery stores and give little thought to what impact their food choices make on the ecosystem and our communities. Fast food, the bastion of disgusting yet convenient, has become a staple for the average American diet. For those raised on crappy cuisine, fast food tastes delicious and seems to be a necessity for a life lived at a frenzied pace. We can't possibly be bothered to worry about how that 99 cent burger ended up in our car. We have commuter rage, endless hours in a life-suffocating cubicle and shopping sprees with which to cope.

But when the Golden Arches of Gross (read McDonalds) tried to set up shop in Rome's famous Piazza di Spagna, Carlo Petrini wasn't having it. Slow Food, Petrini's response to fast food and fast life, was born. Slow Food was founded to 'counteract fast food and fast life, the disappearance of local food traditions and people's dwindling interest in the food they eat, where it comes from, how it tastes and how our food choices affect the rest of the world'.

Slow Food now has more than 80,000 members globally. The international organization has an impressive publishing house and hosts annual events like the Salone de Gusto, where small-scale food producers showcase their products, allowing visitors to taste treats mega farmers will never market because of lower yields (industrial agriculture focuses on mass production as opposed to taste). Slow Food International also hosts similar wine, cheese and fish conferences in which participants not only sample what the world's artisan producers have to offer but learn why such local traditions are vital to the health of the planet (e.g. biodiversity) and individual communities (e.g. money going to Farmer Joe who spends it locally instead of a Wal-Mart corporate executive who pays Satan for the souls of babies, or whatever it is they do with all those billions).

Slow Food was founded to 'counteract fast food and fast life, the disappearance of local food traditions and people's dwindling interest in the food they eat, where it comes from, how it tastes and how our food choices affect the rest of the world.'

Regional events are held for Slow Food members who join a local convivium. Convivia events include meals, tastings, educational seminars, school programs and chef to farmer initiatives. I recently attended a Los Angeles convivium 'chef-farmer' event at Mélisse, a four star restaurant in Santa Monica. As a kid from the sticks who took fresh, locally grown food for granted until I moved to the smog capital of the U.S., I assumed I would be seated among a bunch of pretentious blowhards who were simply using food as yet another excuse to separate themselves from the dirty masses. As usual, I was wrong.

Seated next to me was a guest speaker for the evening, farmer Phil McGrath of McGrath Family Farms. Slow Food LA paid for McGrath to attend Terra Madre, a gathering of farmers, cooks, educators, artisan food producers and fisherman from all over the world. Attendees of the Mélisse event questioned McGrath about his farm and local issues relating to a severe frost that has crippled California citrus growers, a conversation difficult to have with an 'imported from Peru' sign in the produce aisle of a major supermarket.

The work of Slow Food embraces a societal structure that globalization is trying to rip from our hands – one of simplicity, integrity, gratitude for the gifts of a healthy planet and a healthy people, strong communities and the pleasure of delicious food.

McGrath's awe and gratitude toward his experience at Terra Madre was palpable. A farmer and typical Californian surfer dude, he found himself standing in line next to a Masai tribesman wearing traditional garb. It was globalization as it should be – a gathering of diverse communities sharing their wisdom, culture and craft for the betterment of all.

A common critique of the Slow Food movement is that it is an elitist organization, filled with rich folks who have the luxury of being able to spend additional funds on expensive foods. And after watching one too many reality shows involving gourmet chefs, I wasn't looking forward to the 'chef' portion of the evening. I assumed we'd have to listen to some conceited cook rattle on about his amazing culinary skills in making masterpieces for the elite few. Once again, I was wrong.

Chef Josiah Citrin of Mélisse gave a quick overview of the contents of the dishes, most of which contained ingredients from McGrath's farm. But his focus at the evening's pulpit was to convey the importance of sharing the Slow Food philosophy with all community members, not just those who could afford to 'eat at my expensive restaurant'. Citrin works with other chefs in bringing the joy of local foods to low-income families in downtown Los Angeles through educational programs.

Slow Food convivia throughout the world work with schools in creating gardening programs, particularly for at-risk youth. With programs intent on maintaining the integrity of local economies, supporting small farmers, educating the public and creating ties between farmers and their surrounding communities, it's hard to figure out exactly from where the 'elitist' criticism actually originates.

With all these warm fuzzies, you may be wondering why you haven't heard of Slow Food yet. Americans are obsessed with food, so why hasn't Oprah done a special on this grub centred subject? Where are the tales of people losing 400 pounds on The Slow Food Diet?

What separates Slow Food from other diet conscious, environmental and pro-organic movements is its focus on pleasure. It covers all the standard eco-friendly concerns like biodiversity and pollution, but places an emphasis on community and the enjoyment of food. Slow Food isn't about conforming to a set of standards that have little to do with life but everything to do with profit. It's not about supporting the quick fix and bad science behind yet another diet scheme. (For an excellent read on the absurdity and harm of the weight loss industry's food fear game, check out Sandy Szwarc's article 'Junkfood Science', junkfoodscience.blogspot.com). It does not see food as an enemy to overcome or a product to mass produce but an integral part of the fabric of a well-lived life. The Slow Food manifesto reads:

> Our century, which began and has developed under the insignia of industrial civilization, first invented the machine and then took it as its life model. We are enslaved by speed and have all succumbed to the same insidious virus: Fast Life, which disrupts our habits, pervades the privacy of our homes and forces us to eat Fast Foods. To be worthy of the name, Homo sapiens should rid himself of speed before it reduces him to a species in danger of extinction.

Although humanity is still alive and kicking, small, rural communities and locally owned and operated food systems are at risk of becoming extinct. The pace of life, for urban and rural populations alike, is sucking the joy out of life. The work of Slow Food embraces a societal structure that globalization is trying to rip from our hands – one of simplicity, integrity, gratitude for the gifts of a healthy planet and a healthy people, strong communities and the pleasure of delicious food.

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Amidst concern in many corners that Gross Domestic Product (GDP) is a flawed measure of human and ecological wellbeing, a number of other more rounded and nuanced wellbeing indicators have emerged in recent years. Here, an editorial from The Japan Times *takes a look at one of these – Gross National Happiness.*

Tallying National Happiness

The Japan Times, Editorial: Oct. 24, 2004

In most countries, progress is measured in terms of GNP or GDP – gross national or domestic product. But one small country has adopted a startlingly different yardstick. In 1972, the king of Bhutan declared that progress in the landlocked Himalayan mini-kingdom would henceforward be gauged in terms of GNH – Gross National Happiness. The king was not joking.

Contentment, not capital, became Bhutan's official priority. As indicators of national well-being, profits, losses, surpluses and deficits were folded into just one of four 'pillars of gross national happiness – and even then with key qualifications. Thus, in his annual report to the National Assembly, the Bhutanese prime minister testifies not just about 'equitable and sustainable' socioeconomic development, but also about 'preservation and promotion of cultural values, conservation of the natural environment, and establishment of good governance'.

Bhutan is putting into practice a philosophy that some economists now see as a promising alternative to market fundamentalism.

Bhutan might seem an odd place for a revolutionary social philosophy to bubble up. About the size of Switzerland, it boasts fewer than a million people. Already isolated by geography, it has locked in its image as an enigmatic Shangri-La by tightly controlling access. Fewer than 6,000 tourists visited the hard-to-get-to nirvana last year, most of them via Druk Air, one of the world's smallest national carriers (according to Bhutan's official web site, it boasts 'a fleet of two BAe-146 aircraft'). It's the kind of place that celebrates 'Wood Male Monkey Year'. The temptation is strong to see GNH as just another charming expression of Bhutanese eccentricity.

Yet, instead of amusement, the king's Buddhist-inspired decree sparked real interest among economists and other social scientists abroad – interest that has since blossomed into full-blown theoretical research. In February, Bhutan hosted the first major international conference on GNH, attracting academics and journalists from some 20 countries. This month, the Center for Bhutan Studies published essays by 45 of the participants, ranging from doctors and lawyers to environmentalists and Buddhist monks, in a hefty volume entitled *Gross National Happiness and Development*.

In 1972, the king of Bhutan declared that progress in the landlocked Himalayan mini-kingdom would henceforward be gauged in terms of GNH – Gross National Happiness.

In promoting what E.F. Schumacher called 'economics as if people mattered' (the subtitle to his influential 1973 book, *Small is Beautiful*), Bhutan is putting into practice a philosophy that some economists now see as a promising alternative to market fundamentalism. It is not so much antidevelopment – or even antiglobalization – as it is pro balance. One Bhutanese scholar caught its essence in an inspired image, explaining that GNH does not mean rejecting modern advances, including education and technology, in the name of tradition, but figuring out how to place 'the hamburger of modern development in the Bhutanese mandala'.

For Bhutan, this might mean opening the door to fast food, television and the Internet while at the same time preserving and celebrating – as the country tries hard to do – its cultural and spiritual heritage and its superb environment. Its small size and physical isolation make the task easier. But what might GNH mean for larger, more developed countries such as Japan?

According to Ed Diener, an American professor of psychology who has taken an interest in the approach, the first thing that is required is 'a huge shift in the way policymakers think'. Instead of merely considering economic indicators as a measure of national progress, governments would have to get used to the idea of factoring in both social indicators, such as education, health care and the state of the environment, and much more subjective measures of what Mr. Diener calls 'life satisfaction'. It's the third part, of course, that is the challenge. Most governments do pay attention to education and health care, albeit sometimes reluctantly, since such matters influence votes. But what does life satisfaction consist of, and what can policymakers do to promote it?

The trick, according to Western proponents of GNH, is to focus on redressing the often deleterious side effects of too narrow a concern with economic progress. Promote appreciation of the importance of work conditions, vacation, leisure time and child care. Take into account the social value of volunteer work. Offset assessments of industry profits with an honest accounting of the losses due to environmental degradation. Broaden the definition of the bottom line, they say, and the bottom line as traditionally understood will probably even benefit, since a happier, healthier workforce should prove more productive.

Thirty-two years into its grand experiment, Bhutan has become a beacon for intellectuals as well as hikers and hippies. Maybe it should consider adding a third plane to its national fleet.

Helena Norberg-Hodge is a leading analyst of the impact of the global economy on culture and agriculture worldwide and a pioneer of the localisation movement. She is the founder/director of the International Society for Ecology and Culture (ISEC) and author of Ancient Futures: Lessons from Ladakh for a Globalizing World. *Here, she reveals how globalisation fuels climate change. She also shows how localisation would reduce carbon emissions as well as alleviate poverty around the world.*

Economics of Happiness

Helena Norberg-Hodge

Over thirty years ago, I watched as a culture that had been sealed off from the rest of the world was suddenly thrown open to economic development. Witnessing the impact of the modern world on an ancient culture gave me insights into how economic globalisation creates feelings of inadequacy and inferiority, particularly in the young, and how those psychological pressures are helping to spread the global consumer culture. Since that time I have been promoting the rebuilding of community and local economies as the foundation of an 'Economics of Happiness'.

When I first arrived in Ladakh or 'Little Tibet', a region high on the Tibetan plateau, it was still largely unaffected by either colonialism or the global economy. For political reasons, the region had been isolated for many centuries, both geographically and culturally. During several years of living amongst the Ladakhis, I found them to be the most contented and happy people I had ever encountered. Their sense of self-worth was deep and solid; smiles and laughter were their constant companions. Then in 1975, the Indian government abruptly opened Ladakh to imported food and consumer goods, to tourism and the global media, to Western education and other trappings of the 'development' process. Romanticised impressions of the West gleaned from media, advertising and fleeting encounters with tourists had an immediate and profound impact on the Ladakhis. The sanitised and glamorised images of the urban consumer culture created the illusion that people outside Ladakh enjoyed infinite wealth and leisure. By contrast, working in the fields and providing for one's own needs seemed backward and primitive. Suddenly, everything from their food and clothing to their houses and language seemed inferior. The young were particularly affected, quickly succumbing to a sense of insecurity and self-rejection. The use of a dangerous skin-lightening cream called 'Fair and Lovely' became widespread, symbolising the newly-created need to imitate the distant role models – western, urban, blonde – provided by the media.

Romanticised impressions of the West gleaned from media, advertising and fleeting encounters with tourists had an immediate and profound impact on the Ladakhis.

Over the past three decades, I have studied this process in numerous cultures around the world and discovered that we are all victims of these

same psychological pressures. For example, in 1980, an examination of population studies in China indicated that depression was rare among the Chinese. In a follow-up study in 1998, researchers found it was becoming much more commonplace. Psychiatrist Dominic T.S. Lee, M.D., who recently conducted research into post-partum depression has said, "Traditional values and sociocultural factors, such as family cohesiveness, a low divorce rate, and parental substitutes, have often been cited to explain the low rates of all depression in Chinese studies from the 1980s. However, these putative protective factors may no longer be relevant, as we have seen divorce, family violence, job insecurity, child and sexual abuse, juvenile pregnancy, deterioration in network solidarity, and alcohol and drug addiction [invade Chinese life]". Many believe that these trends are a direct result of the increasing Westernization of Chinese society.

The global consumer culture taps into the fundamental human need for love and twists it into insatiable greed.

In virtually every industrialised country now, including the US, UK, Australia, France and Japan, there is what is described as an epidemic of depression. In Japan, it is estimated that one million youths refuse to leave their bedrooms – sometimes for decades – in a phenomenon known as 'Hikikomori'. In the US, a growing proportion of young girls are so deeply insecure about their appearance they fall victim to anorexia and bulimia, or undergo expensive cosmetic surgery. In 2003 alone, over 11,000 girls under the age of eighteen had breast implants. Liposuction and tummy tucks are being performed on girls as young as fourteen.

Why is this happening? Too often these signs of breakdown are seen as 'normal': we assume that depression is a universal affliction, that children are by nature insecure about their appearance, that greed, acquisitiveness, and competition are innate to the human condition. What we fail to consider are the billions of dollars spent by marketers targeting children as young as two, with a goal of instilling the belief that material possessions will ensure them the love and appreciation they crave. In the United States, the average child watches up to 40,000 television commercials every year. And while this certainly generates results for the advertisers – it is estimated that children directly influence over 600 billion dollars of household spending annually in the US – the effects on children are far from positive. Children who watch a lot of television are more likely to be overweight, have low self-esteem and develop attentional problems, such as ADHD.

Global media is now reaching into the most remote parts of the planet and the underlying message is: 'If you want to be seen, heard, appreciated and loved you must have the right running shoes, the most fashionable jeans, the latest toys and gadgets'. The reality is that consumption leads to greater competition and envy, leaving children more isolated, insecure, and unhappy, thereby fuelling still more frantic consumption in a vicious cycle. The global consumer culture taps into the fundamental human need for love and twists it into insatiable greed.

Today, more and more people are waking up to the fact that, because of its environmental costs, an economic model based on endless consumption is simply unsustainable. But because there is far less understanding of the

social and psychological costs of the consumer culture, most believe that making the changes necessary to save the environment will entail great sacrifice. Once we realise that oil-dependent global growth is not only responsible for climate change and other environmental crises, but also for increased stress, anxiety and social breakdown, then it becomes clear that the steps we need to take to heal the planet are the same as those needed to heal ourselves: both require reducing the scale of the economy – in other words localising rather than continuing to globalise economic activity. My sense from interviewing people in four continents is that this realisation is already growing, and has the potential to spread like wildfire.

Economic localisation means bringing economic activity closer to home – supporting local economies and communities rather than huge, distant corporations. Instead of a global economy based on sweatshops in the South, stressed-out two-earner families in the North, and a handful of billionaire elites in both, localisation means a smaller gap between rich and poor and closer contact between producers and consumers. This translates into greater social cohesion: a recent study found that shoppers at farmers' markets had ten times more conversations than people in supermarkets.

Community is a key ingredient in happiness. Almost universally, research confirms that feeling connected to others is a fundamental human need. Local, community-based economies are also crucial for the well-being of our children, providing them with living role models and a healthy sense of identity. Recent childhood development research demonstrates the importance, in the early years of life, of learning about who we are in relation to parents, siblings, and the larger community. These are real role models, unlike the artificial stereotypes found in the media.

Efforts to localise economies are happening at the grassroots all over the world, and bringing with them a sense of well-being.

A deep connection with nature is similarly fundamental to our well-being. Author Richard Louv has even coined the expression 'nature deficit disorder' to describe what is happening to children deprived of contact with the living world. The therapeutic benefits of contact with nature, meanwhile, are becoming ever more clear. A recent UK study showed that 90 percent of people suffering from depression experience an increase in self-esteem after a walk in a park. After a visit to a shopping centre, on the other hand, 44 percent feel a decrease in self-esteem and 22 percent feel more depressed. Considering that over 30 million prescriptions for anti-depressants are handed out in the UK each year, and over 150 million in the US, this is a crucial finding. Doctors in the UK are now being encouraged to prescribe 'ecotherapy' – essentially exercising in nature – instead of drugs for their depressed patients.

Despite the enormity of the crises we face, turning towards more community-based, localised economies represents a powerful solution multiplier. As Kali Wendorf, editor of *Kindred* magazine, says, 'The way forward is actually quite simple: it's more time with each other, more time in nature, more time in collective situations that give us a sense of community, like farmers' markets, for example, or developing a relationship with the corner shop where you get your fruits and vegetables. It's not going back to

the Stone Age. It's just getting back to that foundation of connection again'.

Efforts to localise economies are happening at the grassroots all over the world, and bringing with them a sense of well-being. A young man who started an urban garden in Detroit, one of America's most blighted cities, told us, "I've lived in this community over 35 years and people I'd never met came up and talked to me when we started this project. We found that it reconnects us with the people around us, it makes community a reality". Another young gardener in Detroit put it this way: "Everything just feels better to people when there is something growing".

Global warming and the end of cheap oil demand a fundamental shift in the way that we live. The choice is ours. We can continue down the path of economic globalisation, which at the very least will create greater human suffering and environmental problems, and at worst, threatens our very survival. Or, through localisation, we can begin to rebuild our communities and local economies; the foundations of sustainability and happiness.

MODULE 4
Local Economies

Many goods and services that would enrich our communities and our ecosystems we can provide for ourselves through social enterprises. Their distinctive feature is that their primary function is to deliver social and/or environmental services rather than to make a profit – though if they are to succeed, they do need to behave in a business-like manner.

Ecovillages and other sustainable community initiatives around the world have succeeded in creating a range of local businesses that strengthen and enrich the social and ecological fabric. In this Module, we will explore the key tools for identifying enterprise opportunities and examine those areas in which there appears to be greatest potential for locally-based social enterprise development.

We also explore some of the key issues faced by ecovillages and other intentional communities in terms of employment generation and asset – and income-sharing.

Contents

The Specialization Trap

Fifty Million Farmers

Why You Should Think Local First

Reclaiming our Future: Reclaiming our Food

Profits of Place

Short Tails: The Coming Small-Mart Revolution

Economics of Solidarity: Good Practice from within the Ecovillage Family

The Economy of Auroville

Will Earthaven Become a 'Magical Appalachian Machu Picchu'?

Creating and Managing an Ethical Business: Permanent Publications

Powerdown and Permaculture: At the Cusp of Transition

Drawing on a review of the history of previous civilizations, peak oil commentator John Michael Greer makes the case for small-scale decentralised economies in a low-energy future.

The Specialization Trap

J.M. Greer

Few ideas are quite as unpopular nowadays as the suggestion that the fate of past civilizations has something to teach us about the likely destiny of our own. This lack of enthusiasm for the lessons of history pervades contemporary culture; what makes this interesting is that it is also among the most fruitful sources of disaster in the modern world. The ongoing implosion of real estate prices around the industrial world is simply one example out of many.

Long before the phrase 'condo flipper' entered common usage, one thing should have been obvious: anybody who claims that an asset class can keep on increasing in value forever is shovelling smoke. From the 17th century Dutch tulip mania to the internet bubble of the late 1990s, financial history is littered with the blackened ruins of speculative booms that crashed and burned while in hot pursuit of the fantasy of endless appreciation. None of this kept investors in the last few years from betting the future on the belief that this time was different, and real estate prices would keep rising forever – or from lambasting those few spoilsports who suggested that what went up would inevitably, in due time, come down.

Those of us who insist on reading today's headlines about peak oil in the light of history risk a similar reaction. Still, it's a risk worth taking. The logic which insists that while all other civilizations have risen and fallen, ours will just keep rising forever, differs not a whit from the logic underlying the late real estate bubble; the only difference is one of scale. It's for this reason among others that I try to keep up with scholarship on the decline and fall of past civilizations, and that was what brought me to Bryan Ward-Perkins' valuable book *The Fall of Rome and the End of Civilization* (Oxford UP, 2005).

Those of my readers who don't keep track of current fashions in historiography may not know that for several decades now, such phrases as the 'Dark Ages' and 'the fall of Rome' have been nomina non grata in scholarly circles. The transition that turned western Europe from the crowded, cosmopolitan Roman world into the depopulated, impoverished patchwork of barbarian chiefdoms that succeeded it has been recast by

several influential writers as a process of positive cultural evolution that just happened to feature such awkward incidents as, say, the sacking of Rome by the Visigoths.

Now it's only fair to say that, like most revisionist histories, this one made a necessary point. An older generation of historians had gone so far in the other direction – demonizing the barbarians, ignoring the real cultural achievements of the centuries following Rome's fall, and paying too little attention to the survival of the eastern Roman Empire during the years when its western twin imploded – that a reaction was overdue. Like most revisionist histories, however, the reaction pushed itself to the point of absurdity, and Ward-Perkins' book is a useful corrective.

One of the tools he uses to document the real scale and impact of the western empire's collapse is the humble but eloquent voice of pottery. The Roman pottery industry was huge, capable, and highly centralized, churning out fine tableware, storage vessels, roof tiles, and many other goods in such vast quantities that archaeologists across Roman Europe struggle to cope with the fragments today. The pottery works at La Graufesenque in what is now southern France and was then the province of Gallia Narbonense, for instance, shipped exquisite products throughout the western empire, and beyond it – goods bearing the La Graufesenque stamp have been found in Denmark and eastern Germany. Good pottery was so cheap and widely available that even rural farm families could afford elegant tableware, sturdy cooking pots, and watertight roof tiles.

Rome's fall changed all this. When archaeologists uncovered the grave of a sixth-century Saxon king at Sutton Hoo in eastern Britain, for example, the pottery found among the grave goods told an astonishing tale of technical collapse. Had it been made in fourth century Britain, the Sutton Hoo pottery would have been unusually crude for a peasant farmhouse; two centuries later, it sat on the table of a king. What's more, much of it had to be imported, because so simple a tool as a potter's wheel dropped entirely out of use in post-Roman Britain, as part of a cascading collapse that took Britain down to levels of economic and social complexity not seen there since the subsistence crises of the middle Bronze Age more than a thousand years before.

Had it been made in fourth century Britain, the Sutton Hoo pottery would have been unusually crude for a peasant farmhouse; two centuries later, it sat on the table of a king.

Ward-Perkins' book contains many other illustrations of the human cost of the Roman collapse – the demographic traces of massive depopulation, the way that trends in graffiti track the end of widespread literacy, the decline in the size of post-Roman cattle as a marker of agricultural contraction, and much more – but I want to focus on the pottery here, because it tells a tale with more than a little relevance to our own time. Cooking vessels, food containers, and roofing that keeps the rain out, after all, are basic to any form of settled life. An agricultural society that cannot produce them is impoverished by any definition; an agricultural society that had the ability to produce them, and loses it, has clearly undergone an appalling decline.

What happened to put such obviously useful items out of the reach of the survivors of Rome's collapse? As Ward-Perkins shows, the post-

The possibility of a future dark age apparently never entered the cultural dialogue in Roman times, but it has been raised repeatedly in ours. Preventive action is well within the reach of individuals and local communities...

Roman economic collapse had its roots in the very sophistication and specialization that made the Roman economy so efficient. Pottery, again, makes an excellent example of the wider process. Huge pottery factories like the one at La Graufesenque, which used specialist labour to turn out quality goods in immense volume, could make a profit only by marketing their wares on a nearly continental scale, using sophisticated networks of transport and exchange to reach consumers all over the western empire who wanted pottery and had denarii to spend on it. The Roman world was rich, complex, and stable enough to support such networks – but the post-Roman world was not.

The implosion of the western empire thus turned what had been a massive economic advantage into a fatal vulnerability. As the networks of transport and exchange came apart, the Roman economy went down with it, and that economy had relied on centralized production and specialized labour for so long that there was nothing in place to take up the slack. During the Roman Empire's heyday, people in the towns and villas near Sutton Hoo could buy their pottery from local merchants, who shipped them in from southern Britain, Gaul, and points further off. They didn't need local pottery factories, and so didn't have them, and that meant their descendants very nearly ended up with no pottery at all.

Even where Roman pottery factories existed, they were geared toward mass production of specialized types, not to small-scale manufacture of the whole range of pottery products needed by local communities. Worse, as population levels declined and the economy contracted, the pottery on hand would have been more than adequate for immediate needs, removing any market for new production. A single generation of social chaos and demographic contraction thus could easily have been enough to break the transmission of the complex craft traditions of Roman pottery-making, leaving the survivors with only the dimmest idea of how to make good pottery.

Trace any other economic specialty through the trajectory of the post-Roman world and the same pattern appears. Economic specialization and centralized production, the core strategies of Roman economic success, left Rome's successor states with few choices and fewer resources in a world where local needs had to be met by local production. Caught in the trap of their own specialization, most parts of the western empire came out the other end of the process of decline far more impoverished and fragmented than they had been before the centralized Roman economy evolved in the first place.

Map this same process onto the most likely future of industrial society, in turn, and the parallels have daunting implications. In modern industrial nations, the production and distribution of goods are far more centralized than anything Rome ever achieved. Nearly all workers at every level of the economy perform highly specialized niche jobs, most of which only function within the structure of a highly centralized, mechanized, and energy-intensive global economy, and many of which have no meaning or value at all outside that structure. If the structure falters, access to even the most basic goods and services could become a challenge very quickly.

Food is the obvious example – a very small number of people in any industrial nation have the skills necessary to grow their own food, and even fewer could count on access to the land, tools, and seed stock to give it a try – but the same principle holds for every other necessity of life, not to mention countless other things that would be good to have in the de-industrial dark age that looms up ahead of us in most of our possible futures. Consider the suite of skills needed, for example, to locate and process suitable fibres, spin and weave them into cloth, and make the cloth into clothing. Not many people these days have any of those skills, much less all of them; the tools needed to do most of them are not exactly household items in most homes these days, and the ability to build and repair those tools are even more specialized.

Our situation is thus far more precarious than Rome's was. On the other hand, we have an advantage that the Roman world apparently lacked – if we choose to use it. The possibility of a future dark age apparently never entered the cultural dialogue in Roman times, but it has been raised repeatedly in ours. Preventive action – the deliberate revival of non-industrial ways of providing necessary goods and services – is well within the reach of individuals and local communities, and indeed some of this work has already been done by hobbyists and people involved in historical re-enactment societies of various kinds.

A great deal more of the same thing will be needed, though, to keep the decline of industrial society from leaving the same sort of economic vacuum in its wake that Rome's fall left behind. I am coming to think that one of the most useful things anyone concerned about the future can do is to adopt some practical craft that produces goods or services useful in a de-industrializing world, and get skilled at it. If we are to get much of anything out from between the jaws of the specialization trap, projects such as this are a crucial step.

Celebrated peak oil author and educator Richard Heinberg explains why the US will need 50 million farmers to feed its population as fossil fuels begin to run down.

Fifty Million Farmers

Richard Heinberg

There was a time not so long ago when famine was an expected, if not accepted, part of life. Until the nineteenth century – whether in China, France, India, or Britain – food came almost entirely from local sources, and harvests were variable. In good years there was plenty – enough for seasonal feasts and for storage in anticipation of winter and hard times to come; in bad years starvation cut down the poorest and the weakest – the very young, the old, and the sickly. Sometimes bad years followed one upon another, reducing the size of the population by several percent. This was the normal condition of life in pre-industrial societies, and it persisted for thousands of years.

Today in America, such a state of affairs is hard to imagine. Food is so cheap and plentiful that obesity is a far more widespread concern than hunger. The average mega-supermarket stocks an impressive array of exotic foods from across the globe, and even staples are typically trucked from hundreds of miles away. Many people in America did go hungry during the Great Depression, but those were times that only the elderly can recall. In the current regime the desperately poor may experience chronic malnutrition and may miss meals, but for most the dilemma is whether to find time in the day's hectic schedule to go to the grocery store and take food home to cook or whether to eat out instead. As a result, fast-food restaurants proliferate: the fare may not be particularly nutritious, but even an hour's earnings at minimum wage will buy a meal or two.

We've basically been living on free energy for the past two hundred years.

The average American family spent 20 percent of its income on food in 1950; today the figure is 10 percent. This is an extraordinary state of affairs, but because it is the only one that most Americans alive today have ever experienced, we tend to assume that it is normal and will continue indefinitely. There are, however, reasons to think that our current anomalous abundance of inexpensive food may be only temporary; if so, present and future generations may become acquainted with that old, formerly familiar but unwelcome houseguest – famine.

The following are four principal bases (there are others) for this gloomy forecast. The first has to do with looming fuel shortages. I'm going to describe this problem in some detail because it is so central to the entire thesis that I'm laying before you. Energy is of course the key to life itself. We humans have been harvesting energy from our environments forever in effect, gaining energy from the environment principally through the food we eat and exerting energy upon our environment primarily through muscle power.

There are reasons to think that our current anomalous abundance of inexpensive food may be only temporary; if so, present and future generations may become acquainted with that old, formerly familiar but unwelcome houseguest – famine.

We have been through several important energy transitions in our history, including the harnessing of fire, the planting of crops, the domestication of animals and the hitching of them to plows and carts and chariots, and so on. Throughout all of this we were subject to the net energy principle; in other words, it takes energy to get energy from the environment. It takes energy to feed horses, for example. We have to grow food for them, and as recently as 1900 something like 20 to 25 percent of U.S. cropland was set aside to grow food for horses. But because a horse can do the work of ten people, there was a net energy profit from raising and harnessing horses. It was that net energy profit from agriculture, from animal muscle power, and occasionally from water mills or windmills that made possible the construction of complex societies that we call civilizations.

Then we discovered fossil fuels, but we didn't know how to use them for a long time until we found the technological means. We had to develop metallurgy, we had to develop certain basic machines, but once we had done so, we lit a fuse on a keg of dynamite under civilization.

Previous energy transitions pale by comparison to what has happened over the past two hundred years, and of course the easiest way to measure that is by human population. We had never numbered more than a few hundred million, even well into the medieval period, but our population achieved one billion by the year 1820, two billion by 1930 or so, three billion by around 1960, four billion by the mid-1970s, five billion by the late 1980s, six billion by the late 1990s, and we've added more than half a billion humans just since 1999. This is an extraordinary success from a biological point of view, but of course it's a highly perilous kind of success.

How did we manage to do it? How did we, being just one puny species among millions of others, manage to take over the biosphere? The answer is, through the power of fossil fuels. Fossil fuels made the net energy constraint temporarily almost null and void. Think about it. Have your ever run out of gas along the highway and had to push your car two or three yards to get it off to the side of the road? You know that's hard work. Imagine pushing your car twenty or thirty miles. That's the energy equivalent of roughly six to eight weeks of hard human labour. It's what we get from a single gallon of gasoline for which we're paying less than $2.25 right now. Imagine getting six to eight weeks of human labour for $2.25. You can't do that even in China. So of course we've mechanized every possible aspect of human life to take advantage of that enormously cheap energy. We've basically been living on free energy for the past two hundred years. Sometimes people ask me, What if we discover a free energy device? Well, we already have one,

and that's what has led us to this point. I dread to think what would happen if we found another.

Oil and the other fossil fuels are non-renewable, and here is the catch: we started running out of oil when the very first barrel of it was extracted from the ground, and that depletion of oil really became apparent in this country in 1970 when we achieved our national oil-production peak. Of course, prior to that time the United States had been the world's foremost oil-producing nation. That is celebrated in a wonderful television series that I'm sure we all are familiar with, the 'Beverly Hillbillies'. Back in those days a few Americans were getting rich from exploring for and discovering oil. That's not happening any more. The peak of discovery in the United States was way back in 1930. We're finding very little these days, and what we do find, such as recently in the Gulf of Mexico, is in extremely inhospitable environments, where the cost of exploration and extraction is enormously higher than it was only a couple of decades ago.

Every energy source needs to be evaluated by its net-energy profit ratio, its convenience of use, scalability, the size of the resource base, environmental impacts, and so on.

Reaching the peak of domestic oil production has had enormous economic repercussions for our nation: we have become dependent on imports of oil. Now we import about 70 percent of what we use in terms of regular conventional oil and refined oil products. That means we are borrowing roughly a billion dollars a day to pay for those imports. We used to be a net lender to the rest of the world; now we are a net borrower. Of course our foreign policy has also changed, and we've developed a peculiar fascination with one part of the world, where much of the remaining oil lies. We now have military bases throughout the Middle East and central Asia. In fact, wherever there's an oil well or a pipeline anywhere in the world, there's likely to be a U.S. military base close by.

Now, as costly and significant as the U.S. oil production peak has been, the global peak, when it inevitably occurs, is going to be far more so, and there are clues to suggest that it may not be so far in the future. First of all, we're seeing oil production peaks in many other countries: Great Britain, Norway, Oman, Mexico; the list goes on. The majority of oil-producing nations now are in decline. In a very few cases that decline may be temporarily reversible. But in most cases, as in the United States, we are looking at a long, slow, inexorable decline.

Most of the large fields were discovered a long time ago, and that's important because not all oil fields are the same. Some are extremely large, but others are very small. Roughly half of all current oil production comes from only 120 giant and super giant fields, all of which were discovered in the 1930s, 1940s, 1950s, a few in the 1960s, and one in the 1970s; the rest of the world's oil production, the other half, comes from tens of thousands of much smaller oil fields, and that's what we're finding today – mere minnows. As the giant and super giant fields go into decline, it becomes more and more difficult to replace their production from the smaller fields we're finding today. As a result the oil industry is on a kind of treadmill that's speeding up over time, and the runner is tiring. When is the global peak likely to occur? The answer is, no one knows for sure, but more and more analysts are lining

up around approximately 2010. We are not looking at an event far in the distant future but one that has possibly happened already.

Can't we simply make up for oil with alternative energy sources? There are alternative fossil fuels: low-grade fossil fuels like the tar sands of Canada and shale oil in Colorado and turning coal and gas into liquid fuels, using stranded natural gas, etc. Then there are alternative energy sources that are renewable – solar, wind, geothermal, tidal, wave power, ocean thermal. In each and every case when we do the analysis, we find that there are inherent limits, either time limits or limits of scale. Very few of us, unfortunately, have been educated to understand energy or to be able to assess energy sources. This kind of energy literacy really needs to be developed rapidly in our society, not only among the general population but especially among policy makers, very few of whom understand this issue at all. Every energy source needs to be evaluated by its net-energy profit ratio, its convenience of use, scalability, the size of the resource base, environmental impacts, and so on. There are eight or nine variables that we need to take into account. When we do so, we find that solutions are not plentiful. There are many energy sources, and we need to develop them as rapidly as possible, but the prospect of their being able to pick up where oil is leaving off is not great.

An attempt to make up for fuel shortfalls by producing more biofuels – ethanol, butanol, and biodiesel – will put even more pressure on the food system and will likely result in a competition between food and fuel uses for land and other resources needed in agricultural production.

As if the peak-oil crisis were not bad enough, the United States is also facing a natural-gas-supply crisis. Production or extraction is declining already, despite the fact that drilling efforts have more than doubled over the past eight years. Currently every available drilling rig is at work, but because there is a shortage of trained personnel, drilling rates probably cannot be increased further. Ironically, natural gas in storage is now at record levels, and therefore prices have actually fallen significantly in recent months. This is due to reduced demand stemming from warmer winters (thanks, perhaps, to global warming) and reduced demand from industry because of the recent high prices. Much of the U.S. chemicals industry has fled the country for good; which is also why industrial demand for natural gas is down significantly.

As extraction rates continue to fall, the market tells us there is no problem because there is no actual shortage for the moment. In just a few years, however, there will indeed be shortages and very definitely an enormous problem. This has implications for home heating because 60 to 70 percent of homes in the United States heat with gas. As for our electrical grid system, something like 90 percent of new generating capacity in the past decade is gas fired. As with oil, shortages of natural gas will have their impact on agriculture.

My primary concern today is agriculture. Modern industrial agriculture has been described as a method of using soil to turn petroleum and gas into food. We use natural gas to make fertilizer and oil in order to fuel farm machinery as well as to power irrigation pumps, as a feedstock for pesticides and herbicides, in the maintenance of animal operations, in crop storage and drying, and for transportation of farm inputs and outputs. Agriculture accounts for about 17 percent of the U.S. annual energy budget, which makes

it the single largest consumer of petroleum products as compared to other industries. The U.S. military, in all of its operations, uses only about half that amount. About 1,500 litres (350 gallons) of oil equivalents are required to feed each person in the United States each year, and every calorie of food produced requires on average ten calories of fossil-fuel inputs. This is a food system profoundly vulnerable, at every level, to fuel shortages and skyrocketing prices. Both are inevitable.

An attempt to make up for fuel shortfalls by producing more biofuels – ethanol, butanol, and biodiesel – will put even more pressure on the food system and will likely result in a competition between food and fuel uses for land and other resources needed in agricultural production. Already 14 percent of the U.S. corn crop is devoted to making ethanol, and that proportion is expected to rise to one quarter, based solely on existing projects in development and on government mandates.

The second factor potentially leading to famine is a shortage of farmers. Much of the success of industrial agriculture lies in its labour efficiency: far less human work is required to produce a given amount of food today than was the case decades ago (the actual fraction, comparing the year 2000 with 1900, is about one seventh). But that very success implies a growing vulnerability. We don't need as many farmers as a percentage of the population as we used to; thus, throughout the past century most farming families – including hundreds of thousands and perhaps millions that would have preferred to maintain their rural, self-sufficient way of life – were economically forced to move to cities and find jobs there. Today so few people farm that vital knowledge of how to farm is disappearing. The average age of American farmers is over 55 and approaching 60. The proportion of principal farm operators younger than 35 has dropped from 15.9 percent in 1982 to 5.8 percent in 2002. Of all the dismal statistics I know, these are surely among the most frightening. Who will be growing our food twenty years from now? With less oil and gas available, we will need far more knowledge and muscle power devoted to food production, and thus far more people on the farm, than we have currently.

The third worrisome trend is an increasing scarcity of fresh water. Sixty percent of water used nationally goes toward agriculture. California's Central Valley, which produces the substantial bulk of the nation's fruits, nuts, and vegetables, receives virtually no rainfall during summer months and relies overwhelmingly on irrigation. But the snowpack on the Sierra, which provides much of that irrigation water, is declining, thanks again to global warming, and the aquifer that supplies much of the rest is being drawn down at many times its recharge rate. If these trends continue, the Central Valley may be incapable of producing food in any substantial quantities within two or three decades. Other parts of the country are similarly overspending their water budgets, and very little is being done to deal with this impending catastrophe.

Fourth and finally, there is the problem of global climate change. Often the phrase used for this is 'global warming', which implies only the fact that

the world's average temperature will be increasing by a couple of degrees or more over the next few decades. The much greater problem for farmers is destabilization of weather patterns. We face not just a warmer climate but climate chaos: droughts, floods, and stronger storms in general (hurricanes, cyclones, tornados, hail storms) – that is, unpredictable weather of all kinds. Farmers depend on relatively consistent seasonal patterns of rain and sun, cold and heat; a climate shift can spell the end of farmers' ability to grow a crop in a given region, and even a single freak storm can destroy an entire year's production. Given the fact that modern agriculture in this country has become highly centralized due to cheap transport and economies of scale (as we found out in the recent tainted spinach scare, almost the entire national spinach crop comes from a single valley in California), the damage from that freak storm is today potentially continental or even global in scale. We have embarked on a century in which, increasingly, freakish weather is normal.

I am not pointing out these problems and their likely consequences in order to cause panic. As I will be proposing in a few moments, there is a solution to at least two of these problems, one that may also help us address the remaining two. It is not a simple or easy strategy, and it will require a coordinated and sustained national effort. But in addition to averting famine, this strategy may permit us to solve a host of other seemingly unrelated social and environmental problems.

Intensifying food production

First, in order to get a better grasp of the problems and the solution being proposed, it is essential that we understand how our present exceptional situation of cheap abundance came about. In order to do that, we must go back not just a few decades but at least ten thousand years.

The origins of agriculture are shrouded in mystery, though archaeologists have been whittling away at that mystery for decades. We know that horticulture (or gardening, from the Latin word *hortus,* meaning garden) began at somewhat different periods, independently, in at least three regions – the Middle East, Southeast Asia, and Central America. Following the end of the last Ice Age, roughly 12,000 years ago, much of humanity was experiencing a centuries-long food crisis brought on by the over-hunting of the megafauna that had previously been at the centre of the human diet. The subsequent domestication of plants and animals brought relative food security as well as the ability to support larger and more sedentary populations.

As compared to hunting and gathering, horticulture intensified the process of obtaining food. Intensification (because it led to increased population density – i. e. more mouths to feed) then led to the need for even more intensification: thus, horticulture (or gardening) eventually led to agriculture (from the Latin *ager*, meaning field), which essentially means field cropping. The latter produced even more food per unit of land, thus

enabling more population growth, which in turn meant still more demand for food. I am describing a classic self-reinforcing feedback loop.

As a social regime, horticulture did not represent a decisive break with hunting and gathering. Just as women had previously participated in essential productive activities by foraging for plants and hunting small animals, they now played a prominent role in planting, tending, and harvesting the garden – activities that were all compatible with the care of infants and small children. Thus, women's status remained relatively high in most horticultural societies. Seasonal surpluses were relatively small, and there was no full-time division of labour.

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As agriculture developed – with field crops, plows, and draft animals – societies inevitably mutated in response. Plowing fields was men's work; women were forced to stay at home and lost social power. Larger seasonal surpluses required management as well as protection from raiders. Full-time managers and specialists in violence proliferated as a result. Societies became multi-layered: wealthy ruling classes (which had never existed among hunter-gatherers and were rare among gardeners) sitting atop an economic pyramid that came to include scribes, soldiers, and religious functionaries, supported at its base by the vastly more numerous peasants, who produced all the food for themselves and everyone else as well. Writing, mathematics, metallurgy, and ultimately the trappings of modern life as we know it thus followed not so much from planting in general as from agriculture in particular.

As important an instance of intensification as agriculture was, in many respects it pales in comparison with what has occurred within the past century or so with the application of fossil fuels to farming. Petroleum-fed tractors replaced horses and oxen, freeing more land to grow food for far more people. The Haber-Bosch process for synthesizing ammonia from fossil fuels, invented just prior to World War I, has doubled the amount of nitrogen available to green nature, with nearly all of that increase going directly to food crops. New hybrid plant varieties led to higher yields, technologies for food storage improved radically, and fuel-fed transport systems enabled local surpluses to be sold not only regionally but nationally and even globally. Through all of these strategies, we have developed the wherewithal to feed seven times the population that existed at the beginning of the industrial revolution. In the process we have made farming uneconomical and unattractive to all but a few.

That is the broad, global overview. In the United States, whose history as an independent nation begins at the dawn of the industrial era, the story of agriculture comprises three distinct periods:

The Expansion Period (1600 to 1920): Increases in food production during these three centuries came simply from putting more land into production; technological change played only a minor role.

The Mechanization Period (1920 to 1970): In this half-century technological advances issuing from cheap, abundant fossil-fuel energy resulted in a dramatic increase in productivity (output per worker hour). Meanwhile

farm machinery, pesticides, herbicides, irrigation, new hybrid crops, and synthetic fertilizers allowed for the doubling and tripling of crop production. Also during this time U.S. Department of Agriculture policy began favouring larger farms (the average U.S. farm size grew from 100 acres in 1930 to almost 500 acres by 1990) and production for export.

The Saturation Period (1970 to the present): In these recent decades, the application of still greater amounts of energy has produced smaller relative increases in crop yields. Meanwhile, an ever-growing amount of energy is being expended just to maintain the functioning of the overall system. For example, about 10 percent of the energy in agriculture is used to offset the negative effects of soil erosion, while increasing amounts of pesticides must be sprayed each year as pests develop resistance. In short, strategies that had recently produced dramatic increases in productivity became subject to the law of diminishing returns.

While we were achieving miracles of productivity, agriculture's impact on the natural world was also growing; indeed, it is now the single greatest source of human damage to the global environment. This damage takes a number of forms: erosion and salinization of soils; deforestation (a strategy for bringing more land into cultivation); fertilizer runoff (which ultimately creates enormous 'dead zones' around the mouths of many rivers); loss of biodiversity; fresh water scarcity; and agrochemical pollution of water and soil. In sum, we created unprecedented abundance while ignoring the long-term consequences of our actions. This is more than a little reminiscent of how some previous agricultural societies – such as the Greeks, Babylonians, Romans, and Mayans – destroyed soil and habitat in their mania to feed growing urban populations and collapsed as a result.

Fortunately, during the past century or two we have also developed the disciplines of archaeology, history, and ecology, which teach us how and why those ancient societies failed and how the diversity of the web of life sustains us. Thus, in principle, if we avail ourselves of this knowledge, we need not mindlessly repeat yet again the same time-worn tale of catastrophic civilisational collapse.

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The Twenty-First Century: De-Industrialization

How might we avoid such a fate? Surely the dilemmas I have outlined are understood by the managers of the current industrial food system. They must have some solutions in mind. Indeed they do, and predictably those solutions involve a further intensification of the food production process. Because we cannot achieve much by applying more energy directly to that process, the most promising strategy on the horizon seems to be the genetic engineering of new crop varieties. If we could, for example, design crops to grow with less water or in unfavourable climate and soil conditions, we could perhaps find our way out of the current mess.

Unfortunately, this strategy has flaws. Our collective experience so far with genetically modifying crops shows that glowing promises of higher

yields or of the reduced need for herbicides have seldom been fulfilled. At the same time new genetic technologies carry with them the potential for horrific unintended consequences in the form of negative impacts on human health and the integrity of ecosystems. We have been gradually modifying plants and animals through selective breeding for millennia, but new gene-splicing techniques enable scientists to re-mix genomes in ways and to degrees impossible heretofore. One serious error could result in biological tragedy on an unprecedented scale. Yet even if future genetically modified commercial crops prove to be much more successful than past and existing ones, and even if we manage to avert a genetic apocalypse, the means of producing, distributing, and growing genetically engineered seeds is itself reliant on the very fuel-fed industrial system that is in question.

Through all of these strategies, we have developed the wherewithal to feed seven times the population that existed at the beginning of the industrial revolution.

Is it possible, then, that a solution lies in another direction altogether – perhaps in deliberately de-industrializing production but doing so intelligently, using information we have gained from the science of ecology as well as from traditional and indigenous farming methods in order to reduce environmental impacts while maintaining total yields at a level high enough to avert widespread famine? This is not an entirely new idea. As you all well know, the organic and ecological farming movements have been around for decades, but up to this point the managers of the current national and global systems have resisted the idea. This is no doubt largely because those managers are heavily influenced by giant corporations that profit from centralized industrial production for distant markets; nevertheless, the fact that we have reached the end of the era of cheap oil and gas demands that we re-examine the potential costs and benefits of our current trajectory and its alternatives.

I believe we must and can de-industrialize agriculture. The general outline of what I mean by de-industrialization is simple enough: this would imply a radical reduction of fossil-fuel inputs to agriculture, accompanied by an increase in labour inputs and a reduction of transport, with production being devoted primarily to local consumption. Once again, fossil-fuel depletion almost ensures that this will happen, but at the same time it is fairly obvious that if we don't plan for de-industrialization, the result could be catastrophic. It's worth taking a moment to think about how events might unfold if the process is driven simply by oil and gas depletion – without intelligent management.

Facing high fuel prices, family farms would declare bankruptcy in record numbers. Older farmers (the majority, in other words) would probably choose simply to retire, whether they could afford to or not; however, giant corporate farms would also confront rising costs, which they would pass along to consumers by way of dramatically higher food prices. Yields would begin to decline – in fits and starts – as weather anomalies and water shortages affected one crop after another.

Meanwhile, people in the cities would also feel the effects of skyrocketing energy prices. Entire industries would falter, precipitating a general economic collapse. Massive unemployment would lead to unprecedented levels

of homelessness and hunger. Many people would leave cities looking for places to live where they could grow some food. But they might find all of the available land already owned by banks or the government. Without experience in farming, even those who succeeded in gaining access to acreage would fail to produce much food and would ruin large tracts of land in the process. Eventually these problems would sort themselves out; people and social systems would adapt – but probably not before an immense human and environmental tragedy had ensued.

I wish I could say that this forecast is exaggerated for effect. Yet the actual events could be far more violent and disruptive than it is possible to suggest in so short a summary.

Examples and strategies

Things don't have to turn out that way. As I have already said, I believe that the de-industrialization of agriculture could be carried out in a way that is not catastrophic and that in fact substantially benefits society and the environment in the long run. But to be convinced of the thesis we need more than promises. We need historic examples and proven strategies. Fortunately, we have two of each.

I believe that the de-industrialization of agriculture could be carried out in a way that is not catastrophic and that in fact substantially benefits society and the environment in the long run.

In some respects the most relevant example is that of Cuba's Special Period. In the early 1990s, with the collapse of the Soviet Union, Cuba lost its source of cheap oil. Its industrialized agricultural system, which was heavily fuel dependent, immediately faltered. Very quickly Cuban leaders abandoned the Soviet industrial model of production, changing from a fuel – and petrochemical-intensive farming method to a more localized, labour-intensive, organic mode of production. How they did this is itself an interesting story. A number of eco-agronomists at Cuban universities had already been advocating a transition somewhat along these lines for some time, but they were making little or no headway. When the crisis hit, they were given free rein to redesign the entire Cuban food system. Had these academics not been persistently advocating their position in previous years, the nation's fate might have been sealed.

Heeding their advice, the Cuban government broke up large state-owned farms and introduced private farms, farmer co-operatives, and farmer markets. Cuban farmers began breeding oxen for animal traction. The Cuban people adopted a mainly vegetarian diet, mostly involuntarily; meat eating went from twice a day to twice a week. They increased their intake of vegetable sources of protein, and farmers decreased the growing of wheat and rice, which were the Green Revolution crops that required too many inputs. Urban gardens, including rooftop gardens, were encouraged, and today they produce 50 to 80 percent of vegetables consumed in cities.

Early on, it was realized that more farmers were needed and that this would require education. All of the nation's colleges and universities quickly added courses on agronomy, and urban educational centres provided courses on farming. Even those who were studying to be engineers and

Common permaculture strategies include mulching, rainwater capture using earthworks such as swales, composting, and the harmonious integration of aquaculture, horticulture, and small-scale animal operations.

doctors were required to take such courses. Many people moved from the cities to the country to participate in agricultural work; in some cases there were incentives, in others the move was forced. At the same time, wages for farmers were raised so that they were equal to or even higher than those for engineers and doctors. The result was survival. The average Cuban lost 20 pounds of body weight, but in the long run the overall health of the nation's people actually improved as a consequence. Today Cuba has a stable, slowly growing economy. There are few if any luxuries, but everyone has enough to eat. Having seen the benefit of smaller-scale organic production, Cuba's leaders have decided that even if they find another source of cheap oil, they will maintain a commitment to their new decentralized, low-energy agricultural methods; moreover, the Cuban parliament has declared 2006 to be the year of the energy revolution and has decided to pursue the goal of voluntarily reducing Cuba's energy use by a further two-thirds.

I don't want to give the impression that Cubans sailed through the Special Period unscathed. Cuba was a grim place during those years, and to this day food is far from plentiful there by U.S. standards. My point is not that Cuba is some sort of paradise but simply that matters could have been far worse.

It could be objected that Cuba's experience holds few lessons for our own nation. After all, Cuba has a very different government and climate, so we might question whether its experience can be extrapolated to the United States. Let us, then, consider an indigenous historical example: During both World Wars people planted 'victory gardens'. Gardening became a spontaneous popular movement, which (at least during World War II) the Department of Agriculture initially tried to suppress, believing it would compromise the industrialization of agriculture. It wasn't until Eleanor Roosevelt planted a victory garden on the White House lawn that Agriculture Secretary Claude Wickard relented, and his agency decided not only to promote 'victory gardens' but to take credit for them. At the height of the movement 'victory gardens' were producing roughly 40 percent of America's vegetables, an extraordinary achievement in so short a time.

In addition to these historical precedents new techniques have been developed with the coming agricultural crisis in mind; two of the most significant are permaculture and bio-intensive farming. (There are others, such as efforts by Wes Jackson of The Land Institute to breed perennial grain crops, but limitations of time require me to pick and choose.)

Permaculture was developed in the late 1970s by Australian ecologists Bill Mollison and David Holmgren in anticipation of exactly the problem we see unfolding before us. Holmgren defines permaculture as 'consciously designed landscapes that mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre, and energy for provision of local needs'. Common permaculture strategies include mulching, rain-water capture using earthworks such as swales, composting, and the harmonious integration of aquaculture, horticulture, and small-scale animal operations. A typical permaculture farm may produce a small cash crop but concentrate largely on self-sufficiency and soil building. Significantly,

permaculture has played an important role in Cuba's adaptation to a low-energy food regime.

Bio-intensive farming has been developed primarily by Californian John Jeavons, author of *How to Grow More Vegetables*. Like permaculture, it is a product of research begun in the 1970s. Jeavons defines bio-intensive farming (now trademarked as 'Grow Bio-intensive') as:

> ...an organic agricultural system that focuses on maximum yields from the minimum area of land, while simultaneously improving the soil. The goal of the method is long-term sustainability on a closed-system basis. Because bio-intensive is practiced on a relatively small scale, it is well suited to anything from personal or family to community gardens, market gardens, or mini-farms. It has also been used successfully on small scale commercial farms.

Because of accumulating environmental damage and fossil fuel depletion Jeavons, like Holmgren and Mollison, has worked for the past three decades in anticipation of the need for de-industrialization of food production. Currently bio-intensive farming is being taught extensively in Africa and South America as a sustainable alternative to globalised mono-cropping. The term 'bio-intensive' suggests that what we are discussing here is not a de-intensification of food production but rather the development of production along entirely different lines. While both permaculture and bio-intensive farming have been shown to be capable of dramatically improving yields per acre, their developers clearly understand that even these methods will eventually fail unless we also limit demand for food by gradually and humanely limiting the size of the human population. Thus, given certain conditions it is possible for industrial nations like the United States to make the transition to smaller scale, non-petroleum food production. There are both precedents and models; however, all of them require more farmers. That is the catch – and here's where the ancillary benefits kick in.

One way or another, re-ruralization will be the dominant social trend of the twenty-first century.

The key: more farmers!

One way or another, re-ruralization will be the dominant social trend of the twenty-first century. Thirty or forty years from now – again, one way or another – we will see a more historically normal ratio of rural to urban population, with the majority once again living in small farming communities. More food will be produced in cities than is the case today, but cities will be smaller. Millions more people than today will live in the countryside growing food although they won't be doing so the way farmers do it today and perhaps not the way farmers did it in 1900.

Indeed, we perhaps need to redefine the term farmer. We have come to think of a farmer as someone with five hundred acres, a big tractor, and other expensive machinery. But this is not what farmers looked like a hundred years ago, and it's not an accurate picture of most current farmers in less

industrialized countries; nor does it coincide with what will be needed in the coming decades. We should start thinking of a farmer as someone with three to fifty acres who uses mostly hand labour and twice a year borrows a small tractor that she or he fuels with ethanol or biodiesel produced on site.

Young adults – not in the millions but at least in the hundreds – are aspiring to become permaculture or organic or bio-intensive farmers.

How many more farmers are we talking about? Currently, the United States has three or four million of them, depending on how we define the term. Let's again consider Cuba's experience. In its transition away from fossil-fuelled agriculture that nation found that it required 15 to 25 percent of its population to become involved in food production. In the United States in 1900 nearly 40 percent of the population farmed whereas the current proportion is close to one percent. Do the math for yourself: extrapolated to our country's future requirements, this implies the need for a minimum of forty million and up to fifty million additional farmers as oil and gas availability declines. How soon will the need arise? Assuming that the peak of global oil production occurs within the next five years and that natural gas is already in decline in the United States, we are looking at a transition that must occur over the next twenty to thirty years, and it must begin approximately now.

Fortunately there are some hopeful existing trends to point to. The stereotypical U.S. farmer is a middle-aged, Euro-American male, but the millions of new farmers in our future will have to include a broad mix of people reflecting our increasing diversity. Already the fastest growth in farm operators is among Hispanics, Asians, and Native Americans as well as among female full-time farmers. Another positive trend worth noting is that in the Northeast, where the soil is acidic and giant agribusiness has not established as much of a foothold as elsewhere, the number of small farms is increasing. It is heartening to learn of Will Raap's remarkable successes in Vermont based on many years of persistent, intelligent work. Young adults – not in the millions but at least in the hundreds – are aspiring to become permaculture or organic or bio-intensive farmers. Farmers markets and community-supported-agriculture farms (CSAs) are established or springing up throughout the region. This is somewhat the case on the Pacific coast too, much less so in the Midwest and South.

What will it take to make these tentative trends predominate? Among other things we will need good and helpful policies. The USDA will need to cease supporting and encouraging industrial mono-cropping for export and begin supporting smaller farms, rewarding those that make the effort to reduce inputs and to grow for local consumption. In the absence of USDA policy along these lines we need to pursue state, county, and municipal efforts to support small farms in various ways – through favourable zoning, by purchasing local food for school lunches, and so on.

We will also require land reform. Those millions of new farmers will need access to the soil, and there must be some means for assisting in making land available for this purpose. Conservation land trusts may be useful in this regard, and we might take inspiration from Indian Line Farm, a community land trust in nearby Great Barrington.

Because so few people currently know much about farming, education will be essential. Universities and community colleges have both the opportunity and the responsibility to quickly develop programs in small-scale ecological farming methods, programs that also include training in other skills farmers will need such as marketing and formulating business plans.

Given the fact that few if any farms are financially successful the first year or even the second or third, loans and grants will be necessary to help farmers get started. These new farmers will need higher and stabilized food prices. As difficult as it may be even to imagine this situation now, food rationing may be required at some point in the next two or three decades. A quota system needs to be organized in such a way as to make sure everyone has the bare essentials and to support the people at the base of the food system – the farmers.

Finally, we need a revitalization of farming communities and farming culture. I grew up in the Midwest, and there it's very easy to see the devastation of small farming communities that has occurred over the decades. A century ago, even in the absence of the air and auto transport systems we now take for granted, small towns across this land strove to provide their citizens with lectures, concerts, libraries, and yearly chautauquas. These same towns have seen their best and brightest young people flee year after year, first for distant colleges and then for the cities. As a result, they are blighted, dull places. The folks left behind have done their best to maintain a cultural environment, but in all too many cases that now consists merely of a movie theatre and a couple of video rental stores. If these places bloom once again with the arts, with culture, those who left will want to return. Farming communities must be interesting and attractive if we expect people to inhabit them and their children to want to stay there.

The re-ruralization program I am describing could be a springboard for the rebirth of democracy in this nation.

If we do this well ...

We have been trained to admire the benefits of intensification and industrialization, but as I've already indicated, we have paid an enormous price for these benefits – a price that includes alienation from nature, loss of community and tradition, and acceptance of the anonymity and loss of autonomy implied by mass society. In essence, this trade-off has its origins in the beginnings of urbanization and agriculture.

Could we actually regain much of what we have lost? Yes, by going back, at least in large part, to horticulture. Recall that the shift from horticulture to agriculture was, as best we can tell, a fateful turning point in cultural history. It represented the beginning of full-time division of labour, of hierarchy and patriarchy. Bio-intensive farming and permaculture are primarily horticultural rather than agricultural systems. These new intelligent forms of horticulture could, then, offer a viable alternative to a new feudalism with a new peasantry. In addition, they emphasize biodiversity, averting many of the environmental impacts of field cropping; they use various strategies

to make hand labour as efficient as possible, minimizing toil and drudgery; and they typically slash water requirements for crops grown in arid regions.

We have gotten used to a situation where most farmers rely on non-farm income. As of 2002 only a bit less than 60 percent of farm operators reported that their primary work is on the farm. Only nine percent of primary operators on farms with one operator and ten percent on farms with multiple operators reported all of their income as coming from the farm. The bad side of this is that it means it's hard to make a living farming these days. The good side is that we don't have to think of farming as an exclusive occupation. As people return to small communities and to farming, they could bring with them other interests. Rather than a new peasantry that spends all of its time in drudgery, we could look forward to a new population of producers who are involved in the whole range of pursuits of the modern middle class that make modern urban life interesting and worthwhile – the arts and sciences, history, anthropology, philosophy, spirituality, and psychology.

Cultural anthropology teaches us that the way people get their food is the most reliable determinant of virtually all other social characteristics.

The re-ruralization program I am describing could, moreover, be a springboard for the rebirth of democracy in this nation. I do not have to tell this audience how, over the past few years, democracy in America has become little more than a slogan. In fact, this erosion of our democratic traditions has been going on for some time. As Kirkpatrick Sale showed in his wonderful book *Human Scale*, as communities grow in size, individuals' abilities to influence the affairs within them tends to shrink. Recent sociological research now shows that people who have the ability to influence policy in their communities demonstrate a much higher sense of satisfaction with life in general. In short, the re-ruralization of America could represent the fulfilment of Thomas Jefferson's vision of an agrarian democracy – but without the slaves. If we do this well, it could mean the revitalization not only of democracy but of the family and of authentic, place-based culture. It could also serve as the basis for a new, genuine conservatism to replace the ersatz conservatism of the current ruling political elites.

What I am proposing is nothing less than a new alliance among environmental organizations, farmers, gardeners, organizations promoting economic justice, the anti-globalisation movement, universities and colleges, local businesses, churches, and other social organizations. The efforts of this alliance would, moreover, have to be coordinated at the international, national, state, and local levels. This is clearly a tall order; however, we are not talking merely about a good idea. This is a survival strategy.

It may seem that I am describing and advocating a reversion to the world of 1800 or even of 8000 B.C. This is not really the case. We will of course need to relearn much of what our ancestors knew, but we have discovered a great deal about ecology, biology, geology, hydrology, and other relevant subjects in recent decades. We should be applying that knowledge – as Holmgren, Mollison, Jeavons, and others have done – to the all-important project of producing food for ourselves.

Cultural anthropology teaches us that the way people get their food is the most reliable determinant of virtually all other social characteristics. That's

why we classify societies as hunter-gatherer, horticultural, fishing, animal herding, agricultural, industrial, and so on. Thus, as we build a different food system, we will inevitably be building a new kind of culture, certainly very different from industrial urbanism but probably also from what preceded it. As always before in human history, we will make it up as we go along, in response to necessity and opportunity.

It may be that the great change I've been telling you about won't take place until the need is more obvious and irresistibly pressing. Perhaps gasoline needs to get to $10 a gallon. Perhaps unemployment will have to rise to 10 or 20 or 40 percent, with families begging for food in the streets, before embattled policy makers begin to reconsider their commitment to industrial agriculture. Even in that case, as in Cuba, all may depend upon having another option already articulated. Without that, we will be left to the worst possible outcome.

Rather than consigning ourselves to that fate, let us accept the current challenge – the next great energy transition – as an opportunity not to vainly try to preserve business as usual, the American Way of Life that we are told is not up for negotiation, but rather to re-imagine human culture from the ground up, using our intelligence and our passion for the welfare of coming generations and for the integrity of nature's web as our primary guides.

Excerpted from the text of a 2006 Schumacher lecture. It is available as a pamphlet from the E. F. Schumacher Society.

Attorney and economist Michael Shuman is author of The Small-Mart Revolution: How Local Businesses Are Beating the Global Competition *and he has a blog at www.smallmart.org. Here he gives ten good reasons why consumers should favour locally-produced goods.*

Why you should Think Local First

Michael H. Shuman

As Michiganders rev up spending for the holidays, many will see signs, articles, and the like urging them to 'Think Local First'. Campaigns to mobilize more local purchasing of locally made goods and services, from more local merchants, are under way in Grand Rapids, Lansing, Ann Arbor, and elsewhere in the state. Mainstream economic developers tend to deem such campaigns as nice, quaint, harmless – pick your favourite dismissive adjective. What they don't yet appreciate is Local First is actually an essential component of successful economic development.

Part of what makes any community great is how well it preserves its unique culture, foods, ecology, architecture, history, music, and art.

Consider ten reasons why it's important to encourage consumers to buy local:

1. Higher Standards – The most fundamental difference between local and non-local businesses is that the former stick around while the latter may well move to Mexico or Malaysia. Consequently, any community seeking sustainability and high wages through non-local businesses, in the final analysis, cannot possibly do so. A good example of this is in my backyard, Maryland. Regulation of the chicken industry has been virtually impossible because the producers, Tyson and Perdue, are continually threatening to move to 'business friendly' jurisdictions like Arkansas and Mississippi.
2. Greater Wealth – Because non-local businesses come and go while local businesses more often stick around for years, they are much more reliable generators of wealth, income, and jobs. A study of the cost effectiveness of tax abatements in Lane County, Oregon, found that 95 percent of the tax abatement dollars had been given to six non-local companies – three of which came, took the benefits, and then shut down and moved elsewhere. The remaining five percent went to about a hundred local companies. The cost to the community in tax-abatements was about $23,800 per non-local job and $2,100 per local job. On a net jobs basis (after the big firms' departures), non-local jobs were 33 times more expensive.

3. Greater Stability – The comings and goings of large, non-local business create enormous stresses, especially on a small community's economy. In the Katahdin Region of Maine, where I've been working over the past few years, the shutdown of a paper mill (the parent company sought to move operations to a lower-wage area in Canada) created a regional unemployment rate of 40% over the next year. That kind of catastrophe is far less likely in a community economy built primarily around local businesses with no plans for moving to China.
4. Greater Multipliers – There's a growing body of evidence that local businesses contribute more to local multipliers – the most fundamental basis for community income, wealth, and jobs. A Civic Economics study in Austin, Texas, for example, found that for every $100 spent at a Borders bookstore, $13 remained in the local economy. For every $100 spent at a local bookstore, $45 remained. Roughly speaking, every dollar spent locally contributed roughly three times the economic impact on jobs, incomes, and tax proceeds. A dozen other studies worldwide all point in the same direction, and for an obvious reason: Local businesses spend more money locally. Unlike a chain book store, for example, a local book store has a local management team, uses local business services, advertises locally, and enjoys a local stream of profits.
5. Less Vulnerability – A local economy that is more self-reliant will be more immune to global surprises totally outside its control. The obvious example right now is importation of oil, which many observers link with terrorism and economic instability and which could be largely eliminated through the cost-effective implementation of local energy efficiency and renewable resources.
6. Smart Growth – Local small business is a natural promoter of 'smart growth' or anti-sprawl policies. Smart growth means redesigning a community so that residents can walk or ride bikes from home to school, from work to the grocery store. It means scrapping old zoning laws and promoting multiple uses – residential, commercial, clean industrial, educational, civic – in existing spaces, because it's better to fully use the town center than to build subdivisions on green spaces on the periphery. Because local businesses tend to be small, they can fit more easily inside homes or on the ground floor of apartment buildings.
7. Greater Identity – Part of what makes any community great is how well it preserves its unique culture, foods, ecology, architecture, history, music, and art. Local businesses celebrate these features, while non-locals steamroll them with retail monocultures. It's the local firms who are most inclined to serve local tastes with specific microbrews and clothing lines. Austin's small business network employs the slogan 'Keep Austin Weird', because it is its 'weirdness' that attracts tourists, engages locals in their culture, draws talented newcomers, and keeps young people hanging around.

The comings and goings of large, non-local business create enormous stresses, especially on a small community's economy.

8. Greater Creativity – Richard Florida's arguments about the importance of a 'creative class' for economic success also tend to support locally owned businesses. Florida argues that among the key inducements for a creative class to move to and stay in a community are its civic culture, its intellectual bent, its diversity, and its sense of self – all attributes that are clearly enhanced in a local-business economy. A local-business economy seeks to celebrate its own culture, not to import mass culture through boring chain restaurants and Cineplexes. It seeks to have more residents engaged as entrepreneurs and fewer as worker bees for a Honda plant.

Local First doesn't mean Local Always or Local At All Costs.

9. Greater Social Well Being – In 1946 two noted social scientists, C. Wright Mills and Melville Ulmer, compared communities dominated by at least one large manufacturer versus those with many small businesses. They found that small business communities 'provided for their residents a considerably more balanced economic life than big business cities' and that 'the general level of civic welfare was appreciably higher'. Thomas Lyson, a professor of rural sociology at Cornell University, updated this study by looking at 226 manufacturing-dependent counties in the United States. He concluded that these communities are 'vulnerable to greater inequality, lower levels of welfare, and increased rates of social disruption than localities where the economy is more diversified'.

10. Greater Political Participation – Studies of voting behaviour suggest that the longer residents live in a community, the more likely they are to vote, and that economically diverse communities have higher participation rates in local politics. As one group of scholars recently concluded after reviewing the social science literature: '[T]he degree to which the economic underpinnings of local communities can be stabilized – or not – will be inextricably linked with the quality of American democracy in the coming century'. An economy with many long-term home-grown businesses is more likely to contribute to such stability than the boom-and-bust economy created by place-hopping corporations.

Sceptics counter that all these benefits of buying local assume that local goods and services cost no more than their global counterparts. But don't we live in an era of globalization when bigger is better? Aren't box stores always – as the Wal-Mart slogan insists – cheaper?

Let's clear something up: Local First doesn't mean Local Always or Local At All Costs. It means, instead, educating consumers about the myriad ways buying local often saves money. A typical family's single largest expenditure is for housing, and moving a mortgage to a local bank usually gets you the lowest interest rates. Tightening the energy efficiency of your home reduces your utility bills by thousands per year, and also localizes energy dollars. Cutting up credit cards prevents interest payments from leaving the state, as well as improving your overall financial well being.

But what about retail? Even here, our beliefs about chain store discounts

are largely driven by billions of dollars of advertising, not reality. The state of Maine surveys pharmaceutical prices every year, and local drugstores consistently have lower prices than chains (including Wal-Mart). Local First helps consumers pay attention, not just to price, but to all the elements of smart shopping. Next time you shop at Wal-Mart, you might ask the following questions:

- How much am I saving if the clerk overcharges me? (The Connecticut Attorney General alleges this happens to as many as one in twelve shoppers.)
- Is it really a bargain when a slightly cheaper pair of Levi's lasts half as long? (Wal-Mart often contracts with name brand manufacturers to produce lower quality knockoffs.)
- How much did I spend in time and gas to get to and from the chains, compared to a trip to a local store?

Local First aims to correct the record about local small business: would it surprise you, for example, that local businesses represent about half the private economy? Or that they produce 60-80% of all new jobs in the economy, and 13-14 times more patents than big firms? Or that between 2000 and 2001, the last year for which data are available, there were 32,000 more small business births than deaths (while large businesses registered 200 net deaths)?

An important goal of Local First is reform public policy so that local businesses finally can compete on a level playing field with the non-locals.

It's true that over the past decade local businesses have lost some ground to non-local businesses –about four percent of their share of the gross domestic product (GDP). We tend to think the number is much higher, because of the flood of big-box retailers. But we forget that retail is only seven percent of the economy. In other sectors – everything from investment advisors to home-based manufacturers – local businesses are flourishing.

Economists might argue that even a four percent drop in market share represents the diminishing competitiveness of local small business. Perhaps. But consider some other explanations:

- State and local authorities are lavishing $50 billion per year on non-local business; the feds give non-locals another $63 billion per year in grants and other non-tax incentives.
- Sales tax laws disadvantage local businesses by exempting big mail-order and internet retailers.
- Unenforced antitrust laws allow Wal-Mart to carry out predatory practices, particularly with suppliers, that would have been prohibited a generation ago.

An important goal of Local First is to reform public policy so that local businesses finally can compete on a level playing field with the non-locals. As I argue in my book *The Small-Mart Revolution*, if we finally eliminate

the counterproductive – and expensive – advantages non-local businesses now enjoy, we may well see a tremendous renaissance of local businesses. This will bring new wealth to communities across the country, especially to places like Michigan whose consumers understand the value of Local First. The bottom line is this: economists and economic developers assume perfect information and competition, while Local First actually works to achieve it.

Every year, millions of small farms and businesses are killed off in the march of globalisation. Helena Norberg – Hodge of ISEC explains the root causes of this insidious process, the negative results affecting us all and what we can do to turn it around. The local food movement is a key element of this renewal of food and farming. It is one of the most successful grassroots examples of localisation in action, sweeping the world and gaining momentum with each passing day.

Reclaiming Our Future: Reclaiming Our Food

Helena Norberg-Hodge

Paris in the 1970s was a city full of character and life. Each quarter had its own colourful market, selling wonderful fruits, all kinds of vegetables, meats, superb cheeses and wine. All of that diversity originated at no great distance: most of it came from different regions of France, if not from the immediate surroundings of Paris. Today it can be difficult to find garlic in Paris that has not travelled from China. In the supermarkets, grapes from Chile and wine from California are increasingly commonplace. The diversity of French foods is in decline, and those that are available are becoming more and more costly.

In the little villages of Southern Andalucia in the 1980s, almost all the food in the shops came from the villages themselves or the immediate region: goat's cheeses, olives and olive oil, grapes, fresh and dried figs, wine and many different kinds of meat. Today you will find almost nothing that has been produced locally. The olives may have been grown in the surrounding region, but they have travelled to the metropolis to be packaged in plastic and then sent back again. Virtually everything sold is vacuum-sealed in layers of plastic. Even cheese rinds are now made of plastic.

In line with these trends, in 1999 Britain exported 111 million litres of milk and 47 million kilograms of butter. Simultaneously, they imported 173 million litres of milk and 49 million kilograms of butter. Apples are flown 14,000 miles from New Zealand and green beans flown 4,000 miles from Kenya. We might wonder how these can possibly compete with local apples and beans – surely food produced locally should be cheaper? But it isn't. Instead, generally speaking, fresh local food is vastly more expensive than food from faraway. The main reason for this is government investments and subsidies.

Governments, using taxpayer's money, fund the motorways, high-speed rail links, tunnels, bridges and communications satellites that make the supermarkets' global trade possible. This money also subsidises the aviation

fuel and energy production on which supermarkets depend. And it helps fund the research geared toward biotechnology, mechanisation and intensive chemical use. Local traders, small-scale farmers, retailers and manufacturers pay the price through their taxes and also through being forced out of business.

Some people might argue that there is nothing wrong with such developments – that they are a sign of progress and the emergence of a global, cosmopolitan society based on the principle of choice. But the purported diversity offered by the global economy and its supermarkets is based on modes of production that are condemning producers to monoculture. The result is that day by day the diverse cheeses from France, the apple varieties of Devon and the olive groves of Andalucia, are ripped out or replaced by standardised hybrids, to suit the long distance, large scale marketplace. Small producers are being pushed out by the need to produce ever larger monocultures, with the mechanised production and high levels of chemical inputs that this entails. And this in turn has negative repercussions for the entire rural economy.

Recently, citizen groups around the world are beginning to realise that it is this highly centralised and subsidised economic system itself – rather than the inefficient management, or insufficient scale, of it – that is the prime culprit behind food shortages in developing countries and food scares like BSE, salmonella and GMOs in the West. Increasingly, grassroots movements are pressing for major policy changes at national and international levels in order to bring the global financial markets under control. They are also working, against the economic odds, to strengthen local economies. Of all the movements promoting localisation, probably the most successful is the local food movement.

Re-localising food: it's already happening

The purported diversity offered by the global economy and its supermarkets is based on modes of production that are condemning producers to monoculture.

For virtually the whole of human history most human cultures have relied on food produced within reasonable distance. The logic is unassailable: locally grown food is fresher, and so tastier and more nutritious, than food transported over long distances. It is also likely to be healthier, because the producer knows the consumer, does not view him or her merely as a faceless 'target market', and so is less likely to take risks and liberties with preservatives and other artificial chemicals. Increasingly, faced with a bland, globalised, food culture, people are realising the advantages of local food, and are working to rejuvenate markets for it.

In the UK, for example, the first 'farmers 'market', set up in the city of Bath in 1997, was restricted to producers based within a 30-40 mile radius. Public interest in the Bath market was extraordinary, with over 400 callers ringing the market itself in the first few weeks, many of them asking for information on how similar initiatives might be set up in their own areas. Enthusiasm is such that the Soil Association, which promotes organic farming in the UK, is now offering one-day courses on how to set up a

farmers' market, and such markets are now planned or already operating in numerous towns and cities across the UK.

At the same time, more and more people are also joining a variety of community supported agriculture (CSA) schemes in which consumers in towns and cities link up directly with a nearby farmer. In some cases, consumers purchase an entire season's produce in advance, sharing the risk with the farmer. In others, shares of the harvest are purchased in monthly or quarterly instalments.Consumers usually have a chance to visit the farm where their food is grown, and in some cases their help on the farm is welcomed too. This movement is sweeping the world, from Switzerland, where it first started 25 years ago, to Japan where many thousands of people are involved.

Direct communication between producers and consumers creates a responsive economic system, one shaped by the needs of society rather than the needs of big business.

In the Forest of Dean, the 'Forest Food Directory' lists 32 different food producers, with products ranging from organic and free-range meat, through to vege-box schemes and local cheeses. A survey early this year revealed that some small local producers have seen their turnover increase by up to 25 per cent as a result of the scheme, and its popularity is still growing.

When farmers are allowed to sell in the local marketplace, more of the profit stays in their hands. Currently, in the UK, only about five pence in every pound spent on food goes to the farmer. The rest goes on transport, packaging, irradiation, colouring, advertising and corporate profit-margins. But when these links are closed, the farmer receives more money and the consumer pays less.

Often, the joy of a direct connection between producers and consumers is that their ideals coincide. They want the same things: small-scale production and high organic quality. They both want freshness, variety and a non-exploitative price. Social life often flourishes when like-minded suppliers and consumers meet as friends.

Direct communication between producers and consumers creates a responsive economic system, one shaped by the needs of society rather than the needs of big business. Local food markets by their very nature create consumer demand for a wide range of products that are valued for their taste and nutritional content, rather than the ability to withstand the rigours of long-distance transport or conform to supermarket specifications. This therefore helps to stimulate diversification, allowing farmers to change their mode of production away from monoculture to diversified farming. The local food movement allows a return to mixed farming systems, where farmers can keep animals and grow some grain, vegetables, tree crops and herbs on the same land. This diversity allows for cycles that reinforce one another in both ecological and economic ways. When animals, grain and vegetables are combined on the same farm, they all feed each other: the grain and vegetables feed both humans and animals, while the straw provides bedding for animals and animal manure is used as a valuable fertiliser. The farmer thus finds the required inputs within reach, without having to pay for them, whereas farmers who are forced to produce monocultures are dependent on ever more expensive inputs. A strong local

food economy also provides farmers with the opportunity to diversify into value-added products.

Local production is also often conducive to a gradual reduction in the use of artificial chemicals and other toxic substances. Food sold locally does not need to contain preservatives or additives as it isn't transported vast distances in lorries or planes. In addition, when we produce food locally, we do not need to subject the land to the conformist rigours of centralised monoculture, eradicating competing plants, birds, insects and other animals. By promoting multicultures for local production, we allow people and nature space to move and breathe: diverse people, plants and animals regain their place in local ecosystems.

By promoting multicultures for local production, we allow people and nature space to move and breathe.

The local food economy is the root and fibre of the entire rural economy, and efforts to strengthen it thus have systemic benefits that reach far beyond the local good chain itself. A complicated web of interdependence, comprising farmers, farm shops, small retailers and small wholesalers, and spreading out from farming into all of its allied trades, underpins the economy of the market towns and villages, their trades people, bankers and other professional service-providers.

Simple steps towards closer links between farmers and consumers are thus helping to rebuild community, enhance human health and restore ecological balance. In joining the local food movement we take an apparently small step that is good for ourselves and our families. At the same time we also make a very real contribution towards preserving biodiversity, the environment in general and regional distinctiveness, while protecting jobs and rural livelihoods. This is true not only in the industrialised world, but particularly in 'developing' countries, where often as much as 80 per cent of the population lives by farming, forestry or fishing. The drive towards cash crops for export pushes small producers off the land in many developing countries and often creates local food shortages. Ensuring that land and fisheries remain in the hands of small producers concerned with producing for the local market is a better guarantee of food security, economic health and ecological sustainability than large-scale export oriented production.

Big business would like us to believe that diversifying and localising food production leads to inefficiency, job losses and economic hardship. The reality is that the opposite is true: as more of the wealth created by the community stays in the community, jobs are created locally and the prosperity of small business is secured.

Tipping the scales towards local production

For local food systems to genuinely flourish and prosper and be replicated in large numbers around the world, changes at the policy level are clearly necessary. Current economic policies across the world are artificially lowering the prices of industrially-produced foods by shifting the costs of production onto the community. If groups campaigning for sustainable farming, wildlife issues and better food do not take these hidden subsidies

into account, and do not challenge the economic basis of our current monocultural, export-based food system, they risk falling into the trap of arguing that consumers should pay more for better food – when, as farmers markets etc. show, they can actually pay less. This approach marginalises the poor and opens campaigners to charges of elitism. Furthermore, to overlook hidden subsidies is to miss a fantastic opportunity: if these resources were diverted towards decent agriculture and retailing, we could have better food at no extra cost at all.In fact, the price of fresh local food would come down.

The destructive, global economy can only exist as long as we are prepared to accept and subsidise it. We can reject it.

Recognising the global consequences of the economic system also gives agricultural and environmental groups common cause with those campaigning for social justice and the 'Third World' Access to fresh, healthy food is coming to be seen as a fundamental human right. These diverse bodies are now beginning to join hands to demand a different set of economic priorities, and the redrawing of the global economic map.

The most important thing to remember is that we do have the power to change things. The destructive, global economy can only exist as long as we are prepared to accept and subsidise it. We can reject it. We can start today by joining the local food movement and reap the wealth of benefits from re-linking farmers and consumers. Fresh, local food for all may be one of the most rewarding – and certainly the most delicious – results of the battle against globalisation.

Josh Harkinson supports his local coffee shop in Houston, Texas, which, unlike Starbucks, also serves tequila. His work has appeared in magazines such as E, San Francisco, *and* Harper's, *and he is a staff writer for the* Houston Press.

Profits of Place

Josh Harkinson

A short walk from the University of Pennsylvania, on a block of Victorian brownstones once condemned to the wrecking ball, resides one of the East Coast's great salons for the liberal intelligentsia. A visitor on a given evening might find Eric Schlosser deconstructing fast food, former ambassador to Czechoslovakia William Luers analysing the United Nations, or a gaggle of TV cameras crammed in to cover a protest of the Republican National Convention. Yet the crowds are as likely to be pulled in by the Sweet Potato Plantain Soup, Crispy Twice-Cooked Quail, and Organic Pear Salad with Jumbo Lump Crab Meat as they are by a lecture on the hydrogen future.

A living economy sustains community life, economic viability, and the natural environment.

Judy Wicks founded the White Dog Café on the first floor of her Philadelphia home in 1983. Her food took its cue from the innovative New American cuisine of Alice Waters's Chez Panisse in Berkeley: updated regional dishes, rebuilt on a foundation of seasonal local produce. At the White Dog the food was a hit, and diners soon spilled onto the sidewalk, waiting for a chance to taste farm-fresh strawberry pie and the succulent local tomatoes on Betty's Beef Kabobs. As the restaurant grew, so did Wicks's notion that the strength of her business relied upon the quality and sustainability of its locally grown ingredients.

Six years ago, after reading about the horrors of industrial hog farms, she stormed into her kitchen, scratched pork off the menu, and went searching for a farmer with a soft spot in his heart for pigs. Her hunt took Wicks beyond the meat wholesalers, who knew not whence their cuts came, to Glen Brendle, a farmer who delivered produce to the *White Dog* in his compact pickup truck. Brendle knew Amish farmers in nearby Lancaster County who were still raising hogs the old way. But he barely had room in his pickup for vegetables, let alone pork chops, so Wicks gave him a low-interest loan to purchase a refrigerated cargo truck. The loan enabled him to deliver meat to more than fifteen restaurants and caterers, creating an entirely new market in Philadelphia for locally grown, humanely raised, free-range pigs.

"Judy is an enabler," Brendle says. "Without her encouragement and financial help I probably wouldn't be doing this." That could have been the end of the story, but Wicks saw something powerful in what she and Brendle had done. She began to envision how strengthening relationships between independent, community-rooted enterprises could inspire broad and profound cultural change.

As the restaurant grew, so did Wicks's notion that the strength of her business relied upon the quality and sustainability of its locally grown ingredients.

In 2001, she and cofounder Laury Hammel unveiled the Business Alliance for Local Living Economies (BALLE), the first national network of small, sustainable companies dedicated to buying and selling products locally. The organization supports merchants who are deeply committed to their communities and who define success more holistically than the managers of investor-owned corporations.

"In a living economy, investors seek a 'living return' – one partially paid by the benefits of living in healthy, vibrant communities and participating [in civic affairs]," Wicks says. "By addressing the deeper needs of their employees and community, business owners can grow their companies in new ways, providing more fulfilling jobs, healthier communities, and greater economic security for their bioregions." A living economy sustains community life, economic viability, and the natural environment. "We have to change our concept about how we measure value in things, and get people to be willing to pay more for something that's well made, made locally, and that they would have for a long time," Wicks says. BALLE members join local 'affiliates' (a term intended to emphasize how BALLE – which is pronounced "bah-lee" – is a bottom-up kind of organization) and pledge to purchase as many locally made items as possible – everything from energy to personal clothing.

Banding together, they attempt to construct an alternative to corporate globalization by building local and, if their plans work out, international networks of self-sufficient economic communities. "This is a new way to operate," Wicks says. "It's about stepping outside your business and working collectively and cooperatively with others to rebuild entire local economies."

The first person to unite small businesses into a national force for economic self-determination was born in Porbunder, India, in 1869. Mohandas Gandhi is best known as the pioneer of non-violent resistance, but many of the techniques he used to fight British imperialism harnessed market forces. He inspired Indians to burn imported British fabrics and return to the traditional textiles woven in villages, and he helped retrain local spinners, weavers, and carders. Gandhi's independence movement illustrated how a group such as the BALLE could combat modern colonizers that today take the form of Burger King and Wal-Mart. Wicks invokes Gandhi's example when she promotes BALLE. "Where Gandhi fought British tyranny," Wicks says, "we're now fighting corporate tyranny – and we're using the same strategies."

By effectively ignoring global corporations, the BALLE strategy represents a break from more traditional efforts to reform them, choosing to focus instead on the benefits of local businesses and their interconnections.

Strengthening local economies shortens the separation between cause and effect, allowing business owners and customers to comprehend the environmental and social impacts of their behaviour more immediately. It also causes economic interests to mesh more effectively with community interests by illustrating how they overlap.

BALLE employs a diverse set of strategies to bolster business on Main Street. For instance, it lobbies for policies to tailor technology for regional use and to recirculate financial capital locally. But the foundation of any local living economy is a community's appreciation for its own uniqueness. BALLE thus focuses heavily on boosting community pride and tying this notion to the idea of local purchasing.

By effectively ignoring global corporations, the BALLE strategy represents a break from more traditional efforts to reform them, choosing to focus instead on the benefits of local businesses and their interconnections.

By late 2002, BALLE counted about four thousand members among twenty affiliates in twelve states. By then, some of the groups had begun actively trying to stimulate business-to-business connections. The New York affiliate, Whole Profit Exchange, started holding a monthly working cocktail hour dubbed the 'Transaction Bar'. "For a lot of us, the traditional kind of networking thing is not that interesting," says Ajax Greene, organizer of the Bar and cofounder of Visionary Health Concepts, a Manhattan healthcare company. "We wanted to meet with people who share our values." The affiliate in Minneapolis, Responsible Minnesota Businesses, began organizing similar monthly salons. And Sustainable Connections – the BALLE group in Bellingham – issued its first membership directory, a catalogue of 110 merchants, in 2002.

The 1990s were an especially brutal decade for local retailers. In ten years, eleven thousand independent pharmacies closed as chain drugstores captured the majority of the market. More than forty percent of independent book stores failed; Barnes & Noble and Borders now command nearly half of all sales. And five supermarket firms jumped from controlling less than a quarter of all grocery receipts to ringing up nearly half of them. Today, Blockbuster rents out one in three videos; one hundred chains pocket forty percent of restaurant spending; and Wal-Mart marshals over a third of the entire U.S. market for product lines ranging from dog food to diapers. Big businesses leach money and vitality from the communities they purport to serve. A study conducted by the Austin Business Association found that a dollar spent at a local store circulates in that community three times more than a dollar spent at a chain. Big-box stores situated on the urban periphery also lure people away from downtown parks and sidewalks and into their cars, reducing their social interactions to elbow bumping in checkout lines. And corporate chains rarely lend customers a hand. "When is the last time you got advice from Safeway?" asks Stacy Mitchell of the Institute for Local Self Reliance, an anti-chain research group. "Or borrowed a dollar from Walgreens?"

BALLE, which Wicks launched with the help of other members of the Social Venture Network, has grown quickly because the advantage it brings to members is the connections they make with each other. These relationships are good for business – witness the improved dollar recycling effect – but

they are also good for the other values BALLE espouses. "It's a model for activism, in some ways," says *Bellingham's Long*. "It's about thinking about what's in it for everybody. It's about not pointing fingers, but going about business the way it should be done and caring about each other."

Big businesses leach money and vitality from the communities they purport to serve.

Andrew Anderson, Greater Philadelphia Local Living Economy Fund BALLE, is structured around 'building blocks,' each essentially a citizens' task force dedicated to one of twenty basic industries – for example, sustainable energy, independent media, locally designed and manufactured clothing, neighbourhood tourism, reuse and recycling, green building, independent retailers, local arts and culture, and holistic healthcare. Volunteers form building blocks to strengthen bonds between restaurants and local farmers; to build intelligent local transportation solutions; and to green up the local construction industry. "A key to success is tapping into the energy and passion of people in your community," Wicks says. "That's where the building blocks have made a big impact."

Last winter, BALLE partnered with The Society of Friends (Quakers) to create the Greater Philadelphia Local Living Economy Fund, an eight-hundred-thousand-dollar endowment dedicated to promoting new businesses based on BALLE principles. The type of loan that Wicks gave to Brendle is now available to scores of other merchants. The fund has invested in locally owned Pennypack Farm – which donates a portion of its produce to the hungry – and is studying a ridesharing business called Philadelphia Car Share. "We want to invest in goods and services, rather than bads and disservices", says fund director Andrew Anderson. "We are looking at businesses that are moving toward a restoration economy."

Balle's next project will tie local affiliates together through a national online purchasing database. A remodeller in Boston shopping for eco-certified timber could buy it at Home Depot, for instance, but if she types 'wood' into the BALLE webpage, up pops an independent forester who will ship straight from Vermont. The database, open to all, is designed to unite local networks – and individual shoppers – into a national marketplace of independent businesses. As far as Wicks is concerned, there is no reason to stop there. One of BALLE's principles is to 'reach out globally to other communities to trade in those products they cannot reasonably produce at home'.

Reaching out online, restaurateurs could buy sustainably grown coffee directly from Chiapas farmers; furniture makers could order eco-certified veneers from West African villagers; and decorators could purchase rugs from Moroccan weavers. What began as ties between the White Dog Café and Pennsylvania farmers could eventually grow into a new model for the global economy. "You can't buy everything locally," Wicks says, "so what we are envisioning is a global economy that is comprised of this intricate network of small-to-small relationships around the world."

Business is about relationships. Money is simply a tool.

As BALLE's power to market and network local businesses has expanded, entrepreneurs have begun resurrecting local trades once nearly extinct. The moribund clothing industry in Philadelphia seemed a particularly hopeless

candidate for revival until Wicks took it up as a project this spring. She doubted BALLE could enable local garment makers to compete on price with major chains that manufacture their clothes in the Third World, but she wanted to open minds to the idea of spending more for locally made options – much as the White Dog had popularized local (albeit sometimes more expensive) food.

Marcia O'Donnell, the head of BALLE's Philadelphia clothing building block, never thought she could earn a living from garments until Wicks connected her with a government grant that helped O'Donnell pay the salary of an additional seamstress. Wicks also pointed her to trade shows where she could meet buyers. "Judy has been a critical resource for me at this time in my career," says O'Donnell, who now produces outfits for children through her new company, Added Touch Sewing Specialties. She will sell her creations alongside those of other local designers in a new clothing store Wicks plans to open adjacent to the White Dog Café next fall. O'Donnell and Wicks proved BALLE could create a buzz around Philadelphia's rebounding clothing industry when they mounted a local fashion show at the May conference of the Sustainable Business Network. Three hundred people ate locally grown salads in the assembly hall of a design school as models strutted up and down a red carpet runway produced by a Philadelphia company from recycled materials. O'Donnell took the microphone to introduce a dress inspired by a snowdrop flower, designed by Philadelphian Kiril Tchangov. Later, a muscular model appeared in a sleeveless shirt designed from vintage tie fabric by local boutique owner Anthony Sparacino. And O'Donnell's granddaughter captivated the audience when she stepped into the ballroom wearing O'Donnell's pink Cinderella dress. She strode down the runway in a flutter of organza, stopped, twirled, and smiled.

What began as ties between the White Dog Café and Pennsylvania farmers could eventually grow into a new model for the global economy.

Later that month, reflecting on what BALLE has accomplished, Wicks summarized the consciousness a local living economy creates. "When I eat the food from my restaurant," she said, "I think about the local farmers in Pennsylvania I buy my produce from. I think about the goat herder and the sheep. When I drink the coffee from my café, I think about the Indians in Chiapas, Mexico, who grew the beans. Business is about relationships. Money is simply a tool."

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Michael Shuman, an attorney and economist, is Vice President for Enterprise Development for the Training & Development Corporation (TDC) of Bucksport, Maine. Here he describes the growing competitiveness of small enterprises in the economies of countries across the world.

Short Tails: The Coming Small-Mart Revolution

Michael H. Shuman

Across the planet thousands of communities are responding to the challenges of globalization by localizing their economies. They are buying local, investing local, hiring local, relying on local resources, and – above all – nurturing a new generation of competitive small businesses anchored to place through local ownership. In the United States more than 100 cities and towns, led by organizations like the Business Alliance for Local Living Economies (BALLE), have community-based associations involving several tens of thousands of small businesses pushing for a 'Local First' agenda. Everywhere can be found signs that say 'Locally Owned Restaurant', 'Local Bank, 'We Sell Local Jewellery'. Equally striking is that non-local businesses are trying, however disingenuously, to sneak into this movement. One of the largest British banks, HSBC, advertises itself as 'The World's Local Bank'. It would be a mistake to dismiss these efforts as old-style protectionism. Most localization is focused, not on erecting laws or other legal barriers against imports, but rather on promoting free choices – of consumers to prioritize local goods, of investors to favour local business opportunities, and of entrepreneurs to look harder for community-based inputs for production. Moreover, these movements actually support dismantling many domestic subsidies and regulations (concerning taxes, antitrust, zoning, and so forth), nearly all of which favour global over local business. This is a movement that is more free-trade minded than most globalization advocates are. Superficially, the Local First movement would seem to have little in common with Chris Anderson's arguments on 'The Long Tail'. Local markets, he argued, are inherently too small for many local producers. Only through the aggregation of markets provided by global platforms like Amazon or E-Bay can these micro-businesses begin to enjoy success. How does this model comport with the ideals of buying local?

In fact, however, the triumph of the Long Tail also means the triumph of the Short Tails of local business, in at least three important ways.

Technical revolutions are making it possible for anyone to do almost anything economically from almost anywhere.

1. Produce local, sell global

Localization does not necessarily mean that a community will pull back from the global economy. It can mean maximizing self-reliance while continuing to take full advantage of global sales opportunities. The ideal of the Long Tail, in which locally owned niche producers increasingly seize global demand for a going business concern, is wholly consistent with the principles of Local First.

Successful localization, moreover, requires using all kinds of tools, global and local, to maximize the advantages for local companies. The competitiveness of local businesses is enormously strengthened by computers, the Internet, low-cost international telephone transportation, global shipping companies, and affordable transcontinental travel. In St. Lawrence County, in upstate New York, the Chamber of Commerce now trains small, local entrepreneurs how to sell their locally produced wares on E-Bay. Some 150 businesses have already received this training, and some of the program's graduates have seen their monthly sales increase by more than ten fold. Another example is that a group of entrepreneurs, including the former counsel general of the Pacific Stock Exchange, are trying to set up a national internet platform that would facilitate state and local stock markets for exchanging small-business stock shares.

In the United States more than 100 cities and towns, led by organizations like the Business Alliance for Local Living Economies (BALLE), have community-based associations involving several tens of thousands of small businesses pushing for a 'Local First' agenda.

The emergence of electronic networks that erode the connections between any given economic activities and place are, paradoxically, facilitating localization. The most competitive communities increasingly are the smartest, not the largest. Size does not limit a community in the skills it can develop, the knowledge it can retain, or the technology it can acquire. Nor, as many college towns demonstrate, does size determine the quality of local research or public education.

Manufacturing once depended on special places that were close to inputs from farms, mines, and forests, or on special infrastructure assets like harbours, airports, roads, rivers, and telecommunications. But increasingly the biggest input for manufacturing is information, which is accessible from a high-speed internet connection just about anywhere in the world. Scholars at Princeton's Centre for Energy and Environmental Studies have documented that Americans and Western Europeans consume fewer raw materials as GNP rises. The central reason for this is that advances in technology have liberated products from bulky materials. Cars, for example, are increasingly made with composite materials that are stronger, lighter, and cheaper than steel (and as oil prices rise, even these will increasingly come from local biomaterials).

If information-rich manufacturing can increasingly be done anywhere, then certainly other economic activities that depend less on materials can be localized even more easily. Technical revolutions are making it possible for anyone to do almost anything economically from almost anywhere. More than twenty million Americans (including me) do some work out of their homes, a number that is sure to grow. This means we can choose places to live in on the basis of everything else we value in community – beauty,

culture, music, art, traditions, religion, family, and friends. Find a place you love, then put together your ideal job.

But isn't a certain critical mass of workers, managers, innovators, and firms necessary to achieve competitiveness? The regional planning literature is filled with theories about 'agglomerations' of many businesses, people, capital, and technology in a particular place. The proximate siting of related and interrelating firms is believed to create certain economies of scale. Whatever the virtues of agglomerations and clusters, it seems equally true that these advantages are fast disappearing. Information technologies are bringing more and more individuals, companies, and innovations within our personal and professional orbits at the click of a mouse. A skilled computer user now performs more efficiently by avoiding the noise of office life – the gossip, the management disputes, the wacko co-workers. Why take your chances with someone else's geographical agglomeration when you can strategically pick and choose the exact personal agglomeration, physical and virtual, that best fits your own needs?

2. Find local niches

A second feature of the Long Tail world is that consumers are increasingly mindful not only of price but quality. Sure, almost everything mass-produced these days, from toothpaste to socks, is being created in low-wage countries like China, where unskilled workers and robots perform routine assembly-line tasks at high speed and low cost. What we forget, however, is that even these goods increasingly must be designed and sold to narrow niches of demanding consumers, whose tastes differ enormously from place to place. In a September 2005 Harvard Business Review article aptly entitled 'All Strategy Is Local', Bruce Greenwald and Judd Kahn argue that the most successful firms these days are 'local', either in the geographic sense or in the sense of being limited to one product or a handful of related ones. A smart producer prefers being a barracuda in a small market than a guppy in a large one. Greenwald and Kahn show that regional grocers have deployed this strategy to achieve much greater levels of profitability than national chains (including Wal-Mart). The most successful telecommunications firms have been the Baby Bell branches of the former telephone monopoly that had strong regional positions, like Verizon, SBC, Qwest, and BellSouth, not the global players like WorldCom and Global Crossing. Managers perform more effectively when they know their markets intimately, master one or two products, and dominate their local niche.

The HEB supermarkets have grown market share in their native Texas, even competing well against Wal-Mart, by carefully stocking its stores with goods narrowly tailored to its market. Residents of the Rio Grande Valley who cannot afford air conditioners find on HEB's shelves low-cost rubbing alcohol mixed with skin moisturizers, which they can use to cool down. Special ovens in the store churn out hot tortillas and fresh chips. In Houston's Asian neighbourhoods, the stores carry tanks of live fish and shellfish.

In principle a global-scale producer can wield its vast resources to produce many different products for many different local tastes. But in practice a local producer is better situated to intuit, design, manufacture flexibly, and deliver just-on-time appropriate products. Consumers can better communicate their needs to local producers, either directly or through local retailers. Microbrewers have flourished throughout the United States and the United Kingdom because each caters to highly specialized local tastes. The increasing discrimination of the palates of San Francisco Bay Area consumers, toward inclusion of more varieties of locally grown fruits and vegetables, has more than tripled the region's agricultural economy by 61 percent between 1988 and 1998 and now translates into $1.7 billion of additional agricultural activity in the local economy each year. Community food systems could potentially generate similar wealth in every region in the world.

A smart producer with laser-beam focus on a local market will build a factory in it or close to it, sized only large enough to meet that demand while keeping inventories low. It will embrace the concepts of flexible manufacturing and economy of scope. Paul Kidd, author of *Agile Manufacturing*, writes: 'We are moving towards an environment in which competitive products need customer-specific tailoring and high quality. At the same time new trends are shortening the product's life cycle, making the number of repeat orders smaller and reducing batch sizes, while adding variety'.

The great conservative economist Friedrich Hayek argued that state socialism was doomed because knowledge is too complex, too subjective, and too dependent on particular circumstances of time and place for even the smartest, best-intentioned bureaucrats to comprehend. Big Brother's natural inclinations to average, simplify, generalize, and abstract, necessarily filter out critically important facts that make national policymaking inherently insensitive to local needs. The same problem afflicts global-scale corporations. Long Tail consumers with increasingly discriminating tastes are driving these Short Tail trends. Local producers are inherently in the best position to recognize these special tastes and respond to them with just the right products, at just the right time, in just the right way.

In practice a local producer is better situated to intuit, design, manufacture flexibly, and deliver just-on-time appropriate products.

3. The dominance of local services

Perhaps the most important example of where local production enjoys a growing comparative advantage is in the area of services. In 1960 U.S. consumers spent four of every ten 'personal consumption' dollars on services, and the rest on goods. In 1980, 48 percent of our consumer dollars went to services; in 1990, 55 percent; and in 2003, 59 percent. These changes, economist Paul Krugman argues in *Pop Internationalism*, are moving the U.S. economy inexorably toward localization:

> A steadily rising share of the work force produces services that are sold only within that same metropolitan area…And that's why most people in Los

> Angeles produce services for local consumption and therefore do pretty much the same things as most people in metropolitan New York – or for that matter in London, Paris and modern Chicago.

No matter how many terrific courses are available online, good teaching will still require, as it has for millennia, real humans working side by side with the students to facilitate learning through discourse, empathy, and support.

Few services can be mechanized or delivered from afar via the Internet. Have you ever gotten a massage over the Web? No matter how many terrific courses are available online, good teaching will still require, as it has for millennia, real humans working side by side with the students to facilitate learning through discourse, empathy, and support. Many services – whether health care, teaching, legal representation, or accounting – demand a close, personal, trusting relationship. Community banks are realizing that one of their competitive advantages is in their personalized customer service. In *The World Is Flat,* Thomas Friedman counters that U.S. firms are increasingly using global networks to outsource services. He gives hundreds of colourful examples of global trade in services, but his overall empirical case turns out to be flimsy. In 2004 the United States imported about $302 billion worth of services, a number that has been rising somewhat faster than national income but now represents just over two percent of our national income, a tiny part of our economy, a fifth of the value of goods imported. Moreover, despite a yawning trade deficit, we actually run a surplus in services, which means we are exporting more than we are importing, and this surplus has remained steady over the past decade. Some U.S. companies that enthusiastically outsourced services, moreover, now regard it as a colossal error. More than a few computer companies have been dismayed to discover consumer revolts against the outsourcing of the 'tech support' divisions to Bangalore, where well-trained trouble-shooters must follow regimented scripts that take twice as long and yield half the results. After a mountain of complaints, Dell moved its tech support back to Texas.

Role of economies of scale

Even if Short Tails meet the expanding Long Tail niches of both the global and local economy, what's to stop these small companies from combining into larger firms? Won't the merger of a bunch of niche oriented businesses simultaneously take advantage of the Long Tail by seeking greater efficiencies from larger size? Perhaps. But consider two counterarguments:

First, Short Tail consumers increasingly prefer local producers wherever possible, and small-scale global producers wherever necessary. One study of residents in Maine, New Hampshire, and Vermont found that 17 to 40 percent of consumers in each state were willing to pay two dollars more to buy a locally produced five-dollar food item. Any local firm trying to improve its bottom line through merger or acquisition now must take into account the potential alienation and destruction of its core consumer base. Second, it is not at all clear whether such mergers actually improve economies of scale. A recent review of the literature on mergers by Paul A. Pautler of the U.S. Federal Trade Commission (FTC) found that these deals

actually depress stock value 45 to 70 percent of the time. Not only is the Long Tail unleashing millions of competitive Short Tails, but these Short Tails could well become the dominant force of the new global economy. Consider several factors, unrelated to the Long Tail, that are making small scale businesses more competitive:

- For some goods, like food and electricity, the inefficiencies of global distribution already far outweigh the efficiencies from global production. The costs of food distribution, for example (which include packaging, refrigeration, transportation, advertising, middle people) consumes about 71% of all food dollars.
- Rising energy costs will exacerbate these inefficient global distribution costs and further improve the competitive advantage of local producers. Concerns about global warming seem likely to translate into more 'green taxes', which will increase the price of energy still further, resulting in even more localization.
- Add mounting concerns about global terrorists cutting off or sabotaging long supply lines, which raise the value of community self-reliance in food and other basics, and inevitably this will spur more public investment to promote such self-reliance.

More and more businesses will find that the ingenuity, drive, and quality of its managers and workers, as well as the quality of its products and services, matter more than the sheer size of an operation.

But won't these factors influence just a few sectors of the economy? That's unlikely. To understand the possibilities for a new generation of competitive small businesses, consider some data from the United States. Our Census Bureau regularly publishes details about every kind of business in the U.S. economy – more than a thousand categories – in what is called the North American Industrial Codes System, or NAICS. If you rank these categories by the probability that any firm will be large, you find that the third 'largest scale' industry is 'Guided Missile & Space Vehicle Manufacturing'. If ever there was a natural niche for big business, it would be one with an intergalactic mission. And yet, of the ten firms in that category nationally, three have fewer than one hundred employees.

In how many of the thousand-plus NAICS categories are there more large firms than small? The answer is, stunningly, only seven, including the rocketry category. So let's concede, for argument's sake, that small firms probably cannot do very well at running central banks or nuclear power plants, mining phosphate rock, or manufacturing pipelines or cyclic crude. Keep in mind that 'small', in the U.S. data systems means fewer than 500 employees, so for European readers we're really referring to small and medium-scale firms.

More than 99 percent of the other thousand-plus categories have more small and medium firms than large ones. Any community interested in starting a business in just about anything else will, with a little homework, be able to find plenty of viable small-business models all around the world. Thanks to the Long Tail companies that gather and sift information

worldwide, more and more businesses will find that the ingenuity, drive, and quality of its managers and workers, as well as the quality of its products and services, matter more than the sheer size of an operation.

As global trends nudging the world toward localization accelerate, more and more Short Tail producers will adjust their market focus accordingly. Sure, global corporations will still exist, especially the Long Tail companies like Amazon and Google that facilitate Short Tail firms. But their number and their overall influence in local and national economies could well decline. And this is the final irony of globalization: the ability of economic players to find a global universe of information inexpensively is accelerating the discovery that the best bargains are increasingly to be found in our backyards.

Findhorn resident, and Global Ecovillage Network president Jonathan Dawson, provides an overview of economic good practice from within the global ecovillage family.

Economics of Solidarity:
Good Practice from within the Ecovillage Family

Jonathan Dawson

The process of economic globalisation has severely undercut the viability of local economies. Corporate subsidies and unfair trade arrangements have created a global economy in which huge volumes of produce are shipped hither and thither across the world. This delivers profits to the corporations that control production and distribution, while undermining communities, local economies and ecosystems alike.

So all-pervasive is this global system that people feel increasingly powerless to oppose it. While the fair trade movement has made important strides, it constitutes a tiny fraction of total global trade, and in most product areas, consumers find it ever more difficult to find affordable ethically produced goods.

The ecovillage response to this thorny problem takes three forms. First, there is a strong impulse towards 'voluntary simplicity', the conscious decision to live more simply. This takes its purest form in communities such as Tinkers' Bubble and Sieben Linden that are committed to modelling low-impact lifestyles, but pervades the ecovillage movement.

Thus ecovillages tend to be places where there is a significant sharing and recycling of clothes, toys and equipment of all kinds. The seventy-two members of the Kommune Niederkaufungen ecovillage in Germany share seven cars, two washing machines and two video recorders.

Levels of television ownership in ecovillages tend to be especially low, both because of the cost of the equipment and licence and because of the medium's subversive role in promoting consumerism. The Ladakh Project even runs 'No TV' weeks, aimed at resisting the most damaging elements of non-Ladakhi culture. In the place of television, ecovillagers tend to turn to home-grown entertainment: choirs, concerts and theatre groups abound.

There is, in addition, a strong impulse to redefine the relationship to work, not as a chore but an act of service and enjoyment. Thus, the Twin Oaks ecovillage in Virginia declares: 'We use a trust-based labour system in

which all work is valued equally. Its purpose is to organise work and share it equitably, giving each member as much flexibility and choice as possible. Work is not seen as just a means to an end; we try to make it an enjoyable part of our lives'. In Findhorn, work is described as 'love in action'.

Ecovillages are also involved in campaigns to promote the ethics of voluntary simplicity. A number act as nodal points for local groups of the Slow Food movement, an initiative whose aim is to 'protect the pleasures of the table from the homogenisation of modern fast food and life'. One of these, the Italian ecovillage Torri Superiori, is also an active participant in the emergence of Decroissance Soutenable (Sustainable Contraction), a movement that is growing fast in Italy and France, geared towards promoting lower consumption in order to achieve higher quality of life.

Second, there is within ecovillages a strong, though weakening, tradition of economic solidarity: that is, a broad sharing of resources with all income going into a common pot, and the collective taking some measure of responsibility for meeting members' needs. This permits the community to provide a wide range of shared services, to facilitate a redistribution of wealth within the collective and to help communities reduce their dependence on the global economy.

While the fair trade movement has made important strides, it constitutes a tiny fraction of total global trade, and in most product areas, consumers find it ever more difficult to find affordable ethically produced goods.

Perhaps the economy of solidarity finds its strongest expression in the Camphill communities. Their core economic principle is the following:

> In a community of human beings working together, the well being of the community will be the greater, the less the individual claims for himself the proceeds of the work he has himself done; i.e. the more of these proceeds he makes over to his fellow workers, and the more his own requirements are satisfied, not out of his work, but out of the work done by others.

This ensures that frugality and generosity are built into economic behaviour. The Norwegian Camphill family of communities redistributes some of its surplus through the 'East Fund', created to help the setting up of Camphill communities in Estonia, Latvia, Poland, Russia and the Czech Republic. Over the last fifteen years, around £1 million has been channelled through the fund and the Norwegian communities have sent builders to Russia to teach straw bale building techniques.

The economy of the Kommune Niederkaufungen ecovillage is strongly communitarian in nature. There is no private property other than clothes and personal effects. All the profits from each of the eleven work groups – carpentry, seminar centre, construction, kitchen, organic gardening, dairy farm, leatherwork, architecture services, kindergarten, metalwork and construction – go into the common purse. The community's businesses earn enough to meet communal living costs of around €50,000 per month. When members need money for personal matters, they simply take it from a box of cash that sits in the office. They do not ask anyone's approval, but record how it will be used. Expenditures are displayed at the end of each month according to how it was spent. Bill Metcalf observes: "The system works remarkably well".

The Twin Oaks community in Virginia, US, also provides a living for all of its 100 members, including health insurance, from the profits it makes from its community-owned hammock, furniture and tofu making businesses. Some members of The Farm community in Tennessee, US, meanwhile, have developed an ingenious system, the Second Foundation, in which participants pool income that is used to provide low-interest loans to community businesses. The interest on these loans provides members with accounting and legal services, group medical and pension funds, while the capital continues to revolve in the form of low-interest loans among community initiatives.

This has parallels with a pensions scheme being developed among Camphill communities in Norway. Here, eighty participants have contributed about £500,000 into a pension fund that is secured by the Camphill Village Trust of Norway, conservatively estimated at a value of £9 million. These funds provide loans to the Norwegian Camphill Trust (this cannot exceed twenty per cent of the total invested), loans to individual Camphill members and equity investments in ethical banks. The interest payments on the loans pay pension dividends while the capital circulates in support of life-enhancing projects. (For more information on this, see Jan Bang's article in Module 2 of this reader.)

Together, these various economic strategies – voluntary simplicity, economic solidarity and the use of community banks and currencies – have helped many ecovillage economies attain a distinctive and uncommon level of vitality.

A third type of economic innovation explored by ecovillages is experimentation with community currencies and banks. Two of the most successful such initiatives are in Damanhur in Italy and the Findhorn Foundation community in Scotland. Both have set up their own banks to mobilise their members' savings for community initiatives and their own currencies to keep money circulating locally rather than quickly leaving the area as tends to happen with national and supra-national currencies. (For more information on the Findhorn and Damanhur economies, see Jonathan Dawson's article in Module 2 of this reader.)

Together, these various economic strategies – voluntary simplicity, economic solidarity and the use of community banks and currencies – have helped many ecovillage economies attain a distinctive and uncommon level of vitality. One sees bakeries, theatres, shops and cafés that draw in visitors from far and wide. Local organic cheeses, wines, fruit and vegetables combine great quality with very low food miles. Crafts studios turn out beautiful ceramics, textiles, carvings and candles. Schools and training centres for both children and adults flourish. Publishing houses, printing presses, solar panels manufacturers, waste-water system designers, consulting companies. Everywhere there is evidence of economic vitality and diversification.

Excerpted from: Jonathan Dawson, *Ecovillages: New Frontiers for Sustainability*, Green Books, 2006.

Marti Mueller is a social-environmental activist, writer, and photographer who divides her time between Paris and the celebrated Indian ecovillage, Auroville. Here, she describes the workings of the Auroville economy.

The Economy of Auroville

Marti Mueller

The Yamiwana Indians in Ecuador call money "sad leaves". In today's world, finding value-oriented economic systems that honor people and provide a creative system of exchange that doesn't damage some for the benefit of a few is a huge challenge. In Auroville, we have been studying how to generate abundance while not falling into the traditional traps and constraints of conventional businesses and the adverse affects of globalization. Auroville is called 'The City the Earth Needs'. It is our aim to show how ecology and socio-economic solutions can be replicated throughout the world while symbolizing an aspiration for higher consciousness. We try to co-create criteria for innovative roles in business, to do integral visioning for an optimal planned future, and to insure income and abundance for our community while respecting the environment and each other. More than ever before, Auroville is motivated by the need to transform itself from a donation-dependent community township to a self-sustaining economic model. This is, in many respects, a tall order.

Business with a difference

Auroville is a community of nearly 2000 permanent residents plus a fluctuating population of an additional 2000 people at any given moment. The community has more than 150 service and commercial units, some of them very small in size and others with a rather large yearly turnover and a considerable export market. Business in Auroville is based on non-ownership and stewardship of assets, which are held in trust by the Auroville Foundation for 'humanity as a whole'. Auroville is audited by the Government of India and enjoys a tax-exempt status for some of its activities. From photovoltaic systems and computer software to village handicrafts, our business units are encouraged to give at least 35 percent of their profits towards community development. Most of our production units are small to medium in size and largely oriented towards textiles, natural food processing, and appropriate energy. They provide income for local villages and have wage scales that

More than ever before, Auroville is motivated by the need to transform itself from a donation-dependent community township to a self-sustaining economic model

are above the norm for our region. Auroville has always had a reputation for beauty and quality in craftsmanship. We try to practice ethical fair trade and ensure that our working conditions are good and that our wage levels are above the norm for our region. This allows local people to live well and to maintain their cultural heritage.

Becoming more sustainable in India

Today community-based businesses in Auroville offer new and alternative models to the dominant paradigm of economic globalisation. When Auroville business units and services are motivated towards community wealth creation instead of private profit, new paradigms emerge. Our entire local community shifts from:

Our challenge is to maintain small production units, which support the region in terms of providing local income at a fair rate, and to strengthen village relationships while being open to new kinds of business opportunities.

- competition to cooperation
- material ambitions to holistic human values
- impulse consumption to basic needs considerations
- greed and corruption to ethical standards
- individual desires to abundance for all
- shareholder profit to stakeholder responsibility
- selfish individualism to a real sense of community

Creative thinking

The Auroville model is largely based on small-scale economic enterprises that stress creative ideas, knowledge sharing, and high levels of creativity. Our entrepreneurs don't necessarily look for a niche, but for something that corresponds to social criteria, innovative lifestyles, holistic living, and relevant values that can be offered to the world. In Auroville we have discovered that deep problem-solving can lead to highly creative solutions through the production of new products and services. For example, the effect of the historically devastating South East Asian tsunami led to Tsunamika, an employment project for village fishing women based on a gift economy. The village women make dolls out of fabric waste and people donate what they wish. The project was highlighted in Paris by UNESCO for bringing prosperity back to the villages.

'Wellpaper' is another Auroville generated business project located in an outlying village where recycled newspapers are transformed into useful objects, such as bowls, sacks, and containers. Wellpaper has not only trained local women but has made them part owners of the business. The Auroville-based unit handles the communication and marketing and the villages handle the manufacturing. The profits are then split. One of our planetary dilemmas is that as our population increases and there is more demand for knowledge-based skills, people with few recognizable skills become

and remain unemployed. This is one of the reasons that the dynamics of interpersonal relationships and a stress on the value of human resources in business now matters even more than in the past.

Auroville's specific challenge

At the moment, Auroville is highly focused on handicrafts and construction, which generate considerable employment in the surrounding villages. The hope is to see this continue, but also to infuse the community with a diversity of other types of businesses that are more knowledge-based. Our challenge is to maintain small production units, which support the region in terms of providing local income at a fair rate, and to strengthen village relationships while being open to new kinds of business opportunities.

Auroville is also home to some cutting-edge technology while still maintaining a strong rural base. It has its own computer industry offshoots, a number of excellent design studios, and a centre for linguistic study, which has had considerable support from UNESCO. We attract researchers in all fields and from all parts of the world. We are home base to philosophers, engineers, architects, researchers in the evolution of consciousness, university students studying sustainability in action, engineers eager to try out new appropriate energy models, technicians interested in reforestation and heritage seed saving, yoga teachers, authors, health specialists, watsu initiates. The list is endless.

Research on branding

Parallel to organizing forums on business, we have done research on bringing some of our major showcase Auroville brands together under one label with logos and trademarks that are a sign of quality, beauty, perfection, respect for nature, and fair labour practices. We have placed an emphasis on applied research and encourage constant innovation, as our product lines are often copied. Establishing an Auroville brand that is backed by a pledge to high quality and good labour standards is essential because Auroville products are the ambassadors of our values.

Foodlink co-operative

To encourage local production for local food needs, Auroville has established 'Foodlink', a food cooperative programme, to bring a dozen Auroville farms under one centralized unit. As an offshoot of our business seminars, Auroville farmers joined forces and developed a marketing concept, designed their own logo, and signature, 'Auroville grown', which is included on their packaging and in the distribution of Auroville goods. Their products are brought into a central clearing house where their availability is posted and orders are taken and dispatched to different parts of the community. In this way our community of consumers knows how the food they eat has been

produced and that for the most part, it is organic. Plans are to link this practice to the biosphere itself, with foods that cannot be grown in Auroville because of environmental or climatic considerations.

Auroville's internal economy

Auroville is constantly experimenting with new internal economic models. We have a Central Fund through which all money, including Auroville maintenances and external donations from abroad, is circulated. The money is distributed to designated sources through an account transfer system. The Mother, the visionary founder of Auroville, stipulated that there would be no money exchange in Auroville. In accordance with her wishes, Aurovilians rarely exchange money in any cash form. We use a system of individual accounts on paper where we sign for products and services and money is transferred in and out of our individual accounts through a central accounting system. When we do trading transactions, whether it is for coffee at the café or for groceries or other items, such as dental care, we sign a ledger. At the end of the month the money owed is automatically transferred from one account to another.

There is a new breed of business entrepreneurs and consumers who are more concerned about how wealth is generated, used, and distributed than about simply accumulating profits for profits sake or consuming for consumptions sake.

The fact that we do not exchange cash among ourselves frees us up to relate to each other in other ways. It is also an exercise in assessing values in other terms, as most of us are used to putting a monetary value on everything. This gives us much more of a sense of community. When a project needs money not provided by the community in another way, the project holder can make an announcement in the weekly community newspaper and people can simply transfer funds from their own accounts to the needful account. This is often done anonymously and it encourages a wonderful system of sharing resources without expecting anything in return. Then money isn't simply yours or mine, it is energy beyond either one of us. There is always an implicit invitation to focus on one's work without economic pressure. For the time being, not everyone is achieving their heart's passion in a moneyless society, but we hope to encourage a much broader definition of what work is and how we can manifest our commitment to the community.

For some time we have also been experimenting with ideas of developing a common currency for the biosphere and for business transfer and goods exchanges between Auroville and the surrounding villages. This increasingly encourages thinking locally and being less dependent on outside banking systems.

Times are changing

Today where the power of certain trans-national corporations far exceeds that of some governments, the outcry for ethical business is increasing. There is a new breed of business entrepreneurs and consumers in Auroville, like everywhere, who are more concerned about how wealth is generated,

used, and distributed than about simply accumulating profits for profits sake or consuming for consumptions sake.

In Auroville we believe that developing new community models for business that assure good quality and fair trade are important if our community is to achieve economic autonomy and be a real example for the world – so that we do much more than produce sad leaves, as the Yamiwana would say. The more difficult but equally important challenge, as Mahatma Gandhi once said, is to "Live simply so that others can simply live".

Diana Christian, author of Finding Community: How to Join an Ecovillage or Intentional Community, *and editor of the free online newsletter Ecovillages (EcovillageNewsletter.org), describes the various enterprises that lie at the heart of the Earthaven community and explores the challenges and pitfalls of developing a private economy within a communal experiment.*

Will Earthaven become a 'Magical Appalachian Machu Picchu'?

Diana Leafe Christian

Earthaven, where I live, is a 15-year-old aspiring ecovillage in the Blue Ridge Mountains of North Carolina, about an hour from Asheville. We govern ourselves with community meetings and committees; we live in small passive solar homes we build ourselves without bank loans; we're off the grid.

However, in this economically depressed area of Southern Appalachia in the American South, we're too far from Asheville to support commuting to jobs. There are no large employers within 20 miles, and local service jobs are mostly 10-15 miles away over winding mountain roads. Jobs must be available onsite or nearby. While about 10 of our 45 members are retired, live on trust funds, or have other annuities, the rest must earn incomes.

The economics of a rural ecovillage

Many community members offer skilled or unskilled labour to other members and neighbours and sometimes for the community itself. This includes general labour, administrative work, bookkeeping, giving tours, cooking for onsite workshops, sewing, clearing trees, building roads, milling saw logs and cutting firewood, excavating roads and sites, and designing and building homes. It also includes designing and installing plumbing and off-grid power systems, and repairing and maintaining buildings, roads, and utilities.

Several members work offsite – a tree surgeon, counsellors or teachers at an adjacent school for at-risk youth, or people who travel elsewhere: booksellers at conferences around the US, and workshop presenters and consultants. A few telecommute because most onsite work opportunities require physical strength, the ability to operate heavy equipment, or skill in the building trades, men have a much easier time earning money here than most women. Thus some, especially young women, move to Asheville to earn money. Sadly, we usually lose them for good.

So, like most rural ecovillages we need jobs onsite to attract and keep members and sustain our ecovillage dream. And like ecovillages everywhere, we need other crucial necessities to live sustainably in community. Water, food, shelter. Waste management, electric power, a tractor, excavation equipment. Self-governance and agreements, social and cultural activities, community buildings. Education for our children. Tours, camping facilities, and indoor lodging for visitors.

The community itself supplies water, roads, a tractor, community buildings, and a campground. As individuals we provide our own electric power through off-grid PV systems, deal with our own waste by building composting toilets and constructed wetlands, and get additional water through roof water catchment. We co-create our governance process and agreements. As individuals and in small groups we generate Earthaven's lively social and cultural scene.

Vehicle repair, welding, adobe bricks, honey, and goat milk are supplied by neighbours. But it's up to Earthaven's social enterprises to supply everything else. In an ecovillage context, a 'social enterprise' is a profit-making business or income-earning non-profit set up to meet the group's social and environmental needs, including the need to earn an income onsite.

Like most rural ecovillages we need jobs onsite to attract and keep members and sustain our ecovillage dream. And like ecovillages everywhere, we need other crucial necessities to live sustainably in community.

Permaculture and cottage industries

When three of Earthaven's founders – who are also permaculture designers – created the community site plan, they considered both ecological issues and potential income sources for members. The site plan took into account nine potential income streams, including forestry, lumber production, home construction, and 'speciality agriculture, horticulture, and food production'. The permaculture-based thinking of our founders, our site plan, and the need for social enterprises in a rural ecovillage, motivates some Earthaven members and groups of members to own and operate their own small-scale ecologically sound businesses, grow food for sale onsite rather than buying it from health food stores in town, and create a culture in which we hire each other for needed goods and services whenever possible. For example:

- *Red Moon Herbs*, which makes herbal products for women, and the annual Southeast Women's Herbal Conference (both of which employ only women), provide income for the Earthaven woman who owns the businesses, and four Earthaven members: two full time and two part time.
- *Useful Plants Nursery* raises and sells organic fruit trees and berry bushes to local customers as well as to customers across the Eastern US, and provides income for two members.
- *Road Warrior Construction* builds passive-solar off-grid homes for Earthaven members and neighbours, and provides incomes for its two Earthaven owners, a full time job for one neighbour and occasional work for another Earthaven member.

- *The Forest Children's Program*, a non-profit home-school enrichment program organized by a group of Earthaven parents and neighbouring parents, serves Earthaven and neighbouring children aged three to nine, and provides part-time employment for an Earthaven member and a neighbour.
- The new *Ladyslipper Lodge* will soon offer accommodations for visitors in an onsite four-bedroom hostel. It will probably only break even for a few years because its two Earthaven proprietors are running the Lodge for the community's benefit. It will, however, allow several Earthaven members to earn money as instructors in onsite workshops or in providing administrative services for the workshops or in cooking meals for participants.
- The new *Ethanol Co-op*, comprised of Earthaven members and neighbours, will collect the brewers' mash from local breweries, and use grain and carbohydrate-rich crops grown by neighbours to create needed products and jobs. These will include 190-proof ethanol for use in chainsaws, the tractor and vehicles, and the income-opportunity of owning an ethanol-powered vehicle fleet to provide car-pooling and a shuttle service to town. Wet ethanol mash can be used as nutrient-rich food for members' and neighbours' chickens and turkeys and as the fertile substrate for growing mushrooms, creating mushroom compost, raising worms and collecting worm castings, and raising tilapia and creating fish fertilizer – and it provides income opportunities for those who run these businesses.

A thriving rural ecovillage requires viable, ecologically sustainable cottage industries to provide needed goods or services and jobs, and onsite, ecologically sustainable food production

Food, glorious food!

Six onsite agricultural projects may someday earn incomes for the member-farmers (all who have other income sources), who provide food for other members, neighbours, and sometimes local farmer's markets. Currently these projects just break even, or don't break even yet. The farmers lease from Earthaven small agricultural sites from a half-acre to four acres. The farmers must abide by the community's land-use agreements (which protect creeks from soil erosion and manure run-off by well-designed riparian buffer zones) as well as by the standards of California's 1991 Organic Foods Act. A trout pond operation is managed by two members; two others have started a half-acre orchard project which in five years will bear apples and other fruit. Yellowroot Farm, operated by two Earthaven members, provides Biodynamic vegetables, chicken, eggs, pork, sauerkraut, and pickles. Imani Agricultural Co-op, operated by four Earthaven members, offers eggs, chicken meat, dairy products, and pork. Two Imani Co-op members also make yogurt, and sell organic meat, butter, and cream – other products they get wholesale. The four and a half-acre Gateway Farm, run by the same members who own Road Warrior Construction, has so far provided lumber (from clearing the field), hay, lamb, turkey, and squash.

In fact the Gateway farmers, Chris Farmer (who goes by 'Farmer') and Brian Love, set up the Voison rotational grazing method (which builds soil by moving livestock around a pasture in moveable fences); a fishpond; and a market garden and fruit tree operation. Planned as a social enterprise with multiple benefits for Earthaven members over time, in three to five years, besides lumber and hay, Gateway Farm should produce:

- Organic eggs, meat (chicken, turkey, lamb), fish, vegetables, fruit, and nuts.
- Value-added products: sheep cheese, sauerkraut, garlic spread, horseradish, wool, yarn, felt, knitted apparel, pelts and clothing, sheepskin rugs, and soap.
- Organic vegetable seeds for a planned mail-order organic seed business.
- Jobs for people preparing value-added food and other products or who will work in the planned mail-order seed business.

Ambivalence about business and agriculture

While most Earthaven members appreciate and support these entrepreneurial efforts, others believe that small businesses – which necessarily involve money and budgets, buying and selling – are antithetical to ecovillage values. Or that onsite agriculture means the community risks the excesses of industrialized agriculture and its inevitable pollution of soil and water, rather than seeing the farms as sustainable agricultural projects that build Earthaven's soil and protect its streams and groundwater. Various projects have, in recent years, been slowed down or stopped completely, either officially by proposals being blocked in community-wide meetings, or unofficially through emotional advocacies in the day-to-day life of the community. Yet a thriving rural ecovillage requires viable, ecologically sustainable cottage industries to provide needed goods or services and jobs, and onsite, ecologically sustainable food production.

Concerns about agriculture have ranged from issues about the future availability of water for both agricultural and domestic needs, whether cow manure would pollute streams, and the pros and cons of drilling wells – all worthy issues to research and discuss. Yet a few members have also expressed distrust of the methods and motives of the farmers and the agriculture committee itself, and blocked proposals in order to protect the community from what they saw as self-serving members using ecologically unsound methods.

However, increasing numbers of Earthaven members also began seeing that the way the community governs itself and the limitations of its mission statement contribute to the problem. Earthaven uses pure consensus decision-making (which requires a clear, common mission and purpose), yet its mission and purpose statement is ambiguous enough to be interpreted

in different ways. Thus sometimes people have blocked a proposal because of their own unique interpretation of the word 'sustainability' or how the proposal violated the community's mission and purpose. People also began realizing that Earthaven's unwritten criteria for what constitutes a principled block is also vague enough to have multiple meanings, and blocks have rarely been tested against these criteria anyway. Thus blocking for personal reasons has gone unchecked. Lastly, and perhaps most importantly, many have begun realizing that having a sense of trust for other community members is one of the major requirements for using consensus in the first place. Without trust, community morale soon breaks down.

Earthaven is now working on wording its mission and purpose statement more explicitly. It is also considering a series of proposals to modify its consensus process, including emphasizing more clearly the role of trust. One proposal suggests clear criteria for what constitutes a principled block (which cannot be tied to personal interpretations of what 'ecological sustainability' means). Another requires people who block a 'proposal' to work with its supporters to create a new 'proposal' that addresses the same issues. If passed, these proposals can help eliminate 'personal interpretation' blocking and 'personal distrust' blocking.

Seeds of the future

"There is a way in which ecovillagers are visitors from the future, working on sowing the seeds here and now to create that future."

Recently some of our entrepreneurs and farmers drafted a rather poetic vision statement, which includes the phrase, 'We are creating a sanctuary and seedbed so that our descendants may inhabit a Magical Appalachian Machu Picchu'. They also wrote:

> Earthaven is a living seed in which we store the best of our cultural heritage, and an incubator in which we will embrace our responsibility as humans during the impending chaos. We will pass our mythology, technology, and community skills on to our extraordinary descendants, who will plant a polyculture of survival strategies and help cultivate a sustainable renaissance. Through cultural exchange between tribes, they will create a world more abundant, beautiful, and peaceful than ours.

In 2008 ecovillage activist and GEN co-founder Robert Gilman observed at a GEN meeting in Los Angeles, "There is a way in which ecovillagers are visitors from the future, working on sowing the seeds here and now to create that future."

Here in the mountains of western North Carolina, we're doing our best to sow those seeds. May Earthaven – may all our ecovillage projects – become fertile seeds for the next generations.

Editor of the UK-based award-winning Permaculture Magazine*, Maddy Harland, tells the story of Permanent Publications, and describes the ecological design thinking behind the company*

Creating and Managing an Ethical Business: Permanent Publications

Maddy Harland

Tim and I started the publishing company that was to become Permanent Publications with two other partners in 1990. At that time the company inhabited a bedroom and downstairs room in our cottage. By the nature of its smallness and our shoestring budget it was fairly low impact. We wrote and packed up our own books, brought children into the world and gardened all in one place whilst our eyes gleamed with idealism and ambition.

Permaculture Magazine and the company's first temperate climate permaculture books arrived over the next two years, but the business was still a very small affair. The print runs could be squeezed under packing benches and we had far more fruit trees in the garden than titles. There were no 'staff' and frequently no wages either. By the mid 1990s, the magazine had grown too big for the house and our neighbours became as restive as our noisy young daughters with business traffic and deliveries. It was time to move.

Synchronicity struck when the opportunity arose to move the business to The Sustainability Centre, a new local council Agenda 21 initiative which we helped found. It was established at a redundant inland Naval site a few miles up the hill which was unfavourable for property development, being on a slope and covered in neglected plantation woodland. The Sustainability Centre gradually took shape and we moved to the site in 1998, the first occupants of the 55 acres. It was eerie at times but packed with potential – and many of its own special sort of groundbreaking problems.

We inherited a former dental surgery in what was the old hospital block, now commandeered as The Sustainability Centre's HQ and visitor centre. It was a 1960s flat roof building with single glazed PVC windows and no heating. It was neither beautiful nor ecological but it was somewhere to move to on a non-existent budget, and we dreamed the dream of helping to start a centre to demonstrate permaculture and all manner of things sustainable. That is our history. Now for a permaculture audit of our current business.

Water

The Navy left some large water tanks on site. Very early on, these were hooked up to flush all the toilets in the building with rainwater (and there were loads of them – the Navy liked to separate male/female and officer/rating bottoms!). The centre imported low flush toilets from Scandinavia at great expense (you couldn't pop into a builder's merchant and buy one off the shelf in those days). The sewage goes into a tank, waiting for the day when we install a wetland system that will use the fall of the land and plants to clean both black and grey water.

Heating

The boiler heats both the visitor centre, where our offices and stores are situated, and the centre's ecohostel, Wetherdown Hostel, which can accommodate up to 30 guests and volunteers. It runs on wood chip made on site from the soft wood plantation.

We struggled for some years with a planning controversy over a wood/straw fired Farm 2000 boiler installed under our offices and as a consequence had no heating for five years. This boiler was eventually sold and the controversy solved by the installation and resiting of a biomass boiler, a Veto 120kW stoker-boiler, which is run on woodchip. The boiler heats both the visitor centre, where our offices and stores are situated, and the centre's ecohostel, Wetherdown Lodge, which can accommodate up to 30 guests and volunteers. It runs on wood chip made on site from the soft wood plantation. After a few teething problems, it works reasonably well. Currently we use 50 tonnes of seasonal wood per year. The estimated annual useful heat produced is 125,000 kWh. The calculation is that 39 tonnes of CO_2 emissions are avoided annually.

The boiler heats our water in the colder months and in summer we have a solar thermal system on the roof above us, installed with a grant from the Powergen Greenplan Fund by Southern Solar. The panels are four Filsol FS20 flat plate panels each with a surface area of 2m2 (21.5ft2). The estimated annual yield is 3,272 kWh, enough for three households.

The boiler and panels work reasonably well but we suffer from the difficulties of matching new solar technology with old hardware, losing a lot of heat through ancient large diameter iron pipes, an eco-renovator's nightmare. Our building is Navy issue, circa. 1970s, built to withstand a bomb but poorly insulated.

Lighting

Like many other aspects of our offices, we inherited the lighting from the Navy. There used to be two fluorescent lights housed in every unit and we removed one of the tubes from each unit. We also have a few conventional skylights. We have a strict lights-off policy and use daylight as much as we can. We'd love sun-pipes one day when the roof is rebuilt. The ecohostel has its own photovoltaic panels and the visitor's centre has a 8.16Wp (48 panels x 170Wp) funded by the Low Carbon Buildings Programme. This system saves approximately four tonnes of CO_2 per annum and provides about a

third of the whole site's electricity. We'd like to do a full eco-renovation of the building in time.

Kitchen waste is composted in two bins and a wormery and this adds fertility to our little office garden.

Ventilation

We open the doors and windows!

Windows, doors and other fittings

Our windows are still single glazed PVC Navy issue. One day the building will be refitted with double glazed lowE argon filled locally made units (like the ones at our nearby home) but this has to happen when the centre gets a grant, as with insulating the building further. The doors are wooden Navy issue. Our kitchen literally came out of skip, is solid pine and was refitted by John Adams, our graphic designer. Elsewhere we make shelves out of FSC timber or recycled materials. All of our desks are recycled, thanks to a county-wide office furnishing recycling scheme. It's a case of reuse anything we can and never buy new unless absolutely essential.

Office equipment

We haven't bought a new computer this century. Almost all machines arrive thanks to eBay which has revolutionised *Permaculture Magazine*'s graphic design capability. John Adams builds everything from components. When machines become irreparable, they go for recycling.

Waste

Permanent Publications has no waste collection at all from the site and we set up as many recycling banks as we could. We reuse everything possible and try not to buy in much packaging. Cardboard boxes, book wrappers and padded bags we receive with incoming goods get sent back out with customer orders. If we can't reuse it, we take it home and mulch our garden with it. As a last resort it goes to the recycling centre. Paper is either recycled in a bank on site (the centre gets paid by the tonne for clean paper waste) or shredded as packing filler. Glass, cans and textiles go in the appropriate banks. Stamps go to charity. We send our printer cartridges for recycling to the Royal Society for the Blind who use them to raise money. Any damaged books get sold from our shop at reduced rates. We like to offer our visitors bargains.

Our garden

We started a small urban-style edible container garden, immediately outside our goods-in door three years ago, mostly using recycled materials. Kitchen waste is composted in two bins and a wormery and this adds fertility to our

little office garden. The garden has an unpromising northern aspect but its advantage is that it is right on our door step, Zone 1. We grow salads and a little soft fruit for lunch and demonstrate how to grow potatoes in mail sacks.

We have a tiny Butler sink pond, a haven for frogs on hot summer days, and grow trees in containers (for later planting out) and flowers as well. As time goes on, we are planting more shade tolerant edible perennials.

We recently put up interpretation boards for visitors explaining the design of the garden. The garden demonstrates just how much you can grow in a small urban space with low light levels and how much compost you can make by a variety of methods to replenish the planters. It also gives us a lot of pleasure and is a great chillout zone in hot weather.

Travel and sourcing locally

I think the most important aspect of our collective nature is that we try to treat each other with mutual respect. There are no hierarchies here.

We have a policy of trying to resource skills, services, materials and people as locally as possible. If we cannot, we open up the criteria a bit. All of our print, for *Permaculture* magazine, black and white and colour books is bought in Britain. We do not print in the Far East and import, even though this policy costs us money. We want to support our home industry, save print miles and buy Forest Stewardship Council accreditated paper. We also try and find UK made products and components. This is not always possible in our global world but we do not sell products made from uncertified woods or from sweat shops. We also use Fair Trade products like tea and coffee.

The nature of the site is not public transport friendly – an acknowledged weakness – and so we car share as much as possible. We also try to use vehicles that are as energy efficient as possibleand we choose not to drive gas guzzlers. Recently, the centre has acquired a biodiesel minibus that we have access to.

We don't take gratuitous trips out at lunch – we usually have to have at least three reasons to go to town (or anywhere for that matter) – and we enjoy being on site. It's a pleasure to walk in the woods, observe the changing seasons and the gradual regeneration of the woodland as plantation soft woods are replaced by native flora. The woodpeckers, buzzards, deer and hawks are our companions.

Nor do we live it large at conferences. We don't have that sort of a budget and even if we did we wouldn't want to. We also have a policy of trying to take the train to meetings and events whenever practical. Flying has been rare and is increasingly unlikely. Some members of the team refrain entirely.

Community

The Sustainability Centre with its residents, staff, project leaders, volunteers and green business tenants is becoming a small community. We even have two families with babies living on site now. We, the 'Permies' as we are affectionately known, do not have a great deal of spare time. We work flat

out most days. Publishing, our families and tending our own plots make life a full time job, but we try to help out on site when we are needed, share skills and knowledge, participate in tending our small garden and support other initiatives on the site.

I think the most important aspect of our collective nature is that we try to treat each other with mutual respect. There are no hierarchies here. No one is better than another at Permanent Publications – we all inhabit our own particular niche – and decision-making processes are by consultation and consensus. There is no boardroom elitism, only the director's privilege of underwriting the company overdraft! No one is exempt from making tea or cleaning the toilet (with biodegradable cleaner of course), though there are occasionally some mild controversies about washing up – we are human after all.

We are not in each other's pockets socially but we do look out for each other at work and in the wider world. This is a friendly and supportive environment. We share a common goal, to spread the word about permaculture – positive, life enhancing green living by design – and we certainly don't do this for the money!

Our wider community is our friends, supporters, readers, trade suppliers, consulting editors and of course our authors. We owe our existence as an organisation to all of you. You are too numerous to list here – this isn't an award ceremony after all – but we do want to thank you.

As with the Permanent Publications team, our relationship with our authors is built on mutual respect, trust and friendship. Book publishing is a highly creative venture and we endeavour to work as co-operatively as possible. We are very fond of our 'stable' of wonderful authors. They are all world changers in their own right.

Wish list

There are, of course, things we would like to do better. We are currently building our social networks online, have our own media channel for short films, and are currently developing *Permaculture* magazine online as well as in print. We are exploring how to produce free information and give away online material without becoming financially vulnerable whilst maintaining a high standard of printed media. We are also producing films. We work on projects with various different partners from the non-profits sector and we want to build on this aspect of collaborative media. Working in partnership is creative and stimulating.

We already swap plants and encourage each other to grow food but we'd also like to form a food co-op. We continue to try to buy ethically and support Fair Trade labels where possible, and would like to support more locally sourced sustainable products. We would also like a little more time to have fun.

Permaculture design

As a business, we have always used permaculture principles to design every aspect of what we do. The obvious principles are resourcing locally where possible, cycling energy and turning waste (i.e. cardboard, paper, packaging, kitchen waste) into resources. With actual office design, the principle of relative location – discovering the connections between elements and putting things in the right place to save energy – is used everywhere. Our packing station is a great example of intelligent design. So too are our work stations. We fit a lot of elements into small spaces which minimises use of space (rent is charged by the square metre used) and saves energy.

We would happily say that we are a small scale intensive system and each human element performs many functions! We also use as many biological resources as possible. Obviously, we have to use machines (computers) to design but we minimise waste as much as we can.

There are other more esoteric ways of using permaculture design principles in a business. For example, the principle of 'Each Important Function is Supported by Many Elements' is used in marketing material. We are trying to create a supportive web of permaculture information for all tastes and talents so if we do produce a flyer it promotes the magazine, a new title, plus our catalogue and website, in a concise and simple way.

It is the concepts of using edges, designing from patterns, and valuing diversity and the marginal that may seem abstract in terms of business, but they are of greatest use.

Besides using Bill Mollison's original principles, we also are mindful of David Holmgren's principles.[1] These can be used as a philosophy of life as much as guidelines for designing a landscape. Obviously, 20 years of publishing affords the luxury of observation, feedback (from our readers, customers and suppliers – thank you) – and creativity. It also demands the necessity of obtaining a yield and generating as little waste as possible. It is the concepts of using edges, designing from patterns, and valuing diversity and the marginal that may seem abstract in terms of business, but they are of greatest use. It means that we have to be open to new ideas and criticism, to be constantly trying to improve our editorial and design standards and our services. Even if we are growing into more elderly dogs as the years go by, we still have to learn new tricks, especially technological ones. We have to keep abreast of new thinking – even lead it sometimes. We can never sit back and be complacent, and nor would we want to.

Integrated thinking

In 'The Spiritual Imperative', an article by Satish Kumar published in *Resurgence*, he wrote 'Business without spirit, trade without compassion, industry without ecology, finance without fairness, economics without equity can only bring the breakdown of society and destruction of the natural world. Only when spirit and business work together can humanity find coherent purpose'.[2] These words resonate with me because they sum up what we are trying to do – to be self-aware, to serve others and be as harmless as possible.

I know that we use up finite resources – we move information in the form of paper around the world – and in essence that uses carbon. We try at all times to do this in as low impact a way as possible and within the tight financial constraints we face as an entirely independent organisation without external funding. We also run with the philosophy that the usefulness of the information we produce outweighs the carbon load required to create and transmit it – a form of transitional ethics. We are here to broadcast positive, small scale, solution orientated ideas and practices. The feedback we receive indicates that our work does change lives – for the better. We are also aware that we are of our time and one day we may well hang up our mice and head off in another direction. Or we may end our days writing and publishing... and snoozing in the sun as old dogs do.

The feedback we receive indicates that our work does change lives – for the better.

References

1. David Holmgren, *Permaculture – Principles & Pathways Beyond Sustainability*; (Holmgren Design Press, 2003 – available from The Green Shopping Catalogue, www.greenshopping.co.uk)
2. Satish Kumar, 'The Spiritual Imperative', *Resurgence* magazine, no. 229.

Rob Hopkins – permaculturist and founder of the Transition Towns movement – asks whether the permaculture movement is capable of influencing society as a whole when the coming peak oil energy crisis bites – or should we just head for the hills?

Powerdown and Permaculture: at the Cusp of Transition

Rob Hopkins

We live in a Fool's Paradise, surrounded by iPods, well-stacked supermarket shelves and Celebrity Love Island, believing it to be the 'real world'.

Permaculture has achieved many great things since its inception in the mid – 1970s. It has spread around the world, and informs the day-to-day decisions and thinking of millions of people. It has also often acted as the invisible motivator behind many sustainability initiatives, which although not in themselves strictly permacultural, are informed by its principles.

Readers of *Permaculture Magazine* (PM) will know the joy of applying permaculture design to their own lives and experiencing the benefits of applied common sense, whether it be in the form of fresh salad or a co-housing project. We find ourselves as a movement, however, on the edge of a global transition of unprecedented proportions. In this article, I am asking, "Is the permaculture movement ready for the scale of changes ahead?"

Peak oil – the great oversight of our times

Peak oil is a term increasingly mentioned in PM, but what does it actually mean? In brief, it is the point in world oil production at which supply begins to dictate demand, rather than demand driving supply, which has been the situation for the past 150 years. In other words, we go from having as much oil as we can use, to using as much oil as we can have. It is a pivotal point in human history, and while it does not mean that we are 'running out' of oil, it does mean that the Age of Cheap Oil, and all that cheap oil has made possible, is coming to a close. The price of oil is rising steadily; we only discover one new barrel of oil for every six we consume, and many of the oil producing nations we rely on to power our lifestyles are either in decline, or are so secretive about their reserves that we have no reasons to feel complacent that they are not also declining.

We live in a Fool's Paradise, surrounded by iPods, well-stacked supermarket shelves and Celebrity Love Island, believing it to be the 'real world'. In reality, it is an extremely fragile illusion, which, as the 2000 truck drivers'

strike exposed when the UK supermarket shelves nearly emptied, is utterly dependent on centralised transport. The UK has almost no food security, we no longer make anything, our living arrangements have made us believe that life without a car is impossible, and we have largely forgotten the skills that enabled our ancestors to see out hard times in the past. We are dependent for everything on a globalised economy, which in turn is utterly dependent on cheap oil.

Experts placed the peak in world oil production some time between 2008 and 2010, and a recent study in the US, known as the Hirsch Report, concluded that any 'crash programme' of preparation for life beyond the peak, would need at least 10 years, preferably 20, to have any chance of success. With no sign of such a 'crash programme' coming from national government, what role might the permaculture movement have to play in this transition?

Challenging permaculture

Permaculture, as it has been reframed by David Holmgren in *Permaculture – Principles & Pathways Beyond Sustainability*, is nothing less than the design system for a post-peak society.[1] He writes that, 'permaculture is the wholehearted and positive acceptance of energy descent, as not only inevitable but as a desired reality'. Yet, as Eric Stewart wrote last year in a piece in *Permaculture Activist* called 'A Second Challenge to the Movement', permaculture, as it stands on the verge of its 'call to power', appears to have a built-in flaw.[2] 'It seems to me', he wrote, 'that permaculture houses two virtually polar impulses: one involves removal from larger society; the other involves working for the transformation of society. While the case can be made that removal from the larger society represents action that is transformative of society, I believe that there is an imbalance within the cultural manifestation of permaculture that has favoured isolation over interaction. The cultural shift we need depends on increasing interaction to increase the availability of the resources permaculture offers'.

These extraordinary times require an extraordinary response, and it is my hope that Energy Descent Action Plans offer a mechanism for this response.

Are we thinking big enough? Are we in danger of becoming irrelevant just at the time when permaculture is at its most relevant? We need to ramp our game up, so how might we do that?

My own experience

To illustrate this, I'd like to tell you my own story. Since I did my Permaculture Design Course in 1992, I have tried to dedicate my life to implementing its principles. I was driven by Mollison's assertion that the best thing we can do in the face of ecological crisis is to buy some land with like minded friends, build a house, grow your food, harvest your timber and so on. This vision of 'fetching wood, carrying water' and living by example was very powerful for me.

I moved to rural Ireland, taught permaculture, did consultancy for people, developed an ecovillage project, raised financing, spent four years

Peak oil arrived in my life with a bang, and led me to deeply question everything.

trying to get planning permission (which eventually we did), grew my food, kept a cow, planted trees and composted my family's waste. I built my family's home, a very energy efficient cob house, using local subsoil, local timber, straw, stone, gravel and so on. I was making steps towards the rural self-reliant version of permaculture living.

Then everything was tipped on its head. I saw a film called 'The End of Suburbia', which set out in the starkest terms the reality of peak oil and our societal dependence on oil, something which, extraordinarily, I hadn't ever thought of until then.[3] I also met Dr. Colin Campbell, the world authority on the subject, who lived near to me in West Cork. Peak oil arrived in my life with a bang, and led me to deeply question everything.

I came to see that although I lived in rural Ireland, I too was living in the suburbia that the film had so ruthlessly deconstructed. I relied on the car to drive to work at the college where I taught permaculture, to take my kids to school, to visit friends, to get to the shops. If I had no car, would I actually want to live there? It was an unsettling question. Then, about a month later, an unknown arsonist burnt my nearly-finished cob house to the ground. A deeply traumatic experience, which left us in a position of being able to completely rethink where we lived and what we were doing. I came to question the notion of living in isolation from society, and to see in myself the polar impulses that Stewart referred to. I came to feel that peak oil and the 'wartime mobilisation' scale of response that writers such as Lester Brown call for requires us to be where people are, to be speaking their language. I began to feel that what we might call 'The Great Turning' had begun, and that I wanted to be a part of it. In short, we need to be where people are, rather than expecting them to come to us. People out there are desperately hungry for this stuff, but we can be seen as 'holier than thou', as separate and aloof (or so I am reliably informed by eco-sceptic friends). A plan began to emerge.

Energy descent planning

In short, we need to be where people are, rather than expecting them to come to us.

I observed that although I had taught the permaculture course at Kinsale Further Education College in Ireland for four years to nearly 150 students, there were only perhaps two food gardens in the town of Kinsale that hadnt existed before the course had begun, not a great post-peak resource to fall back on. I began to think about how we might begin to apply permaculture on a town scale, how we might pull in the various elements of the community in a process of mutual design and visioning. Together with second year students from Kinsale FEC, I developed the Kinsale Energy Descent Action Plan (detailed in PM45).

The approach we developed to relocalise Kinsale's economy in response to peak oil was endorsed by Kinsale Town Council. It has since has been downloaded many thousands of times from my website and has been used by communities all around the world. The basic idea is that life with less oil could, if properly planned for and designed, be far preferable to the present.

It is a simple idea, yet hugely powerful, and seems to have really engaged people's imaginations.

It could be argued that one of the reasons for the environmental movement's failure to mobilize more than a small section of society is that it has failed to offer a cohesive and tangible vision of a sustainable society in such a way that people can smell it, feel it, touch it. Creating such a vision is extremely powerful, and allows us then to design step-by-step pathways to it. Energy Descent Planning allows us to do this. It provides, I would argue, a way by which permaculture can ramp up its game and its perceived relevance in this hour of profound need.

Transition Town Totnes

Last September I moved to Totnes in Devon, and began planning a larger initiative, based on the lessons learned in Kinsale. This planning work and research has resulted in Transition Town Totnes, which will aim, over the next 18 months, to produce an exemplary Energy Descent Action Plan for Totnes, setting out the practical steps to a lower energy, more localized Totnes. It will aim to develop an approach and a set of principles that can be applied in other settlements. This will make it the first town taking practical steps to look at how it responds to Peak Oil.

It was launched on 6th September 2006 in the Civic Hall in Totnes, on an evening billed as 'The Official Unleashing of Transition Town Totnes', which was attended by over 350 people. The evening was introduced by the Mayor of Totnes, and featured talks by Dr. Chris Johnstone, author of *Find Your Power*, and myself.[4] The enthusiasm for the process was amazing, boding very well for the next few months.

The programme for TTT includes visits by speakers such as Richard Heinberg, David Fleming and Paul Mobbs, and Open Space think tank days on topics such as housing, energy and food, evening talks, film screenings and an evening class called 'Skilling Up for Powerdown'. A website has been set up which will act as a public face and also has a Wiki aspect, allowing people to collaboratively build ideas online. I am also doing oral history interviews with elderly people about their memories of life before cheap oil, how the local economy functioned, and what skills they have.

Energy Descent Planning provides a way by which permaculture can ramp up its game and its perceived relevance in this hour of profound need.

Working groups focusing on each of the areas to be covered in the plan will be set up, and will invite people with knowledge on those areas to come and talk with them. Local artists will be involved to explore the role the arts have to play. One of the groups set up will explore the Psychology of Change, how insights from eco-psychology and related disciplines can inform this process. How can a community be helped through the various emotions and unconscious obstacles that are thrown in the way of such a transition?

Transitionary times

David Holmgren, in *Permaculture – Principles & Pathways Beyond Sustainability*, writes about the 'Four-Phase Model of Ecological Change', which is observed

The energy descent approach of relocalisation and self reliance has the edge over the competition in that it actually works and answers the challenge raised.

in ecosystems when change occurs. The four stages are conservation, the steady state prior to the change; release, which is the pulse of disturbance (usually very short in duration); reorganization, which is essentially when everything is up for grabs and the outcome is uncertain; and exploitation, where the pioneers colonise the ground and start building towards a new conservation phase.

My sense is that we are so near to the peak that its effects are being widely felt, and this is having knock on effects on all our institutions. By my reading, we are now entering the reorganization phase, where everything is up for grabs. The ideas generated by the permaculture/energy descent movement have as much chance as anyone else's of becoming reality. While governments may propose nuclear power, tar sands and coal to liquids as solutions, these 'solutions' are unworkable and unfeasible. The energy descent approach of relocalisation and self reliance has the edge over the competition in that it actually works and answers the challenge raised.

Permaculture for the 21st century

Permaculture, especially in David Holmgren's reworked principles developed from an energy descent perspective, is the most important tool we have as we enter the uncertain times of energy descent. It allows us to design new systems to replace the soon-to-be obsolete oil-dependent ones. It enables us to apply common sense and ingenuity, and to bring beauty and diversity back into our impoverished lives. Energy Descent Action Planning offers a way of pulling in those in our area with the hands-on expertise in building, energy, food growing and so on, while using what we do best, our design and networking skills, our assembling of random elements.

It allows us to more coherently and effectively rise to the opportunity of peak oil and climate change. It puts us back at the forefront of creative thinking on sustainability. I for one find it tremendously exciting that permaculture could be at the driving edge of this shift. We need to move up a few gears and by doing so we will find more resourcefulness and brilliance in each other and in our work than we ever dreamt possible. Do we as a movement have what it takes to step up to the challenge before us and accept our pivotal role in this historic transition?

When Nelson Mandela left prison he quoted Marianne Williamson, "Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light not our darkness that most frightens us". These extraordinary times require an extraordinary response, and it is my hope that Energy Descent Action Plans offer a mechanism for this response. I hope it is a tool that permaculturists will find useful for taking their work to a new level.

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2. Eric Stewart, 'A Second Challenge to the Movement', *Permaculture Activist* no. 57.
3. 'The End Of Suburbia: Oil Depletion & The Collapse Of The American Dream', DVD (www.endofsuburbia.com)
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Excerpted from *Permaculture Magazine*, no. 50.

MODULE 5
Legal & Financial Issues

In order to create ecovillages and local businesses, we need to become better informed about how to create, finance and manage business initiatives. This involves a number of different tools that are discussed in this module.

However, there is sometimes a tendency to think that because social enterprises have different motivations to mainstream business, that this somehow exempts them from the normal rules of business and commerce. This is not the case. A social enterprise that runs up consistent losses is not going to stay in business any longer than a similar commercial institution.

Similarly, there is sometimes a tendency to think that local businesses do not have competitors. This is rarely the case, and if they are hungrier than you, they may succeed in outlasting you. Here are some simple generalisations that apply to all businesses, socially motivated, or otherwise.

An enterprise needs to focus on delivering the highest possible quality of service at the lowest practical cost.

A business that trades at a loss for three years in a row is likely to cease trading soon after that, unless radical changes are made to improve its financial situation.

As a business grows, different skills will be required. In very general terms, individuals may display three different kinds of approach to work in business (and elsewhere). A visionary wants to be involved in what can be achieved tomorrow. An administrator wants to do what can be done today. A manager knows how to bridge the gap between the two. It is something of a truism that good entrepreneurs are often poor managers and administrators, but successful businesses need all three skills sets to succeed.

Contents

Financial and Legal Issues in Ecovillage and Enterprise Formation
Making a Business Plan
Preparing Feasibility Studies and Business Plans
Legal Entities for owning Ecovillage Land
Buying in – the Effect of an Ecovillage's Economic Choices

Findhorn resident Alex Walker describes the various options open for both financing and for legal incorporation of organizations and enterprises.

Financial and Legal Issues in Ecovillage & Enterprise Formation

Alex Walker

Types and sources of finance

There are various different types of finance that may be required in any enterprise activity. It is important to distinguish between them as each is likely to come with different conditions attached. These include:

- *Seed funding* – initial funds to develop the concept, assess feasibility, pay for specialist advice, obtain planning permission and so on. This is inherently high-risk capital, since the proposed activity may never happen (planning permission may be refused, assessment may suggest that the activity would not be feasible, etc.) and so tends to involve the payment of relatively high rates of interest.
- *Share capital (equity)* – this involves raising finance through selling shares in the ownership and the profits (or losses) of the enterprise.
- *Loan capital* – this generally involves some form of collateral and the repayment of the capital plus interest. Here, one chooses the higher risk and potentially higher reward of retaining full ownership of the enterprise.
- *Grants* – these do not require any repayment but generally come with specific conditions attached.
- *Gifts and donations* – these tend to require no repayment and to involve few conditions.

Potential sources of finance include:

- *Participants* – actual or potential community members or those who share its values, farmers in a marketing cooperative, etc.

- *Local and regional contacts* – individuals or organisations in the area who may be more attracted by potential financial returns than by shared values.
- *Non-profit foundations* – such as charitable trusts and other non-governmental donors.
- *Government* – national, local or supranational donor agencies (such as the European Commission and the United Nations).

Choosing legal structures

The choice of legal structure varies widely between countries, according to their legal codes. The main categories are as follows:

- *Sole trader* – An individual operating without a formal, legal organisation.
- *Limited Company* – A regulated organisation with shareholders and a written constitution. (For more about shares see above)
- *Company Limited by Guarantee* – See below.
- *Partnership* – Less formal but still relatively flexible agreements between two or more people or organisations. In the UK a typical form is a 'Limited Liability Partnership'.
- *Cooperative* – These can take various forms, though all work for the interests of their members and involve one vote per member, regardless of the amount of capital invested.
- *Charity* – This is a regulated organisation which is non-profit and which provides a public benefit. This usually has tax advantages.

If your project has a high risk of failure, you will have to pay a high rate of interest on loans or offer substantial share capital to investors; or attempt to finance the project through grants or donations.

The key criterion used in the selection of the legal organisational form relates to the project's financing strategy. If grants and donations are seen as forming an important source of finances, a non-profit form will be the most suitable.

Financial strategy

Some of the key issues in deciding upon your financial strategy include:

- *Risk-return ratio* – If your project has a high risk of failure, you will have to pay a high rate of interest on loans or offer substantial share capital to investors; or attempt to finance the project through grants or donations.
- *Collateral* – Most lenders will want reassurance that they can recover their loan even if your project fails. They may assess what assets they can claim and sell off. If your project has few saleable assets, it may be less attractive to potential investors.

According to the UN, 'it is estimated that... the total of persons whose livelihoods are to a significant extent made secure by co-operative enterprise approaches three billion people, half the world's population'

- *Gearing* – This means the ratio between share capital and loans. If your project has a lot of saleable assets and/or low risks, lenders will be more likely to accept high gearing (e.g. 30% of capital from shares, 70% from loans). High gearing means a higher potential return on shares, but higher risks if the project runs into problems.
- *Control* – The more risky your project, the more control potential investors will want. For example, shareholders may want the right to fire the directors if things go seriously awry.
- *Fair returns* – Defining and negotiating these is hard for many social enterprises; conventional funding sources will often regard your offered returns as too low and too risky, and other stakeholders may be unhappy about anyone making any profits.

Companies limited by guarantee

These organisations cannot raise share capital as such, and the 'investment' is usually £1 per subscribing member. They are very widely used in the social enterprise and voluntary sectors in the UK, where they can also seek charitable status. However, they are very limited in scope if you want to raise any significant capital for investment purposes. They have no shares, and loans from private individuals are strictly limited. Thus, other than grants, these companies may benefit from investments only in the form of a loan either from a bank or from one or two private individuals.

Companies of this kind sometimes create 'wholly owned' subsidiary companies limited by shares for their trading activities. This of course incurs additional administration and auditing fees, which can be relatively cumbersome if the enterprise is small. As companies limited by guarantee are often set up in a way which prevents payments to directors, this kind of structure may place a great deal of responsibility in the hands of volunteers.

Co-operatives

Co-operatives are a very significant worldwide phenomenon. According to the UN, 'it is estimated that the total number of co-operators is 800 million persons world-wide, with a further 100 million persons employed by co-operatives,' and that 'the total of persons whose livelihoods are to a significant extent made secure by co-operative enterprise approaches three billion people, half the world's population'. In the UK they come in two main types – 'Bona Fide Co-operatives,' and 'Community Benefit Societies'. Both may also issue shares up to a maximum of £20,000 per investor, which may limit support from the wealthy. Each investor receives a single vote regardless of the number of shares owned.

Bona fide co-operatives

Dividends may be paid out to shareholders without limit, and some funding agencies may treat such an organisation as purely commercial. However, the idea of a co-op may be attractive to some social investors.

Community Benefit Societies

Returns to members are also limited to a 'reasonable commercial return'. Any profits over and above this (rather undefined) amount must be used for the benefit of the community the society has been created to support. They may seek charitable status (although this would limit their ability to trade), but even without this, they may be considered to be 'like a charity' by some funding agencies. These are significant advantages, although a disadvantage is that they cannot be subsidiaries of existing organisations (unless these are co-ops of some kind themselves).

Another disadvantage of both kinds of Co-op is that your community may be less likely to include individuals with experience in them than the ubiquitous company limited by shares.

Among other things, Ross Jackson is CEO of Gaia Technologies A/S, Denmark – the venture capital daughter company of Gaia Trust – that has given financial support to a number of 'green' start-ups in Denmark. He is therefore well acquainted with the evaluation of business plans from an investor's viewpoint.

Making a Business Plan

Ross Jackson

For many, an important aspect of ecovillage living is the closeness of home and work. It just makes the whole community more alive and interesting when there are people around at all hours of the day. Many ecovillages aim to have at least 50% of their members working on site. Therefore many ecovillagers would ideally like to establish a small business in their homes or in a common office facility on site, but often they lack the business experience to make it happen. This article is an introduction to how to get such a small business off the ground – i.e. how to go from a rough idea to a real business. The most important tool for doing this is a business plan.

Why bother?

You are much more likely to get a positive reception at your bank if you can show that you have done your homework and can present a convincing case for the viability of your project.

There are several good reasons for creating a business plan before setting up shop. Perhaps the most important is to get a loan from your local bank, or investments from your friends. Few start-ups can get going without some kind of financial help. It is a fact that you are much more likely to get a positive reception at your bank if you can show that you have done your homework and can present a convincing case for the viability of your project.

But even if you are among the precious few that do not need any help, you will be doing yourself a big favour if you have a plan to follow, with clear benchmarks, goals and measures of success. Just by putting all the information about your project in writing in a systematic way may make you aware of opportunities or problems that you had not considered. Or perhaps, by showing it to a friend, you will get some useful criticism that can make a real difference in how you go about achieving your goals.

In the following I will summarize the typical contents of a business plan.

Executive summary

Maximum one page at the beginning of your report summarizing briefly the essentials of who you are, what you want to do, why you want to do it and

how you will go about it, and not least a summary of your financial needs. This should be written last but presented first. A snappy summary with no excess of words always makes a good impression. The details will be found in subsequent sections.

Background

Describe the general background of the field of endeavour in which you wish to engage, with particular emphasis on the local situation where you will need to think of customers, competition and suppliers. More general considerations can also be included here, for example, growth rates of the industry (illustrated if possible), recent technological developments, etc.

If you have an existing company, describe its history and current status, including financial accounts (in an Appendix; not in the main report). If you do not have an existing company, describe what legal entity, if any, you plan to use for operations, for example a company limited by shares. For an existing or planned company, it would be a good idea to attach the Articles of Incorporation in an Appendix.

It is highly advisable that you confer with a local lawyer familiar with your type of business. He/she can help you decide which legal form would be most appropriate and show you some standard corporate Articles, which you can modify to your particular needs. A share company has limited liability, which has some attractions, but may be of little practical consequence if your bank requires a personal guarantee (as it often will when a company is undercapitalized) to cover any losses on its engagement. You will probably need the lawyer for other matters as well, such as employee and customer contracts.

It is also advisable to confer with a local accountant, who can help you to set up your accounting system, and advise you on your legal responsibilities for reporting, paying various taxes, and possibly help you to find a part-time assistant to do the accounting entries and pay the bills while you focus on developing the business.

The most important line for the bank, and often the one calculated as a result of all your income and expense projections, is the bank loan required.

Market analysis

It is essential that you do a thorough analysis of local market conditions so that you do not make any big mistakes. Answer the following questions.

- What business am I in? Think specifically about the segment you are targeting and the geographical area.
- Who are my potential customers? What is the typical profile, characterized, for example, by location, size, age group, education, etc.?
- Is there market research available? Check trade magazines, the Internet, trade associations, etc. for information or studies on your market. For example, what is the size of the market? What are the trends?

- What is the competition? Who are the major players in your segment? What are their strategies, products, distribution channels, prices? What about the minor players? Are they a threat? What are your relative strengths and weaknesses?

Products

Describe precisely what product or products you will offer to your customers. It is usually advisable to limit this in the beginning, focusing on the needs of a particular segment where you believe you have something unique or competitive, preferably both. Once you have a better feel for the market, your competitors and your customers' needs, you should start to think about product development, but not in the first stage. Keep it simple initially. Depending on your product, you may need patent protection if you developed it yourself. Check with your legal adviser.

Organization

This can vary a lot, from a one-man operation to a corporation with several employees. Most ecovillage projects will be quite simple in the beginning. However, even a small company has to deal with several issues, for example:

- Ownership. If there are partners or other shareholders, the founder is going to have to enter contractual agreements to cover such things as investments, voting rights, board positions, etc. In particular, exit conditions should be carefully considered and agreed upon in advance with legal assistance.
- Employee policies. Are you going to employ people on the basis of competitive salaries and public job advertisements? Or are you planning to employ one or more friends from the community? Be very careful with friends. Make sure there are no misunderstandings about the relationship.
- Profit and loss. Be absolutely clear about the rules for distribution of profits and/or bonuses, and about who is responsible for covering losses.
- Decisions. Have a clear decision-making structure with one Chief Executive Officer (CEO) having well-defined authority. In most corporations, major decisions require a board decision, while day-to-day operations are the responsibility of the CEO.

It is essential that you do a thorough analysis of local market conditions so that you do not make any big mistakes.

Financial

Developing a monthly budget for the first three years or so of operations is the most critical tool for negotiating a bank loan. The assumptions should

be spelled out clearly. The budget for each month should include two tables, a profit and loss statement, and a balance sheet. The most important line for the bank, and often the one calculated as a result of all your income and expense projections, is the bank loan required.

Standard low cost software is available to help you do your budgeting of income and expenses, for example a $25 package with free trial available at: www.supershareware.com, and another at www. planware.org.

Business plan software

There are a number of software packages that can make it easier for you to write your business plan following a template. See, for example www. business.com for a number of offers at a range of prices.

The website www.bplans.co.uk is a wonderful resource and contains hundreds of examples of business plans that are free to use.

Findhorn resident Alex Walker describes the outline design of feasibility studies and business plans.

Preparing Feasibility Studies and Business Plans

Alex Walker

Part of the cost of any project is developing a suitable commercial plan and putting it down on paper. The larger the project the more time-consuming this is likely to be. If it proves to be uninspiring to potential investors, you will incur further costs in revising it.

Numerous text-books exist on the preparation of feasibility studies (pre-project studies into the broad viability of the proposed enterprise) and business plans (detailed description of how the enterprise will operate and how it will turn a profit). How these are prepared and designed do not differ between social and conventional enterprises, and it is not the intention to attempt to repeat that information here. The following lists describe the kinds of information that will be expected when preparing feasibility studies and business plans.

Feasibility Study: Typical Contents

1. Executive summary
2. Evaluation of demand for the project
3. Review of fit with relevant official policies and objectives
4. Assessment of project proposals
5. Assessment of project benefits
6. Financial projections and assessments

Business Plan: Typical contents

1. Executive summary
2. Context – evidence of the needs that the project is seeking to meet
3. Key principles and value

4. Proposals in detail
5. Governance and legal structures
6. Financial outline
   - Costs in detail
   - Sources of income
   - Cash flow and sensitivity analysis
   - Investment scenarios
7. Legal/regulatory issues – e.g. planning permission
8. Resources needed and available
9. Timetable for action
10. Appendices

Author and former editor of Communities *magazine, and current editor of the on-line Ecovillage Newsletter, Diana Christian, looks in depth at the different legal entities to choose from for land ownership in an ecovillage. She lives at Earthaven Ecovillage in North Carolina.*

Legal Entities for Owning Ecovillage Land

Diana Leafe Christian

"No – I don't want us to have any legal entities or form a corporation! Corporations and lawyers are what's wrong with this country!"

So declared a cofounder of a start-up ecovillage I was involved in several years ago. She was willing to create community agreements and policies, but not a legal corporation. I certainly saw her point. Corporations are entities which under the law are treated as if they had the rights of actual people, but allow the real people who run them to incur debts, violate the environment, or harm others with no consequence to them personally. And when most people think 'corporation', they think big, multinational corporations. Armed with millions and fleets of lawyers, large corporations can deny, evade, and delay prosecution for environmental and other crimes for which an individual person would be swiftly thrown in jail. No wonder many of the people most interested in creating ecovillages are often averse to 'corporations' and 'legal entities'.

We can use them to create a more sustainable, cooperative way of life and, by demonstration, influence our society for the better.

Yet form them we must, if we are to protect ourselves from potentially ruinous lawsuits, exorbitant taxes, or sudden responsibility for paying debts we didn't agree to. Legal entities are themselves neutral. It's when people use these entities to harm others and avoid responsibility that they become objectionable. We can use them to create a more sustainable, cooperative way of life and, by demonstration, influence our society for the better.

Why you need a legal entity – and before buying your property

Why does your ecovillage need to form a legal entity? First, you'll need one to purchase your property, and to own it together over the years. (Technically a group can purchase property as a group with no legal entity, but you will nevertheless still have, in your government's view, a 'default' legal entity, most likely from real estate law, and these are definitely not beneficial for an ecovillage project.) Second, you'll need a legal entity, which could be a

separate entity, to own and manage any community-owned businesses or to manage any non-profit activities – especially if you want to receive tax-deductible donations for those activities.

Consider the consequences if you don't have a legal entity. Serious, potentially community-stopping conflicts can arise regarding:

- Property rights and responsibilities of ecovillage members
- Vulnerability to creditors and lawsuits with regard to members' personal assets
- Financial compensation for departing members
- Issues about who holds title to property and what happens if the ecovillage disbands and sells its assets

Also, without choosing a particular entity you might end up paying exorbitant, unnecessary taxes. Not having a legal entity for your ecovillage project is definitely a kind of 'structural conflict' that could someday blow your group apart.

Thus the criteria for choosing your community's legal entity for property ownership usually depends on how well it can (1) protect your members from potential lawsuits or other financial liability, (2) prevent unnecessary taxation, (3) allow your ecovillage to hold title to land and set up land use and decision-making rights the way you like, (4) allow your ecovillage to accomplish its purpose, and (5) reflect its values.

Your ecovillage is a business, since it involves your putting this money together and agreeing how you'll spend it, how you'll raise more of it when needed, and how you'll deal fairly with any surplus or deficit.

Some communities have different legal entities for each kind of activity; others conduct various activities under just one legal entity. And since few to no legal entities (depending on the country), are designed specifically for intentional communities, they must borrow from the various legal entities designed for operating businesses.

"Wait a minute, our ecovillage won't be like that," you might say. "We're going to create something beautiful and noble – not some business." Ah, but your financial dealings need to be conducted in a businesslike way. After all, you'll probably be dealing with hundreds of thousands or millions of Euros, dollars, or your country's currency, and you'll need clear, fair agreements. And, when you get right down to it, your ecovillage is a business, since it involves your putting this money together and agreeing how you'll spend it, how you'll raise more of it when needed, and how you'll deal fairly with any surplus or deficit.

Why form a legal entity?

1. Having a legal entity will make the process of buying land easier. A seller or lending institution will take a legal entity with tens of thousands in the bank and a brief credit history more seriously than it would take a collection of individuals trying to buy property together.

2. Any agreements the group makes as part of the documents of its legal entity (such as Bylaws), will be compatible with national or other government law, and thus legally enforceable. If a member violates one of these agreements, the other members will have the force of law behind them to induce the errant member to comply.
3. Some legal entities are more compatible than others for the various ways you can own property together, such as: (a) everyone owns the property in common; (b) each household owns its own individual plot; or (c) each household owns its own individual plot and everyone together has shared ownership of the rest.
4. Since your country's national and provincial or state governments will tax your community's income (and local counties or regions will tax your property) according to whichever legal entity you have chosen, you might as well pick one that saves the most taxes relative to your community's particular circumstances.

Of course you should set up the legal entity for owning property before buying your property. Choosing the right one for your ecovillage is a process of assessing available legal entities in terms of several different issues that will affect your group's functioning and well-being. You'll need to consider issues such as how you'll hold title to land, property rights, financing options, members' liability, tax consequences, and how attractive you'll be to new members. Not every legal entity will be ideal regarding each of these issues! So you'll need to analyze each legal entity for the best balance of benefits for each.

Of course, you should seek the advice of a lawyer you trust about these matters. And of course, neither I nor the publisher of this book nor GEN are presuming to offer legal advice, but rather to describe some generalities about these issues.

Checklist for choosing a legal entity

Here's a checklist for the legal entities you may be considering:

1. How will your community hold title to land? Does this legal entity support it?
2. Does this legal entity, and the way you hold title to land, allow you to choose who will join you as an ecovillage member? (For example, if incoming members will buy a lot, house, or housing unit in your ecovillage with an individual deed, must you say "Yes" to anyone who can pay the asking price and meet the terms of the sale?)
3. Does this legal entity offer liability protection for each of you as individuals?
4. How would this legal entity influence banks or private lenders in deciding whether to refinance a mortgage or make a construction loan?

5. Will it allow members to build equity in the ecovillage, and take all or part of this equity when they leave? (For example, some non-profit entities do not allow this.)
6. Will this legal entity allow the ecovillage to assign its own criteria for decision making, in terms of how decisions are made and who can make them?
7. Will it allow your ecovillage to determine the relationship between the amount of members' financial contributions and their ownership rights? Between their contributions and their decision-making rights?
8. How will your ecovillage collect contributions from members (joining fees, site-lease fees, periodic assessments)? And what will be its expenses (mortgage payments, property taxes, property insurance, maintenance, capital improvements)? How will your legal entity treat this income and expenses for tax purposes?
9. Will your members share incomes? If so, will it be from profits of community-owned businesses, from earnings of outside jobs, or both? What kinds of member expenses will be paid by the ecovillage? How will your legal entity treat your shared income and expenses for tax purposes?
10. How easy will this legal entity be to set up or manage over time? How vulnerable is it to changes in the law, or to your government's tax agencies or other governmental scrutiny? How much are annual filing fees?
11. How easy would it be to make changes in the documents of this legal entity or to manage the legal and ownership implications of people joining or leaving?
12. Will this legal entity restrict your group from engaging in political activity?

While these questions may seem technical, their answers reflect your community's basic values. So the questions underlying all the above questions are:

- Does this legal entity inherently support your ecovillage vision, mission, and values?
- Does it support its ownership, decision-making, and financial structure?

Corporations, non-profits, limited liability, double taxation

'Corporation' is the term used in English-speaking countries for a legal structure that, like a person, can enter into contracts, buy and sell goods and services, borrow money, and pay taxes. It is considered an entity

distinct from the people who own or operate it, so that any criminal charges, business claims, or lawsuits can be filed against the corporation but not against its owners, directors, officers, employees, or shareholders. They have 'limited liability' (see below) and cannot be held personally responsible for the corporation's debts.

Pass-through taxation is beneficial in circumstances in which a legal entity would pay dividends or profits that would be taxed at both the corporate and individual levels, and in cases in which the individual tax rate would be lower than the corporate tax rate.

'Non-profit corporation' is a term used in English-speaking countries for a corporation organized not to make a profit, but to benefit the public or a certain group of people. No income from a non-profit corporation may be distributed to its members, directors, or officers. It can pay its employees reasonable wages or salaries, and sometimes its officers are paid employees, too. Non-profit corporations must be designated as non-profit when they're created, and can only pursue activities permitted by statutes in your country for non-profit organizations, and the activities outlined in their bylaws. Like other corporations, non-profits can enter into contracts, have employees, pay taxes, take out loans, and pay back loans. While a non-profit corporation is accountable to creditors and any lawsuits, its founders, directors, officers, and employees are protected by limited liability. (See below.) Non-profit corporations don't issue shares of stock or pay dividends, and don't have shareholders.

'Limited liability' is the protection that a for-profit corporation or non-profit corporation, or in the US, a Limited Liability Company (LLC), offers its founders, board members, officers, or employees (and shareholders of for-profit corporations). It means their personal assets are not vulnerable to most debts or lawsuits filed against the organization, and they are not held legally responsible for any criminal wrongdoing of the organization. If a legal entity (such as a partnership) did not have limited liability protection, a debtor or someone seeking punitive damages could sue the organization, and if they won the suit, the Court would force members of the organization to pay the overdue bills or punitive damages out of their own personal assets. The people in an organization with the most assets would be the most vulnerable. But this doesn't happen in a for-profit corporation, non-profit corporation, or LLC, because they've got limited liability protection.

It is only 'limited' rather than total protection, however, because if the officers of the organization were found to be using the organization in order to dodge taxes or break the law, the Court could rule "pierce the corporate veil" and attach their personal assets and/or prosecute them individually.

'Double taxation' is a downside of using a for-profit corporation as a legal entity. In a for-profit corporation, any taxable income which is paid to its shareholders, such as dividends, or any income paid to its owners, will be taxed twice: once at the corporate level, at a rate of at least 15 percent, and again when individual shareholders or corporation owners pay personal income taxes on those dividends or profits.

Of course, ecovillages organized as intentional communities aren't intending to 'make a profit' anyway. But an organization's intentions are immaterial to the tax agencies of national (and state and provincial) governments. So if an ecovillage has money left over at the end of the

taxable year, or, as in the case of certain legal entities (such as Homeowners Associations in the US) has income sources or spends money in categories other than those designated for particular purposes, this money will be taxed as 'income'. One way ecovillages deal with this is to spend any leftover money before the end of their taxable year. Another way is to choose a legal entity for shared property ownership that may tax any carryover funds at a lower rate.

'Pass-through tax status' is the method by which partnerships (and in the US, LLCs) pay no taxes directly. Rather, any taxable income (or loss) of the organization is divided up and passed to its partners, members, or owners, who pay taxes on the income (or deduct the loss) on their personal income tax returns. Pass-through taxation is beneficial in circumstances in which a legal entity would pay dividends or profits that would be taxed at both the corporate and individual levels, and in cases in which the individual tax rate would be lower than the corporate tax rate. The downside, though, is when one or more ecovillage members are tax protestors, perhaps because they don't want to support their country's military spending.

As you can see, ecovillagers don't just have to be willing to learn and teach what we're learning about ecological, economic, and social/cultural sustainability. We also have to protect our ecovillages, which often means using the tools of mainstream culture, such as legal entities and financial management, to create an alternative to mainstream culture.

Portions of this chapter were excerpted with permission from *Creating a Life Together: Practical Tools to Grow Ecovillages and Intentional Communities* (Gabriola, B.C., Canada: New Society Publishers, 2003). www.newsociety.com.

Ecovillage resident, Tony Sima, explores some of the different legal structures open to ecovillages as well as differing models for employment and the sharing of incomes and assets.

Buying in – the Effect of an Ecovillage's Economic Choices

Tony Sima

How much does it cost to live there?

That's the question we get most often here at Dancing Rabbit Ecovillage. Everyone wants to know whether they can afford to live sustainably or not. Of course, the answer is not a simple one for us, or for most ecovillages, but the answer makes a huge difference to who has access to these eco-living experiments.

Many ecovillages are based on the intentional community model with a group of people choosing to live together with a goal of living more sustainably. Some instead work with an existing population with the same goal and some are a mix.

In ecovillages where land and/or housing is jointly owned by the village there is the question of buy-in fees, cost to build housing, lease fees, rent and the like.

In either case economic choices will have a big impact on who is part of the ecovillage. In ecovillages where land and/or housing is jointly owned by the village there is the question of buy-in fees, cost to build housing, lease fees, rent and the like. In ecovillages where property is not jointly owned, the choice of locations will often determine these factors with existing housing stock available at subsidized and/or market rates.

Let's look at a variety of choices ecovillages have made.

Fully communal

Twin Oaks community in rural Virginia was founded in 1967 and only recently has started considering itself an ecovillage. The community of about 100 people is fully income-sharing, similar to the traditional Israeli Kibbutzim. At Twin Oaks there is no buy-in fee and no ongoing fees, only a work requirement of 45 or so hours per week. Members keep any previous assets, but all income goes to Twin Oaks and no equity is accumulated during one's membership. When you leave, you take what you brought in. Based on this economic choice Twin Oaks is very economically accessible

to people of any economic level. Anyone can join and share essentially the same middle class lifestyle as all other members. Unfortunately, these choices filter out anyone not interested in communal living and those who feel the need to accumulate personal assets for themselves or their progeny. Some would say that Twin Oaks has higher turnover in membership due to it being so economically easy to join and leave but that is anecdotal.

Rental property

Los Angeles Ecovillage is an urban ecovillage in southern California. Their non-profit has bought a cluster of apartment buildings in a neighborhood and rents them to members, both those who have come specifically to live in the ecovillage and some pre-existing residents. Rent is at or below market rate and it is generally considered an affordable place to live compared with its surroundings.

Similar to Twin Oaks, LA Ecovillage is quite accessible to people without assets, but it does require people to have a source of income to meet ongoing rental fees. This allows for high economic diversity but may also have the same issue with turnover. Economically homeowners have more incentive to improve their property than renters, but since the ecovillagers have a strong commitment to their project I'm sure there is motivation for maintenance and improvement.

Ecovillage at Ithaca in upstate New York is based on the co-housing model where individual homes are owned by members and are bought and sold on the open market.

Leased land – no buy-in

Dancing Rabbit Ecovillage is set up with a non-profit which owns the land, with individuals, families, and groups leasing small parcels from the DR Land Trust for a monthly fee. There is no buy-in fee and the monthly fees are kept low (about $25/person depending on size of parcel). Housing is not provided so most members have a significant up front cost for building or buying housing though some rental options are available. Members retain equity in their homes and can sell them to other members if they leave.

This model allows for broad access though there are still filters based on the availability of housing and the ongoing fees. Unfortunately, this system is predicated on DR having bought cheap land in a somewhat remote location, a similar system in a more expensive location would require a much higher ongoing fee and/or a buy-in fee. The rural location also makes it challenging for people to find income work but with fees so low people can live on $3-12,000 per year depending on their lifestyle and habits.

Leased land, with buy-in fee

Earthaven Ecovillage near Asheville, NC has a similar system to Dancing Rabbit in that it owns its 300+ acres jointly and gives long-term leases to members. At Earthaven a member has initial fees upwards of $20,000, a modest amount compared to home prices in the city, but a significant

amount nonetheless. There are modest ongoing fees similar to DR and housing is similarly left up to each member to provide. They do have some systems for people to work off the buy-in fee over time.

This system will certainly filter out people with fewer economic assets which includes many young people who have yet to amass such savings. Conversely it creates a dynamic of commitment in members who have put a significant amount of money behind their choice of ecovillage living. Like DR, Earthaven is in a rural location, but not as remote, with their land costing twice as much. Income opportunities are more available but many require an hours' drive to Asheville.

Homes at market rate

Ecovillage at Ithaca in upstate New York is based on the co-housing model where individual homes are owned by members and are bought and sold on the open market. EVI retains joint ownership of a large area of open space and agricultural area. Homes cost approximately $200,000 to purchase with bank mortgages available. Occasionally rentals are available in the $1000/ month range.This system makes EVI accessible to anyone who can afford home ownership (about 70% in the US) and is less than the median home price in Ithaca (though higher than the national median).

Turnover in most cohousing is quite low, with such a significant investment. Members retain equity in their homes which increase in value with the market. This system is very attractive to the middle-class as it is very similar to traditional ownership and economic models. Income opportunities abound in nearby Ithaca, a short drive away.

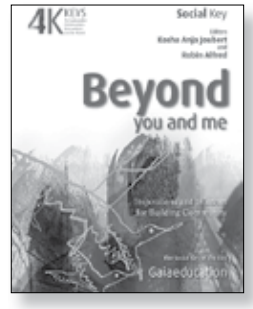
What conclusions can we draw?

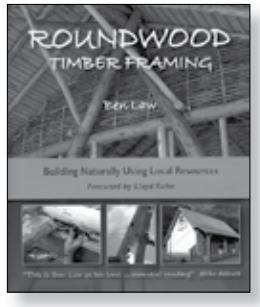
For one, ecovillages must adapt to the environment in which they are set. What works rurally might not work in an urban center and vice versa. We must find locally appropriate solutions to both ecological and economic issues.

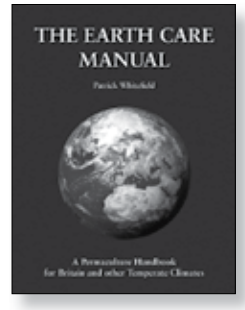
Accessibility has to be examined within the local context. What is considered affordable depends on the local cost of living, income opportunities, community expenses, availability of financing, etc. That said, some choices will almost certainly filter out portions of the population based on economic status, though some choices will certainly filter people out based on ideology or location.

While there is no one solution, its valuable for every group to examine these questions closely and intentionally, and choose their economic structure to match their values, with clarity about the expected effects.

Inspiration for Self Reliance







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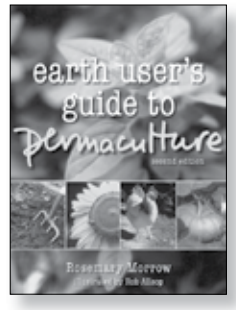

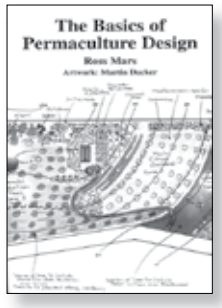

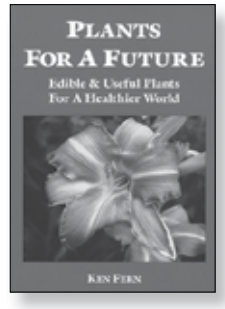

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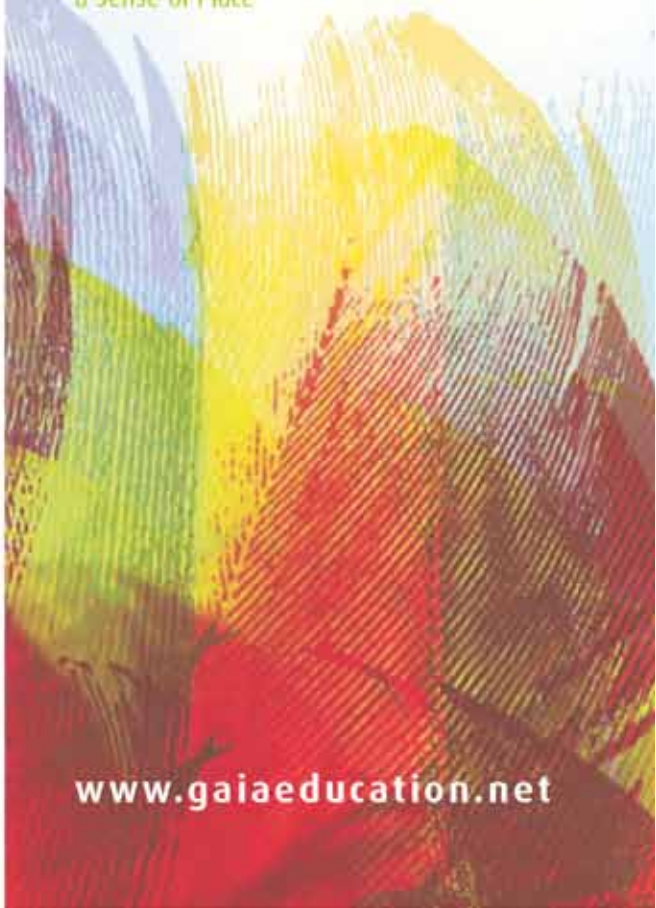

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