

Journey to the Future: The Endnotes

Some websites may change or disappear over time. If you receive a '404' please contact Guy Dauncey through www.journeytothefuture.ca so that I can make a correction.

Chapter 1: Hungry for Hope

1 Vancouver, Greenest City: www.vancouver.ca/greenestcity

Greenest City 2020 Action Plan: http://vancouver.ca/green-vancouver/greenest-city-action-plan.aspx and Part 2: 2015-2020: http://vancouver.ca/files/cov/greenest-city-2020-action-plan-2015-2020.pdf

- The Global Debt Clock: The Economist's interactive view of government debt across the planet. www.economist.com/content/global_debt_clock
- 5 Giant Un-American Corporations Trying to Bolt U.S. to Avoid Taxes. Alternet, July 17, 2014. www.alternet.org/corporate-accountability-and-workplace/5-giant-un-american-corporations-trying-bolt-us-avoid-taxes
- 4 £13 trillion hoard hidden from taxman by global elite (\$20 to \$32 trillion dollars). Guardian, July 21, 2012. www.guardian.co.uk/business/2012/jul/21/global-elite-tax-offshore-economy
- For dark and oppressive visions of the future city, see 100 Imaginative "Cities Of The Future" Artworks. www.hongkiat.com/blog/cities-of-future-artworks

Chapter 2: June 2032: The Journey Begins

6 African Institute for Mathematical Sciences: www.aims.ac.za

The Perimeter Institute: www.perimeterinstitute.ca

Next Einstein Initiative: www.nexteinstein.org

The Universe Within: From Quantum to Cosmos, by Neil Turok. CBC Massey Lectures, 2012. www.amazon.ca/Universe-Within-Quantum-Cosmos/dp/1770890157

- Numbers: http://macpcfirstaid.com/pchelp/page02.htm
- 8 Will Quantum Computer up-end Moore's Law? Kyle Maxey, Engineering.com May 15, 2013. www.engineering.com/DesignerEdge/DesignerEdgeArticles/ArticleID/5719/Will-Quantum-Computer-up-end-Moores-Law.aspx

What Comes After the Computer Chip? Quantum Computing Holds Much Promise. Seth Lloyd,

Slate, March 20, 2013. www.slate.com/blogs/future_tense/2013/03/20/quantum_computing_and_the_future_of_moore_s law.html

- 9 *U.Va. Researchers Helping to Chart Biomedicine's Next Frontier: The Human Neurome.* UVA Today, May 5, 2011. http://news.virginia.edu/content/uva-researchers-helping-chart-biomedicines-next-frontier-human-neurome
- 10 Moore's law: https://en.wikipedia.org/wiki/Moore's law
- 11 *Human Kindness Genes Withstand Threats and Fear*. Time, April 16, 2012. http://healthland.time.com/2012/04/16/human-kindness-genes-withstand-threats-and-fear/

Chapter 3: The Solar Revolution

- 12 Carl Sagan. Time dilation and the speed of light: www.youtube.com/watch?v=Jc4OgBCKmV8
- 13 Dragonfly's Question a Novella on a Positive and Sustainable Future, by Darcy Hitchcock. www.amazon.com/Dragonflys-Question-Positive-Sustainable-ebook/dp/B0063N9FQ8
- 14 Vancity is Vancouver's largest credit union. <u>www.vancity.com</u>
 - For solar financing today in the US, see Mosaic Solar Loans: https://joinmosaic.com/
- There are two equivalents of a BASE Account:
 PACE (Property Assessed Clean Energy) financing. See Wikipedia
 http://en.wikipedia.org/wiki/PACE financing and www.nrel.gov/docs/fy10osti/47097.pdf
 - A 'Pay-As-You-Save' loan attached to the utility bill, in use in parts of British Columbia. www.empr.gov.bc.ca/EEC/Strategy/EEA/Documents/PAYS%20Document%20Jan%2028%20201 2%20-%20FINAL.pdf
- Solar PV Costs To Fall Another 25% In Three Years. Clean Technica, May 26, 2015. http://cleantechnica.com/2015/05/26/solar-pv-costs-to-fall-another-25-per-cent-in-three-years
 - By Fall 2015, some solar installers were quoting as low as CAN \$12,000 for a 4 kW system. The consulting firm McKinsey has forecast that solar will fall to 6 cents/kWh by 2020, or \$1.50 a watt. 4 kW at \$1.50 a watt comes to CAN \$6,000.
- 17 See the NREL Levelized Cost of Energy Calculator, www.nrel.gov/analysis/tech_lcoe.html
- Next generation jets: solar panels, no windows, high speeds. CTV News, Aug 15, 2014. www.ctvnews.ca/sci-tech/next-generation-jets-solar-panels-no-windows-high-speeds-1.1961296
- 19 Vancouver Renewable Energy Co-operative: www.vrec.ca

New Startup Essess Is Making a Mashup of Google Street View and Zillow, to Perform Efficient Home Energy Audits. http://cleantechnica.com/2012/09/12/new-startup-essess-is-making-a-mashup-of-google-street-view-and-zillow-to-perform-home-energy-audits/

Essess: http://essess.com/

Eco Cute: www.mayekawausa.com/products/heatpumps/wEcocute.html

A Heat Pump Using Carbon Dioxide as the Refrigerant. Green Building Advisor, Aug 29, 2013. www.greenbuildingadvisor.com/blogs/dept/energy-solutions/heat-pump-using-carbon-dioxide-

m					
 •	-	•	• • •	-	•

- 21 EnerPhit Passive House standard: http://passipedia.passiv.de/ppediaen/certification/enerphit
- 22 LEDs = light emitting diodes.

Are You In The Dark About Lightbulbs, Watts, And Brightness? Clean Technica, http://cleantechnica.com/2013/08/07/are-you-in-the-dark-about-lightbulbs-watts-and-brightness

- 23 SunStation: www.gosunstation.com
- 24 Tesla PowerWall: www.teslamotors.com/en CA/POWERWALL
- IKEA Sustainable Life at Home. www.ikea.com/ms/en_CA/this-is-ikea/people-and-planet/sustainable-life-at-home
- 26 Graphene could make 'perfect' solar cells. Physics World Sept 5, 2011.
 http://physicsworld.com/cws/article/news/2011/sep/05/graphene-could-make-perfect-solar-cells

Dow Solar rolls out solar shingles in California and Texas. Gizmag, April 25, 2012. www.gizmag.com/dow-powerhouse-solar-shingles/22309

Dow Powerhouse: www.dowpowerhouse.com

A Material That Could Make Solar Power "Dirt Cheap". MIT Technology Review, Aug 8, 2013. www.technologyreview.com/news/517811/a-material-that-could-make-solar-power-dirt-cheap

- 27 Floating Solar A Crazy Big Idea? Guy Dauncey, BCSEA, March 20, 2015. www.bcsea.org/floating-solar-crazy-big-idea
- Battery Breakthrough Offers 30 Times More Power, Charges 1,000 Times Faster. Mashable, April 17, 2013. http://mashable.com/2013/04/17/battery-breakthrough/
- 29 How would Vancouver perform in an earthquake? Frances Bula, State of Vancouver, March 11, 2011. www.francesbula.com/uncategorized/how-would-vancouver-perform-in-an-earthquake
- Ants Lead the Way on Earthquake Prediction. Live Science, April 11, 2013. www.livescience.com/28672-ants-sense-earthquakes.html

The chickens are restless. The Economist, March 28, 2015. www.economist.com/news/science-and-technology/21647271-animals-really-may-be-able-sense-when-tremor-about-happen-chickens

- 31 *Electronic Nose Prototype*. Science Daily, August 12, 2012. www.sciencedaily.com/releases/2012/08/120821162526.htm
- 32 *The Real Lifespan of Solar Panels*. May 7,2014. Energy Informative, http://energyinformative.org/lifespan-solar-panels/

The decline in efficiency of a solar PV panel is estimated at 0.5% a year.

- Before Dezzy's upgrade, her annual energy bill was \$3,000 a year. In 2032, including loan repayments, it is \$2,500. Once her loan is paid off her costs will fall to zero.
- An electric vehicle travelling 15,000 kilos a year consumes 2,400 kWh (Ford Focus Electric) to 3,300 kwh (Tesla S) a year. At an assumed 15 cents/kWh for self-generated solar electricity, that comes to \$360-\$495 a year.

Natural Resources Canada Fuel Consumption Guide, 2015. Scroll down to the very end for the Electric Vehicle ratings.

www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/oee/pdf/transportation/tools/fuelratings/Model%20 Year%202015%20Vehicle%20Tables.pdf

Swanson's Law: Solar for the Masses. Photovoltaic (PV) cell prices drop 20% every time manufacturing capacity doubles. Mosaic.com https://joinmosaic.com/blog/swanson's-law-solar-masses

The Future of US Solar Power: Opportunities In Soft Costs. Climate Progress, July 24, 2013. http://thinkprogress.org/climate/2013/07/24/2345511/the-future-of-us-solar-power-opportunities-in-soft-costs/

- This assumes seven million cars, each travelling 10,000 km a year. The power demand is 20 kwh per 100 km per car = 2,000 kwh a year per vehicle x 7 million = 14,000 GWh a year. 100,000 GWh can be produced on 1,000 sq km. 14,000 GWh needs 85 sq km. Egypt's total area is 1 million sq. km.
- World's Largest Solar Thermal Plant With Storage Comes Online. Clean Technica, Oct 24, 2013. http://cleantechnica.com/2013/10/14/worlds-largest-solar-thermal-plant-storage-comes-online/

Morocco poised to become a solar superpower with launch of desert mega-project. Guardian, Oct 26, 2015. www.theguardian.com/environment/2015/oct/26/morocco-poised-to-become-a-solar-superpower-with-launch-of-desert-mega-project

- Poetry in Motion: Power Plant Will Use Ocean Tides to Power 155K Homes. Good News Network, October 14, 2015. www.goodnewsnetwork.org/poetry-in-motion-power-plant-will-use-ocean-tides-to-power-155k-homes
- 39 America Could Get 10 Percent of its Energy from Solar by 2030. Climate Progress, Nov 20, 2014. http://thinkprogress.org/climate/2014/11/20/3594871/10-percent-solar-power-by-2030/
- 40 Cost Of Solar PV Will Fall To 2 Cents/kWh In 2050, Says Fraunhofer Study. Clean Technica, March 25, 2015. http://cleantechnica.com/2015/03/25/cost-of-solar-pv-will-fall-to-2-centskwh-in-2050-says-fraunhofer-study/
- Canada has 50,000 kilometres of railway line. If the solar installs are 3 metres high, that's 30,000 acres of coverage. The NREL quotes 8.3 acres per MW for land-based solar, or 0.12 MW per acre. Over 30,000 acres, that comes to 3,600 MW.
- 42 Offshore wind farms could tame hurricanes before they reach land, Stanford-led study says. Stanford News, Feb 26, 2014. http://news.stanford.edu/news/2014/february/hurricane-winds-turbine-022614.html
- 43 The Great Turning: From Empire to Earth Community, by David Korten.
 http://livingeconomiesforum.org/great-turning and www.amazon.ca/The-Great-Turning-Empire-Community/dp/1887208089
- 44 HiVE Vancouver: http://hivevancouver.com
- 45 Streetlife: www.streetlife.com
- 46 *Li-Fi revolution: Internet connections using light bulbs are 250 times faster than broadband.* Independent, Oct 28, 2013. www.independent.co.uk/news/science/lifi-revolution-internet-connections-using-light-bulbs-are-250-times-faster-than-broadband-8909320.html

Laser pointers make super-fast 'optical Wi-Fi'. New Scientist, April 25, 2012. www.newscientist.com/article/mg21428626-200-laser-pointers-make-super-fast-optical-wi-fi/

Will Li-Fi be the new Wi-Fi? New Scientist, July 20, 2011. www.newscientist.com/article/mg21128225-400-will-li-fi-be-the-new-wi-fi/

Light tricks: Quantum throttling and space-time waves. New Scientist, December 14, 2011. www.newscientist.com/article/mg21228431-900-light-tricks-quantum-throttling-and-space-time-waves

LiFi Consortium: www.lificonsortium.org

Researchers create 3Gbps LiFi network with LED bulbs. Extreme Tech, April 5 2013. www.extremetech.com/computing/152740-researchers-create-3gbps-lifi-network-with-led-bulbs

For a well-researched summary of the evidence, see *Disconnect: The Truth About Cell Phone Radiation, What the Industry is Doing to Hide It, and How to Protect Your Family*, by Devra Davis. Plume, 2010. www.amazon.ca/Disconnect-Radiation-Industry-Protect-Family/dp/0452297443

Devra Davis is an award-winning, internationally renowned scientist who was founding director of the Board on Environmental Studies and Toxicology of the U.S. National Research Council, National Academy of Sciences.

See Cell Phone Radiation, Environmental Health Trust: http://ehtrust.org/cell-phones and www.facebook.com/EHTrust

Bad News about Cell Phone Radiation: Devra Davis TV interview with Thom Hartman, June 25, 2013. www.youtube.com/watch?v=49Mti6xX0vI&feature=player embedded#t=196

Cell phone fertility studies: http://wiredchild.org/component/content/article/46-hidden/93-fertility-studies.html

Cell Phone Radiation Damages Sperm, Studies Show. Environmental Working Group, Aug 27, 2013. www.ewg.org/cell-phone-radiation-damages-sperm-studies-find

- 48 Bullseye from 1,000 yards: Shooting the \$17,000 Linux-powered rifle. Ars Technica, March 31, 2013. http://arstechnica.com/gadgets/2013/03/31/bullseye-from-1000-yards-shooting-the-17000-linux-powered-rifle/
- 49 I Made an Untraceable AR-15 'Ghost Gun' in My Office—And It Was Easy. WIRED, June 3, 2015. www.wired.com/2015/06/i-made-an-untraceable-ar-15-ghost-gun/
- Army test next generation nano drone the Black Hornet. YouTube, Feb 13, 2013. www.youtube.com/watch?v=d5TdbMu8xc4

DARPA'S Nano Robot Spy Hummingbird Moves Just Like a Real Bird! Inhabitat, 2011. http://inhabitat.com/nano-hummingbird-is-a-tiny-flying-robot-that-moves-like-a-real-bird

51 HIVE Vancouver: <u>www.hivevancouver.com</u>

Chapter 4: Building a Neighborhood

52 Who, what, why: When does tarmac melt? BBC News, July 15, 2013. www.bbc.co.uk/news/magazine-23315384

Village Vancouver: <u>www.villagevancouver.ca</u>

Transition Network: www.transitionnetwork.org

Transition Streets UK: http://transitionstreets.org.uk

- 54 City Repair: http://cityrepair.org
- The White Dinner: http://vancouver.dinerenblanc.info
- 56 Streetbank: Sharing in Your Neighbourhood: <u>www.streetbank.com</u>

Vancouver Tool Library: http://vancouvertoollibrary.com

The People Share UK: www.facebook.com/thepeoplewhoshare

The Sharing City, Seoul project: http://co-up.com/share/archives/32498

Collaborative Consumption: www.collaborativeconsumption.com

What's Mine is Yours: The Rise of Collaborative Consumption, by Rachel Botsman and Roo Rogers. Harper Business, 2010. www.amazon.com/Whats-Mine-Yours-Collaborative-Consumption/dp/0061963542

- 57 StartUp Canada: www.startupcan.ca
- Thanks to Mark Lakeman from City Repair for his inspiring work, and this piece of wisdom. www.cityrepair.org
- 59 The model for the Debt Circles is Debtors Anonymous: www.debtorsanonymous.org
- The Sharing Economy: www.shareable.net
- See Chapter 18 for Citizen's Income details and references.
- 62 City Repair Reed Neighborhood Intersection Repair: www.cityrepair.org/blog/2015/7/12/reed-neighborhood-intersection-repair?rq=intersection%20repair
- In 2013, asphalt speed humps in Portland cost \$1,000 to \$1,500 each. At www.speedbumpsandhumps.com they are priced a lot cheaper.
- The Better Block: http://betterblock.org

Jason Roberts - How To Build a Better Block. TEDxOU. www.youtube.com/watch?v=ntwqVDzdqAU

Complete Streets: It's About More than Bike Lanes (video): http://vimeo.com/22886687

- Livable Streets video: http://player.vimeo.com/video/16399180
- City of Vancouver, Gardening on Boulevards: http://vancouver.ca/home-property-development/gardening-guidelines.aspx

Volunteer gardening on traffic calming spaces: http://vancouver.ca/home-property-development/gardening-on-traffic-calming-spaces.aspx

Liveable Laneways: www.facebook.com/LivableLaneways

Greening Infrastructure—Street to Park. City Studio, Vancouver. http://citystudiovancouver.com/wp-content/uploads/2013/07/S2P_poster-screen1.jpg

- 67 Fujitsu makes 'smart walking stick' to help elderly. BBC News, Feb 28, 2013. www.bbc.co.uk/news/technology-21620624
- Radical Rest Homes: http://radicalresthomes.com

Innovations in Elder Care. Social Innovation Generation, July 6, 2013. www.sigeneration.ca/innovations-in-elder-care

69 New senior exercise park to keep fit longer. Victoria University, Australia. Feb 14, 2014. www.vu.edu.au/news-events/news/new-senior-exercise-park-to-keep-fit-longer

Growing Bolder—Never Stop Playing. Stephen Jepson video. <u>www.growingbolder.com/never-leave-the-playground-793777</u>

70 Food for thought: Eat your way to dementia. New Scientist, Aug 29, 2012. www.newscientist.com/article/mg21528805-800-food-for-thought-eat-your-way-to-dementia

Dementia care in Japan is being solved through volunteer schemes, not government. Guardian, Nov 18, 2014. www.theguardian.com/social-care-network/2014/nov/18/dementia-care-japan-community-volunteer-schemes

71 This is a real commitment, made by the City of Vancouver in 2010. See http://vancouver.ca/green-vancouver/a-bright-green-future.aspx

Greenest City 2020 Action Plan: http://vancouver.ca/files/cov/Greenest-city-action-plan.pdf

Vancouver Greenest City Update, 2015: http://vancouver.ca/files/cov/greenest-city-action-plan-implementation-update-2014-2015.pdf

Elisabet Sahtouris is an active evolutionary biologist and futurist, author of *Earthdance: Living Systems in Evolution* (iUniversity Press, 2000) and other titles. www.sahtouris.com

Chapter 5: Exploring a New Economy

- 73 Tao Te Ching, by Lao-Tzu. Goodreads: www.goodreads.com/work/quotes/100074
- 74 Coloring Inside the Lanes: A photo essay on intersection-painting urban art projects. Sightline Daily, Nov 28, 2011. http://daily.sightline.org/2011/11/28/coloring-inside-the-lanes/
- 75 WWOOF: www.wwoof.org
- After 2012, some of the people at the core of the Occupy movement got dug in, undertaking practical activities to help the victims of climate disasters like Superstorm Sandy, buying up student debt on the discount market to abolish it, and setting up study groups on complicated matters such as alternative banking. See Occupy Wall Street: www.nycga.net and Rolling Jubilee: http://rollingjubilee.org
- 77 *The Public Bank Solution*, by Ellen Brown. Third Millennium Press, 2013. www.publicbanksolution.com

The Case for a State-Owned Bank. Governing, April 12, 2012.

www.governing.com/columns/public-finance/col-case-state-owned-bank-north-dakota.html

Why Is Socialism Doing So Darn Well in Deep-Red North Dakota? Alternet, March 29, 2013. www.alternet.org/corporate-accountability-and-workplace/why-socialism-doing-so-darn-well-deep-red-north-dakota

- 78 Institute for Local Self-Reliance: www.ilsr.org
- 79 Ohio Co-operative Development Center: www.ocdc.osu.edu
- Cleveland's Evergreen Cooperative Finding Better Ways to Employ Locals, Keep Cash Flow in Town. Equity Factor, June 12, 2013. https://nextcity.org/daily/entry/clevelands-evergreen-cooperatives-finding-better-ways-to-employ-locals-keep

Banco Palmas: http://casepalmas.wordpress.com

The Remarkable Expansion of Community Banks in Brazil: Discovering Palmas' Methodology. http://casepalmas.files.wordpress.com/2012/10/case-palmas-pdf.pdf

- 81 Solar Electric Light Fund: www.self.org
- 82 Yes, there is an alternative to capitalism: Mondragon shows the way. Guardian, June 24, 2012. www.guardian.co.uk/commentisfree/2012/jun/24/alternative-capitalism-mondragon

Mondragon: www.mondragon-corporation.com/eng

83 The cooperative economics of Italy's Emilia-Romagna holds a lesson for the U.S. Robert Fitch. The Nation, May 13, 1996, www.uwcc.wisc.edu/info/bologna.html

Emilia-Romagna, Cooperative Region and Economy, by Mitch O'Gorman. Prezi: www.stories.coop/stories/slideshow/emilia-romagna-cooperative-region-and-economy

- New Economy Coalition: http://neweconomy.net
- 85 Gussing Renewable Energy, Austria: www.gussingrenewable.com
- WIR: Cash substitute greases business wheels. Swiss.info, Oct 21, 2009.

 www.swissinfo.ch/eng/business/Cash_substitute_greases_business_wheels.html?cid=7613810#ele
 ment34362608
- 87 Local currencies the German way: the chiemgauer. Guardian, Sept 23, 2011 www.guardian.co.uk/money/2011/sep/23/local-currencies-german-chiemgauer

The Chiemgauer: www.chiemgauer.info

The Bristol Pound (UK): http://bristolpound.org

Qoin Agency for Community Currencies: http://qoin.org

International Journal of Community Currency Research: http://ijccr.net

88 Rethinking Money: How New Currencies Turn Scarcity into Prosperity by Bernard Lietaer. Berrett Koehler, 2012. www.lietaer.com/writings/books/rethinking-money-by-bernard-lietaer-and-jacquidunne

Seedstock Community Currency (Vancouver): www.seedstock.ca

89 Occupy Money: Creating an Economy Everyone Wins by Margrit Kennedy. New Society, 2012. www.amazon.ca/Occupy-Money-Creating-Economy-Everybody/dp/0865717311

People Money: The Promise of Regional Currencies, by Margrit Kennedy, 2012. www.margritkennedy.de

Margrit Kennedy explains interest: www.youtube.com/watch?v=1Ixgt4syL9U

- A Changing Money System: The Economy of Ecology, by Margrit Kennedy. 2001. www.converge.org.nz/evcnz/resources/money.pdf
- 91 Sweden's JAK Bank, by Pat Conaty: http://communityrenewal.ca/swedens-jak-bank

JAK Bank video: www.youtube.com/watch?v=aW2pj109Cr8&fmt=18

92 Växjö: Fossil-fuel free city: www.dac.dk/en/dac-cities/sustainable-cities-2/all-cases/energy/vaxjo-fossil-fuel-free-city

Go 100% Renewable Energy: www.go100percent.org

100% Renewables: http://go100re.net

- 93 See Chapter 18 for Citizen's Income details and references.
- 94 Why Finland loves saunas. BBC News, Sept 30, 2013. www.bbc.co.uk/news/magazine-24328773

The GINI Index (a measure of family income equality) http://data.worldbank.org/indicator/SI.POV.GINI

- People like Pat Conaty, David Boyle, James Robertson, Andrew Simms, Rob Hopkins, and Caroline Lucas, Britain's first Green Party MP.
- 96 Mariana Mazzucato: www.marianamazzucato.com

Ha-Joon Chang: www.hajoonchang.net

- 97 Transition Town Totnes: <u>www.transitiontowntotnes.org</u>
- 98 Findhorn Foundation: www.findhorn.com

Findhorn Ecovillage: www.findhorn.org/aboutus/ecovillage/ecovillage-at-findhorn

Ann & Gord Bair's Award-winning solar-cob house in Victoria, BC: https://ecosenseliving.wordpress.com/about/

99 Incredible Edible Todmorden: www.incredible-edible-todmorden.co.uk

Free food, caring and sharing: new spirit of community in Yorkshire. Guardian, May 6, 2012. www.guardian.co.uk/society/2012/may/06/lifestyle-communities-hebden-bridge-todmorden

Eating the Street: http://environmentportal.in/files/file/FM 27 3-Paull.pdf

- 100 Indiegogo: www.indiegogo.com
- 101 Interview: Who is Rosie Cepero from TLC's "Angels Among Us"? Channel Guide, Sept 4, 2014.

www.channelguidemagblog.com/index.php/2014/09/04/who-is-rosie-cepero

Angels Among Us (TLC TV Series): www.tlc.com/tv-shows/angels-among-us/rosie-questions-answers

- 102 The Empathic Civilization by Jeremy Rifkin. Tarcher, 2010: http://empathiccivilization.com/
 - RSA Animate The Empathic Civilization, with Jeremy Rifkin: www.youtube.com/watch?v=17AWnfFRc7g
- Sixteen Building Blocks of a Green, Entrepreneurial, Cooperative Economy, by Guy Dauncey. The Practical Utopian, Dec 18, 2014. https://guydauncey.wordpress.com/2014/12/18/sixteen-building-blocks-of-a-green-entrepreneurial-cooperative-economy

Chapter 6: The OMEGA Days

- New technology from MIT may enable cheap, color, holographic video displays. Gizmag, June 24, 2013. www.gizmag.com/holograph-3d-color-video-display-inexpensive-mit/28029/
- No More Stolen Sisters. Amnesty International. www.amnesty.ca/our-work/campaigns/no-more-stolen-sisters
- 106 On-line Shrine: www.muchloved.com
- 107 *MOOC* = *Massive Open On-Line Course*. Coursera: www.coursera.org. Khan Academy: www.khanacademy.org

MOOCS - Top 10 Sites for Free Education with Elite Universities: www.bdpa-detroit.org/portal/index.php/comittees/high-school-computer-competition-hscc/29-education/57-moocs-top-10-sites-for-free-education-with-elite-universities.html

When MOOCs profit, who pays? Sarah Kendzior, Al Jazeera, July 29, 2013. www.aljazeera.com/indepth/opinion/2013/07/2013729111456721749.html

- 108 Indignez Vous! By Stéphane Hessel: http://indignez-vous-indignacion.blogspot.ca/p/english.html
 - The Coming Insurrection: http://tarnac9.wordpress.com/texts/the-coming-insurrection/
- The term 'precariat' is being used in Europe. *The Precariat: The New Dangerous Class*, by Guy Standing. Bloomsbury, 2011. www.amazon.ca/The-Precariat-New-Dangerous-Class/dp/1849663513
- Thich Nhat Hanh: www.mindfulnessbell.org/order of interbeing.php
- Norval Morrisseau: www.whetung.com
- 112 *Type 2 diabetes and the diet that cured me*. Guardian, May 12, 2013. www.theguardian.com/lifeandstyle/2013/may/12/type-2-diabetes-diet-cure
- 113 Ubooly: <u>www.ubooly.com</u>
- Why it's Still Kicking Off Everywhere, by Paul Mason. Verso, 2012 www.amazon.ca/Why-Its-Kicking-Off-Everywhere/dp/1844678512
- 115 *The Theology of Consensus*. Popular Resistance, June 10, 2015. www.popularresistance.org/questioning-consensus

Nonviolent Struggle: 50 Crucial Points, by Srdja Popovic, Andrej Milivojevic & Slobodan Djinovic. CANVAS, Belgrade, 2006. www.canvasopedia.org/images/books/50-Crucial-Points/NonViolent-Struggle-50-CP-book-small.pdf

CANVAS: www.canvasopedia.org

A Force More Powerful (movie): www.aforcemorepowerful.org

Waging Nonviolent Struggle: 20th Century Practice and 21st Century Potential, by Gene Sharp. Porter Sargent, 2005. www.amazon.com/Waging-Nonviolent-Struggle-Practice-Potential/dp/0875581625

International Center on Nonviolent Conflict: www.nonviolent-conflict.org

Albert Einstein Institution: www.aeinstein.org

From Dictatorship to Democracy, by Gene Sharp (1993, 2003). www.amazon.ca/From-Dictatorship-Democracy-Gene-Sharp/dp/1846688396

117 Occupy Wall St. Offshoot Aims to Erase People's Debts. New York Times, Nov 13, 2012. www.nytimes.com/2012/11/14/nyregion/occupy-offshoot-aims-to-erase-peoples-debts.html

Occupy Student Debt: http://occupystudentdebt.com/

Occupy Wall Street's debt buying strikes at the heart of capitalism. Guardian, Nov 13, 2013. www.theguardian.com/commentisfree/2013/nov/13/occupy-wall-st-debt-buying-heart-capitalism

Occupy Wall Street activists buy \$15m of Americans' personal debt. Guardian, Nov 12, 2013. www.theguardian.com/world/2013/nov/12/occupy-wall-street-activists-15m-personal-debt

- 118 Rolling Jubilee: http://rollingjubilee.org/
- Pay It Forward Plan In Oregon Would Make Tuition Free At State's Public Universities.

 Huffington Post, July 13, 2013. www.huffingtonpost.com/2013/07/03/pay-it-forward-oregon-tuition-free n 3543827.html

Presentation on Pay it Forward: The Debt-Free Degree Plan for Oregon. Economic Opportunity Institute. www.eoionline.org/education/higher-education/presentation-on-pay-it-forward-the-debt-free-degree-plan-for-oregon

Students for Educational Debt Reform: www.facebook.com/SEDRpdx

Oregon Is Moving on a Creative Solution to the Student Loan Debt Crisis. Spread the Word. The Nation: http://activism.thenation.com/p/dia/action3/common/public/index.sjs?action KEY=11513

Pay It Forward: The Debt-Free Degree Plan for Oregon. John Burbank, Economic Opportunity Institute, Feb 25, 2013. www.eoionline.org/wp/wp-content/uploads/higher-education/PayItForward-Presentation-OR-Feb13.pdf

- 120 Matchstick-sized sensor can record your private chats. New Scientist, Sept 25, 2013.

 www.newscientist.com/article/mg21929364-400-matchstick-sized-sensor-can-record-your-private-chats
- 121 *Body-worn cameras put police evidence beyond doubt.* New Scientist, Oct 23, 2013. www.newscientist.com/article/mg22029404-400-body-worn-cameras-put-police-evidence-

beyond-doubt

- 122 Pain Ray: The US military's new agony beam weapon. New Scientist, May 16, 2013.

 www.newscientist.com/article/mg21829162.300-pain-ray-the-us-militarys-new-agony-beam-weapon.html
- 123 Sing for the Climate: www.singfortheclimate.com
 - Listen here: www.youtube.com/watch?v=XGgBtHoIO4g and many other videos.
- 124 Canada's national anthem: www.youtube.com/watch?v=zwDvF0NtgdU
- For an example of a similar response, see *New Zealand Parliament passes gay marriage bill—and a love song*: www.youtube.com/watch?v=q9pOJ8Bc -g
- For non-Canadian readers: in British Columbia, the New Democrats are similar in outlook to Britain's Labour Party, or leftish Democrats in the US. The Liberal Party is similar to the Conservatives in Britain and Republican Party in the US, but not its far-right Tea Party wing.
- 127 Study Confirms Tea Party Was Created by Big Tobacco and Billionaires. Desmogblog, Feb 11, 2013. www.desmogblog.com/2013/02/11/study-confirms-tea-party-was-created-big-tobacco-and-billionaires
- 128 Hacking firm hints at cybercrime's professional elite. New Scientist, 28 Sept, 2013.

 www.newscientist.com/article/mg21929364.700-hacking-firm-hints-at-cybercrimes-professional-elite.html
- Report from the Woods: BC's sorry state of forest management, by Jim Cooperman. Watershed Sentinel, March 2014. www.watershedsentinel.ca/content/report-woods-bcs-forest-management
- 130 Trust for Sustainable Forestry: www.sustainableforestry.com

Chapter 7: A for Affordable Living

- For examples of Laneway living, see Lanefab Design/Build: www.lanefab.com
- Canadian Passive House Institute West: http://canphi.ca
- 133 "Am Buir", Wassenberg, Germany the world's smallest Passive House. Passipedia:

 http://passipedia.org/examples/residential_buildings/single_-

 family houses/central_europe/am_buir_wassenberg_germany_the_world_s_smallest_passive_house
- 134 *Mini-B: 300 sq. ft. Passive Tiny House*. Tiny House Talk, January 21, 2014. http://tinyhousetalk.com/mini-b-passive-tiny-house/
- 135 Magnum Board: www.youtube.com/watch?v=Yel-gHswa8A
- 136 Canadian Passive House Institute: www.passivehouse.ca
 - The Bernhardt Passive Home in Victoria BC uses 90% less heat energy than a regular home: www.bernhardtpassive.com
 - Magnum Board: www.magnumbp.ca/magnum/home.html
- 137 If it's Tuesday, this must be a Belgian Passive House tour. Treehugger, March 23, 2015.

www.treehugger.com/green-architecture/if-its-tuesday-must-be-belgian-passive-house-tour.html

138 Great Pacific Garbage Patch: http://en.wikipedia.org/wiki/Great Pacific garbage patch

Yachtsman describes horror at 'dead' rubbish strewn Pacific Ocean. Guardian, Oct 22,2013. www.theguardian.com/environment/2013/oct/21/yachtsman-describes-horror-at-dead-rubbish-strewn-pacific-ocean

Midway: Message from the Gyre, by Chris Jordan: www.chrisjordan.com/gallery/midway/#CF000313%2018x24

Midway (the movie): www.midwayjourney.com

- Boyan Slat: <u>www.theoceancleanup.com</u>
- 140 19-Year-Old Develops Ocean Cleanup Array That Could Remove 7,250,000 Tons Of Plastic From the World's Oceans. Inhabitat, March 26, 2013. http://inhabitat.com/19-year-old-student-develops-ocean-cleanup-array-that-could-remove-7250000-tons-of-plastic-from-the-worlds-oceans/

The Dutch boy mopping up a sea of plastic. NNB News, Oct 16, 2014. www.bbc.com/news/magazine-29631332

James Dyson Is Designing A Giant Vacuum-On-A-Boat To Clean Ocean Trash. Fast CoExist, April 14, 2014. www.fastcoexist.com/3028391/james-dyson-is-designing-a-giant-vacuum-on-a-boat-to-clean-ocean-trash

The world uses 32 billion barrels of oil a year. 1 barrel = 0.16 cubic metres; 1 cubic metre = 6.3 barrels. 32 billion barrels = 5 billion cubic metres. 1 Olympic Swimming Pool = 2,500 cubic metres.

141 The Sharing Economy: www.shareable.net

Trust is the Only Currency: http://trustcurrency.blogspot.ca

Sacred Economics: Money, Gift and Society in the Age of Transition, by Charles Eisenstein. Evolver Editions, 2011. http://sacred-economics.com/

How to Start a Gift Circle. http://trustcurrency.blogspot.ca/2010/10/how-to-start-gift-circle.html

Young Entrepreneur Promotes Gifting to Heal His Cancer and Society. Shareable, Feb 27, 2014. www.shareable.net/blog/young-entrepreneur-promotes-gifting-to-heal-his-cancer-and-society

- 143 Yinka-Dene Language Institute: www.ydli.org
- Vancouver's housing 2nd least affordable in world. CBC, Jan 21, 2014.

 www.cbc.ca/news/canada/british-columbia/vancouver-s-housing-2nd-least-affordable-in-world-1.2505524

We need affordable housing, not bachelor pads and empty homes. Evelyn Xia, Vancouver Observer, May 25, 2015. www.vancouverobserver.com/politics/commentary/we-need-affordable-housing-not-bachelor-pads-and-empty-homes

Whistler pioneers formula for affordable real estate. Vancouver Sun, Oct 4, 2012.

www.vancouversun.com/business/Whistler+pioneers+formula+affordable+real+estate/7346930/st
ory.html

146 Vancouver Rent Bank: www.niccss.ca/VRB

Creating and preserving market rental housing: https://vancouver.ca/people-programs/creating-new-market-rental-housing.aspx

Mayor's Task Force on Housing Affordability. September 2012. http://vancouver.ca/files/cov/Staff report to Council re task force report.pdf

My fix for the housing crisis: ban ownership by foreign non-residents. Zoe Williams, Guardian, June 22, 2015. www.theguardian.com/commentisfree/2015/jun/22/housing-crisis-ban-ownership-foreign-non-residents

Barbara Yaffe: Is it time to restrict foreign property buyers? Vancouver Sun, May 3, 2015. www.vancouversun.com/business/affordability/Barbara+Yaffe+time+restrict+foreign+property+b uvers/11028605/story.html

In London, UK, a 15% stamp duty is applied to buildings costing more than £500,000 that are registered to companies. *Stamp Duty Reform: the key facts*. Guardian. December 3, 2014. https://www.theguardian.com/money/2014/dec/03/george-osborne-stamp-duty-reform-key-facts-autumn-statement

Tax property, not people, for a fairer society. Guardian, May 2, 2011. www.theguardian.com/business/2011/may/02/land-value-tax-oecd-comment

Tax, auction and banking: how to release the value of Britain's land. Kate Allen, Guardian, Nov 18, 2011. www.theguardian.com/housing-network/2011/nov/18/tax-auction-banking-release-value-of-british-land

- Owners of empty homes in Islington could face jail. BBC News, Dec 5, 2014. www.bbc.com/news/uk-england-london-30342050
- For a detailed discussion of community-involved affordable housing options, see *The Resilience Imperative: Cooperative Transitions to a Steady State Economy*, Chapter 4, by Michael Lewis and Pat Conaty. New Society Publishers, 2012. http://communityrenewal.ca/resilience-imperative

The Mutual Homeownership Model combines support from existing housing co-ops, pooling resources for a shared mortgage, equity shares, reduced transaction costs, and democratic self-management. For a working example, see Low Impact Living Affordable Community (LILAC) project in Leeds, UK: www.lilac.coop

Global Experiments in Affordable Homeownership. Avi Friedman. The Tyee, Dec 5, 2014. http://thetyee.ca/News/2014/12/05/Affordable-Homeownership-Experiments/

- Group seeks RRSP money to build affordable housing in Victoria. Times Colonist, Jan 7, 2014. www.timescolonist.com/group-seeks-rrsp-money-to-build-affordable-housing-in-victoria-1.781622
- 152 Collective living: http://static.rethinkhousing.ca/vibrant neighbourhoods/89/2.jpg
- 153 Rooftop Prefabs. Inhabitat, Sept 15, 2006. www.inhabitat.com/prefab-friday-rooftop-prefabs

Loft-Cubes: www.loftcube.net

 unveil-roof-pod-for-solar-decathlon

154 Young Prospects? Vancouver's Wealth Gap Demands a Drastic Move. Patrick Condon, Oct 21, 2014. http://theagorian.ca/young-prospects-vancouvers-wealth-gap-demands-a-drastic-move/

Townhouse gap affects entire housing market. Vancouver Sun, Feb 12, 2015. www.vancouversun.com/business/affordability/UDI/Vancity+Housing+Affordability+Index+Tow nhouse/10809374/story.html

Tiny Houses for the Homeless: An Affordable Solution Catches On. Truth-Out/YES! Magazine. Feb 24, 2013. http://truth-out.org/news/item/22050-tiny-houses-for-the-homeless-an-affordable-solution-catches-on

Tiny Homes for the Homeless an Occupy Madison Project. Revolution News, Nov 13, 2014. http://revolution-news.com/tiny-homes-for-the-homeless-an-occupy-madison-project/

Micro-community of tiny homes flourishes on rehabilitated vacant lot. Treehugger, Nov 20, 2013. www.treehugger.com/slideshows/green-architecture/boneyard-studios-tiny-home-community-on-rehabilitated-vacant-lot/

Tiny House Movement Growing Because Small Spaces = More Freedom? www.tinyhousetalk.com/tiny-house-movement-growth

Woman builds herself a gorgeous, tiny, healthy, "chemical free" house. Treehugger, Aug 12, 2014. www.treehugger.com/tiny-houses/160-square-foot-house-not-only-tiny-its-healthy-too.html

See *Farm Villages—the Way of the Future*. A slide presentation by Guy Dauncey. December 2013. www.slideshare.net/GuyDauncey/farm-villages

Chapter 8: A New Synthesis

- For further initiatives see *Affordable Housing Around the World*, by Avi Friedman. http://bcnpha.ca/news/affordable-housing-around-world-avi-friedman
- 158 Satyanendra is a fictional character.
- Neo-liberalism: https://en.wikipedia.org/wiki/Neoliberalism
- 160 Einstein's Third Paradise, by Gerald Holton. www.aip.org/history/exhibits/einstein/essay-einsteins-third-paradise.htm
- Nebia Shower: www.kickstarter.com/projects/1499369835/nebia-shower-better-experience-70-less-water
- The Four Bathers:
 https://en.wikipedia.org/wiki/Théo_van_Rysselberghe#/media/File:Theodoor_van_Rysselberghe_"
 (1862-1926) Four_Bathers.jpg

Chapter 9: The Health Revolution

Sailing into the future of global trade? BBC News, Dec 27, 2012. www.bbc.co.uk/news/business-20792058

Sails to power future cargo ships. Smart Planet, Aug 28, 2012 www.smartplanet.com/blog/intelligent-energy/sails-to-power-future-cargo-ships-global-

trade/18536

B9 Shipping: www.b9energy.com/B9Shipping/tabid/4036/language/en-US/Default.aspx

Solar Sailor: www.gizmodo.com.au/2007/09/solar sailor first aussie tech

Positive News UK: www.positivenews.org.uk

Positive News US: www.positivenewsus.org

- 165 SPUD: www.spud.ca
- SPUD's website shows food-miles. Food calorie labeling tied to distance: www.scientificamerican.com/article.cfm?id=labels-that-translate-calories-into-walking-distance

Many apps show calories: http://iphone.appstorm.net/roundups/lifestyle-roundups/10-iphone-apps-for-counting-calories

Apps are beginning to show nutrients: <u>www.imore.com/best-nutrition-and-food-information-appiphone</u>

167 Salvestrols - Nature's Defence Against Cancer, by Brian Schaefer. Createspace, 2012. www.amazon.ca/Salvestrols-Natures-Defence-Against-Linking/dp/1477554114

Salvestrols: www.salvestrol.ca

Breakthroughs in the Quest to Cure Cancer, by Professor Gerry Potter. www.slideshare.net/gerrypotter52

- Five-star organic status does not exist as a program today, but it is similar in concept to The Origin Green Charter, the Irish farming program, whose members are committed to developing more stringent ways of working such that 100% of Ireland's food and drink exports are on the road to sustainability by 2016: www.origingreen.ie/about/our-sustainability-charter
- Nitrates May Be Environmental Trigger For Alzheimer's, Diabetes And Parkinson's Disease. Science Daily, July 6, 2009. www.sciencedaily.com/releases/2009/07/090705215239.htm

Linking pesticide exposure and dementia: what is the evidence? Zaganas I, et al. PubMed, May 2013. www.ncbi.nlm.nih.gov/pubmed/23416173

The True Cost of Food. Sustainable Food Trust Conference, Dec 6, 2012. http://sustainablefoodtrust.org/articles/true-cost-accounting-conference--videos/

Fertilizer produces far more greenhouse gas than expected. Science News, June 9, 2014. www.sciencenews.org/article/fertilizer-produces-far-more-greenhouse-gas-expected

Non-Organic Celery Packed with 67 Pesticides. Organic Authority, June 2, 2010. www.organicauthority.com/blog/organic/non-organic-celery-packed-with-67-pesticides

Pesticides tied to ADHD in children in U.S. study. Reuters, May 17, 2010. www.reuters.com/article/2010/05/17/us-adhd-pesticides-idUSTRE64G41R20100517

Higher Organophosphate Pesticide Levels Linked to ADHD. NRDC, 2010. www.nrdc.org/living/healthreports/higher-organophosphate-pesticide-levels-linked-adhd.asp

Pesticide exposure in the womb may lower IQ. New Scientist, April 21, 2011.

www.newscientist.com/article/dn20400-pesticide-exposure-in-the-womb-may-lower-iq.html

Prenatal Pesticide Exposure Linked To Diminished IQ. Environmental Working Group, April 21, 2011. www.ewg.org/news/news-releases/2011/04/21/prenatal-pesticide-exposure-linked-diminished-iq

- 171 International Survey of Herbicide Resistant Weeds, 2014 www.weedscience.org/summary/home.aspx
- The comparative yields of organic and conventional farming have been subject to much debate, and differing results. The studies rarely compare nutrients.

Organic farming just as productive as conventional, and better at building soil, Rodale finds. Grist, March 26, 2011. http://grist.org/article/2011-03-25-rodale-data-show-organic-just-as-productive-better-at-building

Rodale's 30-Year Report: http://rodaleinstitute.org/our-work/farming-systems-trial/farming-systems-trial-30-year-report

Crop yields are only part of the organic vs. conventional farming debate. Parke Wilde, Grist, May 3 2012. http://grist.org/organic-food/crop-yields-are-only-part-of-the-organic-vs-conventional-farming-debate

Organic Foods are Safer and Healthier than Conventional... True or False? Dr. Mercola, Sept 17, 2012. http://articles.mercola.com/sites/articles/archive/2012/09/17/organic-vs-conventional-food.aspx

UN: Eco-Farming Feeds the World. Paula Crossfield, Huffington Post, Sept 3, 2011. www.huffingtonpost.com/paula-crossfield/un-ecofarming-feeds-the-world b 833340.html

Agro-ecological farming can double food production in ten years. Pesticide Action Network, 2011. www.panna.org/blog/agroecological-farming-can-double-food-produx-10-yrs

- Soil Biodiversity by Ciro Gardi and Simon Jeffery, European Union Scientific and Technical Report, 1997 http://eusoils.jrc.ec.europa.eu/esdb_archive/eusoils_docs/other/EUR23759.pdf
 - The 1997 assessment was \$13 trillion; I increased it to \$20 trillion to account for price inflation.
- Maine group loses suit against Monsanto over seeds. Bangor Daily News, June 11, 2013. http://bangordailynews.com/2013/06/11/business/organic-growers-lose-decision-in-suit-vs-monsanto-over-seeds
- Organic farming just as productive as conventional, and better at building soil, Rodale finds. Grist, March 26, 2011. http://grist.org/article/2011-03-25-rodale-data-show-organic-just-as-productive-better-at-building/
- Against the Growing Burden of Disease, Kimberly Elmslie, Director General, Centre for Chronic Disease Prevention, Public Health Agency of Canada. 2011: www.ccgh-csih.ca/assets/Elmslie.pdf
- Drivers of Prescription Drug Spending in Canada. Canadian Institute for Health Information, Ottawa, Ont. CIHI, 2012. www.cihi.ca/CIHI-ext-portal/pdf/internet/DRUG SPEND DRIVERS EN
- 178 Economics of Multiple Sclerosis and its Treatment. Jacquelyn L. Bainbridge, PharmD, FCCP. University of Tennessee Advanced Studies in Pharmacy, 2007. www.utasip.com/files/articlefiles/pdf/ASIP 4 11p330 333.pdf

- 179 *Minding Your Mitochondria*. TEDx lecture by Dr. Terry Wahls: www.youtube.com/watch?v=KLjgBLwH3Wc
 - Terry Wahls, MD. Defeating Progressive Multiple Sclerosis without Drugs: www.terrywahls.com
- Dr Wahls' super-nutrient paleo diet, that reversed her Multiple Sclerosis. Julianne Taylor. http://paleozonenutrition.com/2012/02/08/a-new-experiment-dr-wahls-super-nutrient-paleo-diet-9-cups-veggies-a-day/
- 181 The Institute for Functional Medicine: www.functionalmedicine.org
 - Dr. Mark Hyman—About Functional medicine. http://drhyman.com/about-2/about-functional-medicine/
- Diet, nutrition and the prevention of chronic diseases. Joint WHO/FAO Technical Report Series 916, 2002. www.who.int/nutrition/publications/obesity/WHO TRS 916/en/index.html
- Ditch the pedometer the AI in your phone is better. New Scientist, Nov 2, 2013. www.newscientist.com/article/mg22029415.300-ditch-the-pedometer--the-ai-in-your-phone-is-better.html

Kiwi Moves: www.kiwiwearables.com

Google Glass has its electronic eye on health. New Scientist, 28 Sept, 2013. www.newscientist.com/article/mg21929364.500-google-glass-has-its-electronic-eye-on-health.html

- 184 *Can Social Networks Cure Disease?* Dr. Mark Hyman, MD. http://drhyman.com/blog/2012/04/20/can-social-networks-cure-disease-part-i
- Green chemistry tries to mimic nature. Instead of combining a large number of different elements, resulting in substances that are often toxic, it works with the handful of common elements that are already in the body, combining them in elaborate ways that produce no toxic waste. Green chemists say they're learning from Nature, which has had millions of years to develop the strength of a spider's web, for instance, or the glue that holds a barnacle to a rock. It's about using more intelligence, and less brute force. Canadian Green Chemistry Network: www.greenchemistry.ca
- Diesel exhaust fumes cause lung cancer, WHO says. Reuters, June 12, 2012. www.reuters.com/article/2012/06/12/us-cancer-diesel-who-idUSBRE85B0ZN20120612
 - *Tiny Diesel Fume Particles Raise Risk Of Heart Attacks*. Medical News Today, June 15, 2011. www.medicalnewstoday.com/articles/231190.php
- Air pollution nine-times deadlier than car crashes, UBC study finds Vancouver Sun, Oct 21 2013. www.vancouversun.com/health/pollution+nine+times+deadlier+than+crashes+study+finds/90618 97/story.html
- Antibiotic 'apocalypse' warning. BBC News, Jan 24, 2013 www.bbc.co.uk/news/health-21178718

The Antibiotics Crisis: How Did We Get Here And Where Do We Go Next? Medical News Today, Jan 10, 2011. www.medicalnewstoday.com/articles/213193.php

Antibiotics Use In Agriculture Threatening Global Public Health: U Of C Professor. Huffington Post, Jan 8, 2014. www.huffingtonpost.ca/2014/01/08/anitbiotics-use-in-agriculture-public-health n 4550661.html

- Artificial "Poop" Cures Gut Superbug C. Difficile. Catherine Paddock, Medical News Today, Jan 11, 2013. www.medicalnewstoday.com/articles/254864.php
- 190 For the Good of the Gut: Can Parasitic Worms Treat Autoimmune Diseases? Ferris Jabr, Scientific American, Dec 1, 2010. www.scientificamerican.com/article.cfm?id=helminthic-therapy-mucus
- 191 *"Essence of Maggot" Ointment to Heal Wounds Faster?* Matt Kaplan, National Geographic, June 3, 2009. http://news.nationalgeographic.com/news/2009/06/090603-maggots-heal-wounds.html
- 192 Elaine Hsiao. *Mind-Altering Microbes: How the Microbiome Affects Brain and Behavior*. TEDx CalTech.http://tedxcaltech.caltech.edu/content/elaine-hsiao
- 193 *How to be a good mayor of your body's microbe city.* New Scientist, May 19, 2014. www.newscientist.com/article/mg22229690.700
- 194 How Many Cells Are In Your Body? Carl Zimmer, National Geographic, Oct 23, 2013. http://phenomena.nationalgeographic.com/2013/10/23/how-many-cells-are-in-your-body/
- 195 *3D printers could create customised drugs on demand.* BBC News, April 18, 2012. www.bbc.co.uk/news/technology-17760085

treatment-works-study-finds.html

- 196 Gut bacteria found to be far healthier in rural Africa children than in urban Italian ones! Food Matters, Aug 2010.
 www.foodsmatter.com/digestive_conditions/dysbiosis/research/italian_v_african_children.html
 When Pills Fail, This, er, Option Provides a Cure. International New York Times, Jan 16, 2013.
 New York Times, Jan 17, 2013. www.nytimes.com/2013/01/17/health/disgusting-maybe-but-
- 197 *CDC warns of 'catastrophic' results of increased drug resistance*. Guardian, Sept 16, 2013. www.theguardian.com/science/2013/sep/16/cdc-drug-resistance-antibiotics-report

Totally drug-resistant' tuberculosis spreads in South Africa as researchers warn global outbreak would be 'untreatable'. National Post, Feb 12, 2013. http://life.nationalpost.com/2013/02/12/totally-drug-resistant-tuberculosis-spreading-in-south-africa-as-researchers-warn-outbreak-of-bacteria-would-be-untreatable/

Surge in drug-resistant tuberculosis cases has affected both the rich and the poor. National Post, March 19, 2012. http://news.nationalpost.com/2012/03/19/surge-in-drug-resistant-tuberculosis-cases-has-affected-both-the-rich-and-the-poor/

- 198 Discovery of virus that 'eats' bacteria that causes C.diff could spell the end for hospital superbug. Independent, Oct 17, 2013. https://www.independent.co.uk/life-style/health-and-families/health-news/discovery-of-virus-that-eats-bacteria-that-causes-cdiff-could-spell-the-end-for-hospital-superbug-8884846.html
- 199 Maggots: Nature's Nurses. Blue Economy. www.blueeconomy.eu/blog/maggots-natures-nurses/
- Amazon showing signs of degradation due to climate change, NASA warns. Guardian, Jan 18, 2013. www.theguardian.com/environment/2013/jan/18/amazon-rainforest-climate-change-nasa

Amazon fire risk on the rise, says NASA Mongabay June 09, 2013 http://news.mongabay.com/2013/0608-amazon-fire-risk-tool.html#0O7Pr2uUJspRe8K9.99

Amazon decline worse than IPCC projections. RTCC, Oct 21, 2013. www.rtcc.org/2013/10/21/amazon-decline-worse-than-ipcc-projections

201 Rainforest Action Network: http://ran.org

The Inga Foundation works to end slash and burn agriculture: www.ingafoundation.org

202 New Data on Autism Spectrum Disorders. Center for Disease Control and Prevention, 2012. www.cdc.gov/features/dsautismdata

There was a 78% increase in autism in Canada between 2007 and 2012, rising to one in 88 children, with only a small part due to increased reporting. In the US, the Centers for Disease Control reports 1 in 68. www.autismspeaks.ca/about-autism/what-is-autism/

203 The autism enigma - are bacteria to blame? Toronto Star, Jan 28, 2013. www.thestar.com/news/gta/2013/01/28/autism linked to gut bacteria study finds.html

The autism enigma - are bacteria to blame? The Movie. http://cogentbenger.com/autism

Autism Study: More Evidence Linking Altered Gut Bacteria to ASD. Autism Speaks, May 20, 2014. www.autismspeaks.org/science/science-news/autism-study-more-evidence-linking-altered-gut-bacteria-asd

Lower Autism Risk With Folic Acid Supplements in Pregnancy. Science Daily, Feb 12, 2013. www.sciencedaily.com/releases/2013/02/130212172209.htm

Folic acid food sources: www.folicacid.ca/food-sources

Autism risk higher near pesticide-treated fields, study says. Environmental Health News, June 23, 2014. www.environmentalhealthnews.org/ehs/news/2014/jun/autism-and-pesticides

- See the Massachusetts Toxics Use Reduction Act, and Toxics Use Reduction Institute, www.turi.org. The income is used to finance toxics use reduction planning that the chemical industry is required to do under the Act. When the chemical industry saw how much money it could save by using fewer chemicals it changed its approach, and the whole industry is now embracing more green chemistry.
- 205 *Body Burden: The Pollution in Newborns*. Environmental Working Group, July 2005. www.ewg.org/research/body-burden-pollution-newborns
- 206 Higher Levels of Several Toxic Metals Found in Children With Autism. Science News, Feb 25, 2013. www.sciencedaily.com/releases/2013/02/130225162231.htm
- 207 Autism Risk tied to exposure to traffic pollution. Huffington Post, Nov 27, 2012. www.huffingtonpost.com/2012/11/27/autism-risk-traffic-pollution- n 2198764.html

Autism, Air Pollution Link Confirmed By First National Study. Huffington Post, June 18, 2013. www.huffingtonpost.com/2013/06/18/autism-air-pollution-study n 3443518.html

Traffic-Related Air Pollution, Particulate Matter, and Autism. Heather E. Volk, et al. JAMA Psychiatry. 2013. http://archpsyc.jamanetwork.com/article.aspx?articleid=1393589

- The severity of autism is directly linked to heavy metals in the body. Journal of Toxicology, 2009. www.hindawi.com/journals/jt/2009/532640
- 209 A macroepigenetic approach to identify factors responsible for the autism epidemic in the United

- *States*. Clinical Epigenetics 2012, 4:6 www.clinicalepigeneticsjournal.com/content/pdf/1868-7083-4-6.pdf
- A sweet problem: Princeton researchers find that high-fructose corn syrup prompts considerably more weight gain. News at Princeton, March 22, 2010. www.princeton.edu/main/news/archive/S26/91/22K07/
- The sale of alcohol in British Columbia was limited to government-owned liquor stores and a few other outlets until 2014, when the government changed the rules to allow its sale in supermarkets and other public venues.
- Fact Sheets Binge Drinking. US Centers for Disease Control and Prevention. www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm
- Taxing unhealthy food and drinks to improve health. British Medical Journal, May 15, 2012. www.bmj.com/content/344/bmj.e2931

Reducing obesity: Policy Strategies from the Tobacco Wars. Urban Institute, July 2009. www.urban.org/publications/411926.html "A 10 percent tax on fattening foods would yield more than \$500 billion in revenue over ten years." In 2010, Britain spent £140 billion (\$280 million) on healthcare. \$500 billion over ten years is \$50 billion a year, or 18% of Britain's healthcare costs.

214 Sugar is 'addictive and the most dangerous drug of the times'. Daily Telegraph, Sept 17, 2013.

www.telegraph.co.uk/news/worldnews/europe/netherlands/10314705/Sugar-is-addictive-and-the-most-dangerous-drug-of-the-times.html

Big Sugar's Sweet Little Lies: How the industry kept scientists from asking: Does sugar kill? Gary Taubes and Cristin Kearns Couzens, Mother Jones Magazine, Nov/Dec 2012. www.motherjones.com/environment/2012/10/sugar-industry-lies-campaign

Soda Contributes to Behavior Problems Among Young Children. Time, April 16, 2013. http://healthland.time.com/2013/08/16/soda-contributes-to-behavior-problems-among-young-children

Obesity and high-fructose corn-syrup: *Why our food is making us fat*. Guardian, June 11, 2012. www.guardian.co.uk/business/2012/jun/11/why-our-food-is-making-us-fat

Bisphenol A and obesity: *Can BPA make you fat?* Mother Jones, May 30, 2012. www.motherjones.com/tom-philpott/2012/05/bpa-fat-obese-badge-cans

- 215 Can Fire Retardants Raise Risk of Children Born With Lower IQs? Health Day, May 24, 2014. http://consumer.healthday.com/kids-health-information-23/attention-deficit-disorder-adhd-news-50/can-fire-retardants-raise-risk-of-children-born-with-lower-iqs-688201.html
 - Toxic Chemicals in our Couches, NRDC, www.nrdc.org/health/flame-retardants/toxic-couch.asp
- 216 Study Finds Link Between Television Viewing And Attention Problems In Children. Science News, April 6, 2004. www.sciencedaily.com/releases/2004/04/0406090140.htm
- 217 How Kids Are Getting Hooked on Pills for Life. Oct 18, 2012. www.alternet.org/personal-health/how-kids-are-getting-hooked-pills-life
- Nature deficit disorder 'damaging Britain's children'. BBC News, March 29 2012. www.bbc.co.uk/news/science-environment-17495032
- The next frontier in 3-D printing: Human organs. CNN, April 23, 2014.

http://edition.cnn.com/2014/04/03/tech/innovation/3-d-printing-human-organs/

- Opting in vs. Opting Out. New York Times, Sept 26, 2009. www.nytimes.com/2009/09/27/business/economy/27view.html
- Disconnect: The Truth About Cell Phone Radiation, What the Industry Is Doing to Hide It, and How to Protect Your Family, by Devra Davis. Plume, 2011. www.amazon.ca/Disconnect-Radiation-Industry-Protect-Family/dp/0452297443

Cell Phones and Brain Cancer: The Real Story. Devra Davis, Huffington Post, May 22, 2010. www.huffingtonpost.com/devra-davis-phd/cell-phones-and-brain-can b 585992.html

222 Quantum dots control brain cells for the first time. New Scientist, Feb 14, 2012. www.newscientist.com/article/dn21475-quantum-dots-control-brain-cells-for-the-first-time.html

Grow a new brain: First steps to lab-made grey matter. New Scientist, Dec 11, 2013. www.newscientist.com/article/mg22029473-800-grow-a-new-brain-first-steps-to-lab-made-grey-matter

Brain-inspired chip fits 1m 'neurons' on postage stamp. BBC News, Aug 8, 2014. www.bbc.com/news/science-environment-28688781

Google Glass Features: How Medical Uses Will Revolutionize Your Healthcare [VIDEO].

Medical Daily, March 12, 2013. www.medicaldaily.com/google-glass-features-how-medical-uses-will-revolutionize-your-healthcare-video-244613

Smart knife could revolutionize surgery. New Scientist, July 18, 2013. www.newscientist.com/article/mg20927984.200-smart-knife-could-revolutionise-surgery.html

See Cancer: 101 Solutions to a Preventable Epidemic by Liz Armstrong, Guy Dauncey and Anne Wordsworth. New Society Publishers, 2008. www.amazon.ca/Cancer-101-Solutions-Preventable-Epidemic/dp/0865715424

Prevent Cancer Now: www.preventcancernow.ca

225 The cancer sniffers: Dogs could be the best tool for diagnosis. New Scientist, July 4, 2015.

www.newscientist.com/article/mg22730280-300-the-cancer-sniffers-dogs-could-be-the-best-toolfor-diagnosis

DNA puts Stanford chemists on scent of better artificial nose. Aug 20, 2010. www.physorg.com/news201513882.html

New device could make diagnosing disease as simple as breathing. April 25, 2013. http://phys.org/news/2013-04-device-disease-simple.html

TED 2013: Uchek app tests urine for medical issues. BBC News, Feb 27, 2013. www.bbc.co.uk/news/technology-21586082

- 226 Bicycle highways help save healthcare costs in Northern Europe. EurActiv, April 18, 2013. www.euractiv.com/health/bicycle-highway-projects-europe-news-518865
- 227 Cochrane: www.cochrane.org

The Cochrane Collaboration: Medicine's Best Kept Secret, by Alan Cassels. Agio Publishing, 2015. www.amazon.ca/The-Cochrane-Collaboration-Medicines-Best-Kept-ebook/dp/B017S1KSIM

For peer-to-peer carsharing see Getaround www.getaround.com and Relay Rides https://relayrides.com

MODO - The Vancouver Carsharing Coop: http://modo.coop

Global Footprint Network: www.globalfootprint.org

Is Sustainability Still Possible? State of the World, 2013. Worldwatch Institute. Chapter 4: Getting to One-Planet Living by Jennie Moore and William Rees. http://blogs.worldwatch.org/sustainabilitypossible/wp-content/uploads/2013/05/SOW2013-04-Moore-and-Rees-.pdf

230 Ask me why I cycle without a helmet. European Cyclists Federation: http://zakka.dk/cykelhjelm/ECF 090430 Helmet brochure for Velo-city 093.pdf

How much are helmet laws justified? http://cyclehelmets.org/1120.html

Brain injuries and the Dutch cyclist. Aug 19, 2010. A vie from the cyclepath blog. www.aviewfromthecyclepath.com/2010/08/brain-injuries-and-dutch-cyclist.html

Chapter 10: Climate Compassion

- For the list of all 88 Elements, see www.journeytothefuture.ca
- Vanmoof's New Electric Bike Will Be the Most Intelligent Commuter Bike in the World. Inhabitat, Aug 19, 2013. http://inhabitat.com/vanmoofs-new-electric-bike-will-be-the-most-intelligent-commuter-bike-in-the-world

The Copenhagen Wheel: www.superpedestrian.com

Helios handlebars: www.ridehelios.com

Hiring an electric 'smart' bike in Copenhagen. BBC, July 15, 2014. www.bbc.com/news/technology-28261140

- Green Streets Vancouver: www.youtube.com/watch?v=33jW3btENrA
 - Beautifying your boulevard and street. City of Vancouver. www.vancouver.ca/greenstreets
- 234 *Vancouver Was Awesome: The First Bicycle Craze* (in 1900). http://vancouverisawesome.com/2011/06/09/vancouver-was-awesome-the-first-bicycle-craze
- Freeway Planning and Protests in Vancouver 1954—1972. Ken MacKenzie, B.A., University of Ottawa, 1980. See also http://stopthepave.org/1967-strathcona-rejects-freeway
- How a crowd-sourced map changed Kuala Lumpur's ideas about cycling. Guardian, Sept 15, 2015. www.theguardian.com/cities/2015/sep/18/how-crowd-sourced-map-kuala-lumpurs-ideas-cycling
- Vancouver's Transportation 2040 plan calls for at least two thirds of all trips to be done by foot, bike or transit. In 2008, the proportion was 40%. See http://vancouver.ca/streets-transportation/transportation-2040.aspx

Transportation Modal Share - Vancouver vs. other Cities (2010). Rob Baxter's blog: http://rbaxter.blogspot.ca/2010/06/transportation-modal-share-vancouver-vs.html

- Building Bike Lanes Creates Twice As Many Jobs As Fixing Roads. Treehugger, Jan 20, 2012. www.treehugger.com/bikes/building-bike-lanes-creates-twice-as-many-jobs-as-fixing-roads.html
- Generic cost per mile models from the Florida State Department of Transport. ftp://ftp.dot.state.fl.us/LTS/CO/Estimates/CPM/summary.pdf

How Bicycling Creates Economic Impact: A Tale of Two Cities. Triple Pundit, Oct 4, 2012. www.triplepundit.com/2012/10/economic-impact-bicycling/

- Green Wave for Cyclists (Odense, Denmark): www.youtube.com/watch?v=mEOakyjuIEs
- 241 Junction Design in the Netherlands. https://bicycledutch.wordpress.com/2014/02/23/junction-design-in-the-netherlands/
- VeloMetro: www.velometro.com
- 243 Cargo-Bikes:

Yuba: http://yubabikes.com

Cargo Bikes in Canada: www.cargobike.ca Bakfiets (Holland): http://bakfiets.nl/eng/

Splendid Cycles (Portland): www.splendidcycles.com

Vancouver Mundo Cargo Bike: http://vancouverlongbikes.ca/VLB/Intro.html

Tony's Trailers: www.tonystrailers.com

Peer-to-Peer Carsharing is a fast moving field where these companies may have been replaced by

others:

Lyft: www.lyft.me
Sidecar: www.side.cr

245 This short-film on Amsterdam will BLOW YOUR MIND. Treehugger, Oct 23, 2013. www.treehugger.com/bikes/short-film-amsterdam-will-blow-your-mind-video.html

Why is cycling so popular in the Netherlands? BBC News, Aug 7, 2013. www.bbc.co.uk/news/magazine-23587916

Denmark Is Considered The Happiest Country. You'll Never Guess Why. Huffington Post, Oct 22, 2013. www.huffingtonpost.com/2013/10/22/denmark-happiest-country n 4070761.html

- 246 *10 completely 3D printed houses appear in Shanghai, built under a day.* 3ders, April 1, 2014. https://www.3ders.org/articles/20140401-10-completely-3d-printed-houses-appears-in-shanghai-built-in-a-day.html
- Vancouver social housing built from shipping containers. Vancouver Sun, Aug 2, 2013.

 www.vancouversun.com/news/metro/Vancouver+social+housing+built+from+shipping+container
 s/8739234/story.html
- 248 Urban farming start-up demonstrates aquaponics, vertical growing. Climate-KIC Case Studies, 2013. www.climate-kic.org/case-studies/urban-farming-start-up-demonstrates-aquaponicsvertical-growing

GrowUp Urban Farms, UK: www.growup.org.uk

Japanese-Inspired Woven Willow Kagome Sandpit Offers Natural Play for Kids in Vienna.
Inhabitat, March 4, 2014. http://inhabitat.com/japanese-inspired-woven-willow-kagome-sandpit-offers-natural-play-for-kids-in-vienna

250	Insect Hotels: <u>www.inspirationgreen.com/insect-habitats.html</u>
251	Nature Explore Community: www.natureexplorecommunity.org
252	Musical Light Swings on the Streets of Montreal. This is Colossal, Sept 13, 2012. www.thisiscolossal.com/2012/09/musical-swings-on-the-streets-of-montreal
	Street Artist 'Megx' Creates Giant Lego Bridge in Germany. This is Colossal, July 5, 2012. www.thisiscolossal.com/2012/07/street-artist-megx-creates-giant-lego-bridge-in-germany
	Phil Sarazen's bike stand art in Toronto: http://mapofsaltspring.com/phil_sarazen/loader.html
	Solar benches in Boston: www.businessinsider.com/boston-sets-up-smart-benches-2014-6
253	Has Japan designed the world's best bike shed? Guardian, Nov 5, 2009. www.guardian.co.uk/environment/green-living-blog/2009/nov/05/japan-best-bike-shed
254	Creative Bus Stop Designs: http://trendland.com/creative-bus-stop-design
	MIT's SENSEable EyeStop project: http://senseable.mit.edu/eyestop
255	Four-Level conversations are explained in <i>Presence: Human Purpose and the Field of the Future</i> , by Peter Senge, Otto Scharmer, Joseph Jaworski and Betty Sue Flowers. (Chapter 8: The Wedding). www.amazon.ca/Presence-Human-Purpose-Field-Future/dp/0385516304
256	LoftCube: www.loftcube.net
	Tiny Space-Age LoftCube Prefab Can Pop Up Just About Anywhere. Inhabitat, Sept 17, 2013. http://inhabitat.com/tiny-space-age-loftcube-prefab-can-pop-up-just-about-anywhere/
257	'Like summer on steroids': Australia's hottest ever year blamed on climate change, with 'really frightening' temperatures in store. Independent, March 4, 2013. www.independent.co.uk/news/world/australasia/like-summer-on-steroids-australias-hottest-ever-year-blamed-on-climate-change-with-really-frightening-temperatures-in-store-8519918.html
258	DARA's Climate Vulnerability Monitor estimates a million deaths a year by 2030. http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2010/in-numbers/
259	Climate Change and Trace Gases. James Hansen et al, Philosophical Transactions of the Royal Society 365, May 2007. Pp. 1925-1954. http://rsta.royalsocietypublishing.org/content/365/1856/1925
Chaj	pter 11: The Future Café
260	Real Time Farms - Know Where Your Food Comes From: www.realtimefarms.com
261	Wayblaze, a community crowd-sourced fundraising platform: www.wayblaze.com
262	Tax avoidance: Canada-Barbados tax deal loopholes revealed. CBC News, Oct 4, 2013. www.cbc.ca/news/canada/tax-avoidance-canada-barbados-tax-deal-loopholes-revealed-1.1913228
263	Google Project Glass, see https://bitly.com/HeOKaM and www.gizmag.com/google-glasses-2012/21566/

Hand gestures to change the image: Kiwi Move. www.kiwiwearables.com

- The Garden of Earthly Delights (1510-1515). www.wikipaintings.org/en/hieronymus-bosch/the-garden-of-earthly-delights-1515-7#supersized-artistPaintings-195402
- Google unveils new project glass features. Inhabitat, Feb 23, 2013. http://inhabitat.com/google-unveils-new-google-glass-features-announces-contest-to-find-prototype-testers/
- Jimmy Carter: A Five-Nation Plan to End the Syrian Crisis. New York Tines, Oct 23, 2015. www.nytimes.com/2015/10/26/opinion/jimmy-carter-a-five-nation-plan-to-end-the-syrian-crisis.html
- For her first-hand account of her life as a Muslim woman from Somalia, see *Infidel*, by Ayaan Ali Hirsi. Atria Books, 2008. www.amazon.com/Infidel-Ayaan-Hirsi-Ali/dp/0743289692
 - *Heretic: Why Islam Needs a Reformation Now*, by Ayaan Ali Hirsi. Alfred A. Knopf Canada, 2015. www.amazon.ca/Heretic-Why-Islam-Needs-Reformation/dp/0345808827
- Climate change will open up surprising new Arctic shipping routes. Washington Post, March 5, 2013. www.washingtonpost.com/blogs/wonkblog/wp/2013/03/05/climate-change-will-open-up-surprising-new-arctic-shipping-routes/
- The 2013 IPCC Report warned of a sea-level rise between 52 and 98 cm by 2100; other climate scientists are concerned that it could be higher if Greenland melts faster and there is increasing methane release from the melting Arctic. *Sea level in the 5th IPCC report*. Real Climate, Oct 15, 2013. www.realclimate.org/index.php/archives/2013/10/sea-level-in-the-5th-ipcc-report/
- 270 "The climate system is an angry beast and we are poking it with sticks." Dr. Wallace Broecker. CBC News, Nov 18, 2008. www.cbc.ca/news/technology/story/2008/11/18/f-savory-broecker.html
- In 2010, fossil fuels produced 65% of the anthropogenic (human-caused) greenhouse gases; landuse change (including deforestation) produced 11%; methane 16%; nitrous oxide 6%; CFCs 2%. 2014 IPCC Report, WG3, Summary for Policymakers, page 6. This website gives an automatic download: http://report.mitigation2014.org/spm/ipcc_wg3_ar5_summary-for-policymakers approved.pdf

Chapter 11: The Heart of Poverty

- 272 Cyclovia: https://en.wikipedia.org/wiki/Ciclov%C3%ADa
- *Canadian inventor tests new prototype of record-setting hoverboard.* CBC, Oct 14, 2015. www.cbc.ca/news/technology/hoverboard-duru-1.3270569
- Vertical Garden: http://inhabitat.com/tag/vertical-garden/
- The Dancing Crosswalk: http://faithhub.net/crosswalk-dancing-fun/
 - Vertical Garden Patrick Blanc: www.verticalgardenpatrickblanc.com
- Helen Keller: https://en.wikipedia.org/wiki/Helen Keller
- 277 How Many Cities Have a Ban on Plastic Bags? Rachel Cemansky, How Stuff Works. http://people.howstuffworks.com/how-many-cities-have-a-ban-on-plastic-bags.htm
 - California Legislature to consider statewide plastic bag ban. The Daily Californian, Jan 30, 2014. www.dailycal.org/2014/01/30/california-legislature-consider-statewide-plastic-bag-ban

Ban the Bottle: www.banthebottle.net

Abeego—Keep food fresher longer: www.abeego.ca

Tiffins for all: Food cart owner wants to wean Vancouverites off disposable takeout containers. Vancouver Sun, Jan 5, 2013.

 $www.vancouversun.com/life/Vancouver+food+cart+owner+wants+wean+locals+disposable+take\ out/7778013/story.html$

- Will we ever... clone a mammoth? BBC News, June 1, 2012. www.bbc.com/future/story/20120601-will-we-ever-clone-a-mammoth
- 279 Coastal Migration: http://en.wikipedia.org/wiki//Coastal migration
- 280 BC's Gardens of Eden: Why were aboriginal clam farms so far out of our sight? Crawford Kilian, The Tyee. 8 Feb 2007. http://thetyee.ca/Books/2007/02/08/ClamGardens
- 281 Legends of Vancouver, by Pauline Johnson-Tekahionwake. www.robirda.com/legends/index.html
- 282 *Historic Trauma and Aboriginal Healing*, by Cynthia Wesley-Esquimaux and Ph.D. Magdalena Smolewski, Ph.D. Aboriginal Healing Foundation, 2004. www.ahf.ca/downloads/historic-trauma.pdf

Infected at Birth, by Rob Wipond, Focus Magazine, July 2012, www.focusonline.ca/?q=node/413

Smallpox Epidemic of 1862 among Northwest Coast and Puget Sound Indians. Greg Lange, History Link. www.historylink.org/index.cfm?DisplayPage=output.cfm&File Id=5171

The Great Darkening, by Shawn Swanky: www.shawnswanky.com/work/the-great-darkening

For first-hand accounts of those years see the report from Canada's Truth and Reconciliation Commission. www.trc.ca/websites/trcinstitution/index.php?p=3

The Survivors Speak: A Report of the Truth and Reconciliation Commission of Canada: www.trc.ca/websites/trcinstitution/File/2015/Findings/Survivors Speak 2015 05 30 web o.pdf

- Four Directions Teachings: www.fourdirectionsteachings.com/transcripts/ojibwe.html
- Google Glass: https://en.wikipedia.org/wiki/Google Glass
- 286 Robertson calls for study of violence among mentally ill. Globe & Mail, Oct 22, 2013.

 www.theglobeandmail.com/news/british-columbia/robertson-calls-for-study-of-violence-among-mentally-ill/article15012727/

British Columbia Health of the Homeless Survey Report. Dr. Reinhard Michael Krausz, MD, PhD University of British Columbia, 2011. http://pacificaidsnetwork.org/wp-content/uploads/2012/07/BC-Health-of-the-Homeless-Survey-FINAL1.pdf

"Mental Health: We found extremely high rates of multiple mental disorders...in our participants; 93 percent had a current mental disorder. The most common disorders participants met the criteria for were alcohol and drug dependence, agoraphobia, major depressive episodes, posttraumatic stress disorder and general anxiety disorder."

Clair Martin Photography Downtown Eastside: www.clairemartinphotography.com/#/photo-essays/the-misfits/downtown-east-side/CM DowntownEastSide 01

Downtown Eastside Hope in the Shadows: www.hopeinshadows.com

Downtown Eastside Neighbourhood House: http://dtesnhouse.ca

Neighbourhood House Food Philosophy: http://dtesnhouse.ca/food-philosophy/

Downtown Eastside Kitchen Tables Project: http://dteskitchentables.org

289 Community Food Centres Canada: www.cfccanada.ca

The Stop: How the fight for good food transformed a community and inspired a movement, by Nick Saul and Andrea Curtis. Random House Canada, 2013. www.amazon.ca/The-Stop-Transformed-Community-Inspired/dp/0307360784

The Stop, Toronto: http://thestop.org

Bud Osborne. See www.abcbookworld.com/view author.php?id=2576

Bud Osborne: Amazingly Alive (video): www.youtube.com/watch?v=P15SqpAsPU0

V6A, Poetry's Prodigious Postal Code. The Tyee, June 15, 2012. http://thetyee.ca/Books/2012/06/15/Downtown-Eastside-Poetry/

Wheel of Fear, by Peter Leech and Gino Odjik: http://learningcircle.ubc.ca/files/2013/01/Wheel-of-Fear-Power-Point.pdf

Ayahuasca—*Peru: Hell and Back.* Kira Salak, National Geographic, March 2006. www.nationalgeographic.com/adventure/0603/features/peru.html

Ayahuasca May Hold Key to Breaking Addiction, But Canada Is Forcing Doctor to Stop Testing. Indian Country, April 30, 2012. http://indiancountrytodaymedianetwork.com/article/ayahuasca-may-hold-key-to-breaking-addiction,-but-canada-is-forcing-doctor-to-stop-testing-110073

Gabor Mate: http://drgabormate.com

- Judy is Judy Graves, a real woman of deep wisdom and compassion who showed how one-to-one support and affection can help get homeless people off the streets. *One Last Walk with Judy Graves*. The Tyee, April 12, 2013. http://thetyee.ca/News/2013/04/12/Judy-Graves
- 293 Downtown Eastside: Free dental clinic offers help with a smile. Vancouver Courier, Feb 27, 2014. www.vancourier.com/news/downtown-eastside-free-dental-clinic-offers-help-with-a-smile

Free and low cost dental services: www.partnersinhope.ca/local-services/low-cost-dental-services

294 Solefood Farms, Downtown Eastside: http://solefoodfarms.com

Solefood founders: http://solefoodfarms.com/founders/

City orchard brings new life to vacant Vancouver lot. Vancouver Sun, July 7, 2013. www.vancouversun.com/news/metro/City+orchard+brings+life+vacant+Vancouver/8627476/story.html

Vertical Gardening: www.organicgardening.com/learn-and-grow/vertical-gardening

Pinterest Vertical Vegetable Garden: www.pinterest.com/YanGoo/vertical-vegetable-garden

Vertical Home Gardens: www.verticalhomegardens.com

Tower Garden: www.towergarden.com

295 MOSAIC Microloans: www.mosaicbc.com/looking-work/micro-loans-program

FarmFolk CityFolk Local Food Microloan Fund: www.farmfolkcityfolk.ca/projects/microloan/

Chapter 13: Cape Danger

- 296 Vandana Shiva: http://vandanashiva.com
- 297 *'Self-aiming' rifle turns novices into expert snipers.* New Scientist, May 20, 2013. www.newscientist.com/article/dn23571-self-aiming-rifle-turns-novices-into-expert-snipers
- What's happening to the weather-making jet streams? New Scientist, Oct 23, 2013.

 www.newscientist.com/article/mg22029400-800-whats-happening-to-the-weather-making-jet-streams

Climate change altering jet stream, causing storms to "get stuck". Vancouver Observer, May 10, 2013. www.vancouverobserver.com/blogs/earthmatters/climate-change-altering-jet-stream-causing-storms-get-stuck

Wacky Weather, a Warmer Arctic, and a Slower Jet Stream – Is There a Link? Melanie Fitzpatrick, Union of Concerned Scientists, July 31, 2013. http://blog.ucsusa.org/wacky-weather-a-warmer-arctic-and-a-slower-jet-stream-is-there-a-link-194

299 *Ice-free Arctic in two years heralds methane catastrophe – scientist.* Guardian, July 24, 2013. www.guardian.co.uk/environment/earth-insight/2013/jul/24/arctic-ice-free-methane-economy-catastrophe

Effects of Climate Change on Polar Bears. WWF Fact Sheet. http://assets.worldwildlife.org/publications/398/files/original/Effects_of_Climate_Change_on_Polar Bears fact sheet.pdf

Climate change could turn polar bears brown. CBC, March 15, 2013. www.cbc.ca/news/world/climate-change-could-turn-polar-bears-brown-study-says-1.1320965

A curious cold spot in the Atlantic has scientists thinking their worst fears have come true. Inhabitat, Sept 27, 2015. http://inhabitat.com/a-curious-cold-spot-in-the-atlantic-has-scientists-thinking-their-worst-fears-have-come-true

Why some scientists are worried about a surprisingly cold 'blob' in the North Atlantic Ocean. Washington Post, Sept 24, 2015. www.washingtonpost.com/news/energy-environment/wp/2015/09/24/why-some-scientists-are-worried-about-a-cold-blob-in-the-north-atlantic-ocean/

301 Rahmstorf et al. Validate IPCC Temperature Projections, Find Sea Level Rise Underestimated. Skeptical Science, Nov 28, 2012. www.skepticalscience.com/rahmstorf-foster-cazenave-2012.html If the Church & Whit data trend continues, and there is an annual rise of 40 mm by 2030, that would be a 2.8 metres sea-level rise by 2100. If the acceleration increases, it could be higher yet.

Manmade Carbon Pollution Has Already Put Us On Track For 69 Feet Of Sea Level Rise. Joe Romm, Climate Progress, Feb 1, 2013.

http://thinkprogress.org/climate/2013/02/01/1527551/manmade-carbon-pollution-has-already-put-us-on-track-for-69-feet-of-sea-level-rise/

302 Latest numbers show at least 5 metres sea-level rise locked in. New Scientist, June 10, 2015. www.newscientist.com/article/mg22630253.300-latest-numbers-show-at-least-5-metres-sealevel-rise-locked-in.html

Coastal Nations, Megacities Face 20 Feet of Sea Rise. Climate Central, July 9, 2015. www.climatecentral.org/news/nations-megacities-face-20-feet-of-sea-level-rise-19217

Biggest Loser: Thawing Greenland Competes With Collapsing Antarctic For Fastest Ice Loss. Joe Romm, Climate Progress, May 20, 2014. http://thinkprogress.org/climate/2014/05/20/3439488/biggest-loser-greenland-antarctic-ice-loss/

New Studies Suggest Many Coastal Cities Eventually To Be Abandoned With Antarctic Ice Collapse. Joe Romm, Climate Progress, May 13, 2014. http://thinkprogress.org/climate/2014/05/13/3437033/coastal-cities-abandoned/

- Rising Sea Levels Could Cause Staggering Damage To These Cities. Business Insider, April 22, 2014. www.businessinsider.com/cities-exposed-to-rising-sea-levels-2014-4
- 304 Huge methane belch in Arctic could cost \$60 trillion. New Scientist, July 27, 2013. www.newscientist.com/article/dn23923-huge-methane-belch-in-arctic-could-cost-60-trillion.html

Frozen fuel: The giant methane bonanza. New Scientist, Aug 31, 2013. www.newscientist.com/article/mg21929320.800-frozen-fuel-the-giant-methane-bonanza.html

Go Finland! First Arctic nation to call for a global sanctuary around the North Pole. Greenpeace, Sept 4, 2013. www.greenpeace.org/international/en/news/Blogs/makingwaves/go-finland-first-arctic-nation-to-call-for-a-/blog/46483/

- The Transformational challenges of climate change. Interview with Professor John Schellnhuber and Professor Ottmar Edenhover. Post Carbon Pathways, July 2012, page 2. www.postcarbonpathways.net.au/wp-content/uploads/2013/02/JS-and-OE-interview_final2.pdf
- 306 Hand gestures— Kiwi Wearables: www.kiwiwearables.com
- For an earlier version of the technology, see Displair: http://displair.com
- Tianjin Eco-City: www.bbc.com/future/story/20120503-sustainable-cities-on-the-rise
- 309 Latin American Green City Index. <u>www.siemens.com/press/pool/de/events/corporate/2010-11-lam/Study-Latin-American-Green-City-Index.pdf</u>

Curitiba: the Greenest city on Earth. Brian Barth, The Ecologist, March 15, 2014. www.theecologist.org/green_green_living/2299325/curitiba_the_greenest_city_on_earth.html

- 310 Entrancing NASA Model Reveals the Feverish Future of Climate Change. The Atlantic Cities, Sept 30, 2013. www.theatlanticcities.com/technology/2013/09/watch-climate-get-terribly-weird-nasa-simulation/7054/
- NOAA Bombshell: Human-Caused Climate Change Already a Major Factor in More Frequent Mediterranean Droughts. Climate Progress, Oct 27, 2011. http://thinkprogress.org/climate/2011/10/27/355639/noaa-climate-change-mediterranean-droughts
- Climate change could end California farming: Chu. Reuters, Feb 4, 2009.

www.reuters.com/arti-	cle	e/2009/02/05/us-	-chu-idUS	TRE5135	50	Y20090205
-----------------------	-----	------------------	-----------	---------	----	-----------

California's drought isn't doomsday, but yes, it will change the state. VOX, April 29, 2015. www.vox.com/2015/4/29/8511097/california-drought-farming

313 *Groundwater depletion in India worst in world: NASA.* Deccan Herald, June 18, 2015. www.deccanherald.com/content/484290/groundwater-depletion-india-worst-world.html

Study: Third of Big Groundwater Basins in Distress. NASA, June 16, 2015. www.nasa.gov/jpl/grace/study-third-of-big-groundwater-basins-in-distress

- When the Rains Stop, the Emperors Fall.

 http://asianhistory.about.com/od/asianenvironmentalhistory/a/ChinaMonsoon.htm
- 315 Nation Under Siege: Sea Level Rise at Our Doorstep. Architecture 2030: http://architecture2030.org/files/nation under siege lr.pdf

Scientist: 'Miami, As We Know It Today, Is Doomed. It's Not A Question Of If. It's A Question Of When.' Joe Romm, Climate Progress, June 23, 2013. http://thinkprogress.org/climate/2013/06/23/2199031/scientist-miami-as-we-know-it-today-is-doomed-its-not-a-question-of-if-its-a-question-of-when/

A Tale of Two Cities: America's Bipolar Climate Future. Spiegel, Dec 13, 2013. www.spiegel.de/international/world/contradictory-climate-change-planning-in-new-york-city-and-new-bern-a-938704.html

- How do you Measure Happiness? The Top Questionnaires. The Pursuit of Happiness: www.pursuit-of-happiness.org/science-of-happiness/measuring-happiness
- Resilient City Ranking: www.triplepundit.com/2011/06/top-10-globally-resilient-cities

European Green City Index:

www.siemens.com/entry/cc/features/greencityindex international/all/en/pdf/report en.pdf

America's 50 Greenest Cities: www.popsci.com/environment/article/2008-02/americas-50-greenest-cities

- Annual World Population Change: 1950-2050 www.census.gov/population/international/data/idb/worldpopchggraph.php
- For a blunt assessment, see the 2012 Bristol Cabot Lecture *Real clothes for the Emperor: Facing the challenges of climate change*, by Kevin Anderson: Professor of Energy and Climate Change, University of Manchester, Tyndall Centre. Nov 6, 2012. www.bristol.ac.uk/cabot/events/2012/194.html
- For the current CO₂ level, see http://co2now.org
- How Climate Change Could Cause An Epic Collapse Of Ocean Ecosystems. Climate Progress, Oct 16, 2015. http://thinkprogress.org/climate/2015/10/16/3712964/simplifying-the-oceans
- Pentagon weapons-maker finds method for cheap, clean water. Reuters, March 13, 2013 www.reuters.com/article/2013/03/13/us-usa-desalination-idUSBRE92C05720130313
- Collapse: How Societies Choose to Fail or Succeed.
 http://en.wikipedia.org/wiki/Collapse: How Societies Choose to Fail or Succeed

- Jared Diamond: Why do Civilizations Collapse? TED Lecture, Feb 2008: www.ted.com/talks/jared diamond on why societies collapse.html
- Why Nations Fail: The Origins of Power, Prosperity, and Poverty, by Daron Acemoglu and James Robinson. Crown Publishers, 2012. www.amazon.ca/Why-Nations-Fail-Origins-Prosperity/dp/0307719219
- For the original calculation, see *Time to Wake Up: Days of Abundant Resources and Falling Prices Are Over Forever*. The Oil Drum, April 29, 2011.

 www.theoildrum.com/pdf/theoildrum_7853.pdf To check the numbers, go to www.moneychimp.com/calculator/compound interest calculator.htm
- 326 Chris Madden's great cartoons: www.chrismadden.co.uk/cartoon-gallery/environment-cartoon-man-eating-the-earth/
- 327 Genuine Progress: http://rprogress.org/sustainability_indicators/genuine_progress_indicator.htm
- Almost Twice As Many: Green Jobs at the End of the Age of Fossil Fuels, by Guy Dauncey. The Practical Utopian, September 2015. https://guydauncey.wordpress.com/2015/09/10/almost-twice-as-many-green-jobs-if-canada-phases-out-fossil-fuels
 - Our Clean Energy Economy. NextGen Climate America, Nov 9, 2015. "A clean energy economy will create more than 1 million additional jobs by 2030 and up to 2 million jobs in 2050 nationally." http://nextgenamerica.org/blog/our-clean-energy-economy/
- Post Growth Institute—Creating global prosperity without economic growth: http://postgrowth.org

The Degrowth Movement Is Growing. The Tyee, Vancouver, May 5, 2010. http://thetyee.ca/Life/2010/05/05/Degrowth/

Prosperity without Growth? The Transition to a Sustainable Economy. UK Sustainable Development Commission, 2009. www.sd-commission.org.uk/publications.php?id=914

Life after Growth—Economics for Everyone. A film by Leah Temper and Claudia Medina. https://vimeo.com/10871269

- 330 Tikopia: http://en.wikipedia.org/wiki/Tikopia
- For an earlier version of World7, see World3 (2002): www.world3simulator.org
- In the 2013 IPCC Report methane was given a global warming potential (GWP) of 34 over 100 years, 84 over 20 years. *More Bad News For Fracking: IPCC Warns Methane Traps Much More Heat Than We Thought.* Climate Progress, Oct 2, 2013. http://thinkprogress.org/climate/2013/10/02/2708911/fracking-ipcc-methane
- New Study Shows Climate Change Largely Irreversible. NOAA, Jan 26, 2009 www.noaanews.noaa.gov/stories2009/20090126_climate.html
- If a 4 kW PV system costs \$6,000 in 2032, over a 30-year period you will save \$30,000 in purchased electricity if the hydro (electricity) rate increases by 3% a year, \$60,000 if it increases by 5% a year.
- 335 Google Invests \$607 Million in Seawater-Cooled Finland Data Center. Softpedia, Nov 5, 2013. http://news.softpedia.com/news/Google-Invests-450-million-607-million-in-Seawater-Cooled-Finland-Data-Center-397232.shtml

- Google Is Planning For A Zero-Waste, Circular Economy. Fast CoExist, Oct 7, 2015. www.fastcoexist.com/3051869/google-is-planning-for-a-zero-waste-circular-economy
- If a film producer would like to help me create *Hope's Sister*, please get in touch with the author via www.journeytothefuture.ca
- The Great Transition Project. New Economics Foundation, London, UK. www.neweconomics.org/teams/entry/the-great-transition
- 338 Deal of the century: buy out the US coal industry for \$50bn. Guardian, March 11, 2014. www.theguardian.com/sustainable-business/us-coal-industry-buyout
- 339 *POSCO aims to halt CO2 via hydrogen steelmaking*. Reuters, Nov 27, 2009. www.reuters.com/article/2009/11/27/posco-carbon-idUSSEO205120091127
- Power Shift—Divest Fossil Fuels: www.wearepowershift.org/campaigns/divestcoal

Chapter 14: Climate Progress

The clearest expression of this reality comes from the work of Kevin Anderson and Alice Bows at the University of Manchester and the Tyndall Centre for Climate Research in the UK. http://kevinanderson.info/

Kevin Anderson: "Scientists are Cajoled into Developing...Politically Palatable Messages" on Climate. DeSmogBlog, July 16, 2013. http://desmog.ca/2013/07/07/Kevin-Anderson-scientists-cajoled-delivering-politically-palatable-messages-climate

Why carbon prices can't deliver the 2°C target. Kevin Anderson, Aug 13, 2013 http://kevinanderson.info/blog/why-carbon-prices-cant-deliver-the-2c-target

Climate Change Roundtable—Ian Sinclair. December 2013. https://ianjsinclair.wordpress.com/2014/09/10/climate-change-roundtable/

The Ostrich or the Phoenix? Cognitive dissonance or creativity in a changing climate. October 2013. http://kevinanderson.info/blog/wp-content/uploads/2013/10/Edinburgh-presentation-Oct-2013.pdf

- Before World War I, Germany had no oil, making its navy disadvantaged compared to Britain, which had access to oil in the Middle East. For recent conflicts, see *Six Global Conflicts That Have Flared Up Over Oil and Gas*. Michael Klare, Tom's Dispatch. May 10, 2012. www.alternet.org/story/155372/6 global conflicts that have flared up over oil and gas
- For a fascinating first-hand account of the quadruple whammy, and the unreality of so many fossil fuel investments, see *The Winning of the Carbon War*, by Jeremy Leggett (2015). www.jeremyleggett.net
- For emerging parallels from different ends of the political spectrum, see the Global Green Growth Institute www.gggi.org
 - The Gaian League: www.occupyworldstreet.org/the-gaian-league
- 345 *The 2040 Climate Imperative*, by Guy Dauncey. BCSEA, February 2015. www.bcsea.org//2040-imperative
- Liberate the Bank of Canada, Intrepid Think Tank Urges. The Tyee, April 17, 2015. http://thetyee.ca/Opinion/2015/04/17/Liberate-Bank-of-Canada

- COMERS v. Bank of Canada: Canadians Still Fighting to Restore their National Public Bank. Public Banking Institute, Oct 17, 2015. www.publicbankinginstitute.org/comers-v-bank of canada canadians still fighting to restore their national public bank
- Indian monsoon more likely to fail as global warming accelerates Climate tipping point. Climate Citizen, Nov 11, 2012. http://takvera.blogspot.ca/2012/11/indian-monsoons-more-likely-to-fail-as.html
- 348 *InfoGraphic:* \$1 Trillion in Global Fossil-Fuel Subsidies. Huffington Post, June 21, 2012. www.huffingtonpost.com/stephen-kretzmann/fossil-fuel-subsidies-1-trillion b 1605904.html
- 349 Sub 100 gm/km CO2 emissions Cars (UK). http://greencarsite.co.uk/low-emissions-cars/

Reducing CO2 emissions from passenger cars. European Commission Climate Action. http://ec.europa.eu/clima/policies/transport/vehicles/cars/

The car of the future — the very near future — might be driven by the wind. Public Radio International, April 8, 2015. www.pri.org/stories/2015-04-08/car-future-very-near-future-might-be-driven-wind

- 350 The world can be powered by alternative energy, using today's technology, in 20-40 years, says Stanford researcher Mark Z. Jacobson. Stanford Report, Jan 26, 2011. http://news.stanford.edu/news/2011/january/jacobson-world-energy-012611.html
- 351 Green energy pays for itself in lives saved from smog. New Scientist, Sept 22, 2013.

 www.newscientist.com/article/dn24246-green-energy-pays-for-itself-in-lives-saved-from-smog.html
- 352 Islamic leaders issue bold call for rapid phase out of fossil fuels. Guardian, Aug 18, 2015. www.theguardian.com/environment/2015/aug/18/islamic-leaders-issue-bold-call-rapid-phase-out-fossil-fuels

Pope Francis' Encyclical on Climate Change, Laudato Si: http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco 20150524 enciclica-laudato-si.html

- 353 *Q&A With Philippines Climate Envoy Who's Fasting After Super Typhoon Haiyan*. National Geographic, Nov 15, 2013. http://news.nationalgeographic.com/news/2013/11/131115-phillippines-climate-envoy-fasting-interview
- 354 Sing for the Climate: http://singfortheclimate.com
- The Art Scene Warehouse: www.artscenewarehouse.com
- 356 Climate Change Warning Labels on Gas Pump Nozzles. Climate CoLab. http://climatecolab.org;18081/plans/-/plans/contestId/1300210/planId/3905

Do Carbon Labels change shopping behaviour? The Conversation, June 2012. http://theconversation.com/do-carbon-labels-change-shopping-behaviour-7184

357 Eye-Stinging Beijing Air Risks Lifelong Harm to Babies. Bloomberg News, Feb 6, 2013. www.bloomberg.com/news/2013-02-06/eye-stinging-beijing-air-risks-lifelong-harm-to-babies.html

- 358 King's College London: Global Advisor Questions. Ipsos MORI, 2010. <u>www.bitly.com/ipsos-questions</u>
 - Global survey: Where in the world is most and least aware of climate change? Carbon Brief, July 27, 2015. www.carbonbrief.org/global-survey-where-in-the-world-is-most-and-least-aware-of-climate-change
- China's carbon tax is very real. Alvin Lee and Yang Fuqiang. China Dialogue, Jan 27, 2013. www.chinadialogue.net/article/show/single/en/4742-China-s-carbon-tax-is-very-real
- China Solar Power Surges: Leaves Entire World Behind. EarthTechling, April 26, 2015. http://earthtechling.com/2015/04/china-solar-power-surges/
- China's Wind Energy Capacity To Triple By 2020, Says GlobalData. Clean Technica, Sept 25, 2015. http://cleantechnica.com/2015/09/22/chinas-wind-energy-capacity-triple-2020-globaldata
- Stopping Climate Change 'Almost Impossible' If China Can't Quit Coal, Report Says. Climate Progress, May 12, 2014. http://thinkprogress.org/climate/2014/05/12/3436673/coal-dependent-china/
- Many studies show how different countries or regions can achieve 100% renewables. *Reenergizing Europe: Putting the EU on track for 100% renewable energy* (2013) http://awsassets.panda.org/downloads/res_report_final_1.pdf
 - *5 Countries Leading the Way Toward 100% Renewable Energy*. EcoWatch, Jan 9, 2015. http://ecowatch.com/2015/01/09/countries-leading-way-renewable-energy/
- 364 *Iran's invisible opportunity*, by Amory Lovins. Bulletin of the Atomic Scientists, Sept 30, 2015. http://thebulletin.org/iran's-invisible-opportunity8774
- 365 GCC's emission levels make solar energy the best option: expert. Gulf Times, Nov 30, 2013. www.gulf-times.com/qatar/178/details/372196/gcc's-emission-levels-make-solar-energy-the-best-option:-expert

The Gulf's bright solar-powered future. Aljazeera, Jan 23, 2014. www.aljazeera.com/indepth/features/2014/01/gulf-bright-solar-powered-future-201412363550740672.html

Solar GCC Alliance: www.solargcc.com

- 366 Eccoppia's waterless robots completely clean solar panel dust in Israel. Green Prophet, March 31, 2014. www.greenprophet.com/2014/03/ketura-sun-solar-park-deployed-an-army-of-robots-to-clean-their-panels-in-israel
- 367 Saudi Arabia currently consumes 211 terawatt-hours of electricity a year.
- Qatar has an average of 9.4 hours of sunshine a day, or 3,431 hours a year (compared to 1,100 in BC); so 1 GW of solar PV will produce 3,431 GWh a year. According to new NREL research, a 1 MW solar farm requires 8 acres. One square kilometre has 247 acres, so will accommodate 30 MW, and 1,000 square kilometres will accommodate 30 GW. This will produce 30 x 3,431 GWh in Qatar and Saudi Arabia = 100,000 GWh.

Qatar has 11,571 sq. km; Saudi Arabia has 2,149,690 sq. km. A square kilometre in Qatar or Saudi Arabia receives as much solar energy in a year as is contained in 1.5 million barrels of oil, so 1,000 sq. km. = 1.5 billion barrels of oil a year.

Qatar's current oil production is 1.5 million barrels a day (547 million barrels a year), and its proved reserves are 25 billion barrels. Using solar, it can produce its equivalent annual oil production on 360 square kilos of desert land.

Saudi Arabia's current oil production is 11 million barrels a day, 4 billion barrels a year, and its proved reserves are 267 billion barrels (with or without a pinch of salt). Using solar, it can produce its equivalent annual oil production on 2,700 square kilos of desert land, or just over 1,000th of its area.

Qatar energy data (EIA): www.eia.gov/beta/international/country.cfm?iso=QAT

Saudi Arabia data (EIA): www.eia.gov/beta/international/country.cfm?iso=SAU

Report Counts Up Solar Power Land Use Needs. IEEE Spectrum, Aug 7, 2013, http://spectrum.ieee.org/energywise/green-tech/solar/report-counts-up-solar-power-land-use-needs

- Dutch government ordered to cut carbon emissions in landmark ruling. Guardian, June 24, 2015. www.theguardian.com/environment/2015/jun/24/dutch-government-ordered-cut-carbon-emissions-landmark-ruling
- 370 Cool Congregations: www.coolcongregations.org

Interfaith Power and Light: www.interfaithpowerandlight.org

Our Children's Trust: www.ourchildrenstrust.org

Chapter 15: Calling All Carbon

Ocean acidification putting marine life in jeopardy, scientists warn. CTV News, Nov 16, 2013. www.ctvnews.ca/sci-tech/ocean-acidification-putting-marine-life-in-jeopardy-scientists-warn-1.1546286

Ocean Acidification: Summary for Policymakers. International Geosphere-Biosphere Programme, 20131

 $\underline{\text{http://igbp.sv.internetborder.se/download/}18.30566fc6142425d6c91140a/1384420272253/OA_spm2-FULL-lorez.pdf}$

Ocean Acidification: Carbon Dioxide Is Putting Shelled Animals at Risk. National Geographic. http://ocean.nationalgeographic.com/ocean/critical-issues-ocean-acidification

New York's annual CO₂ emissions: 54 million tonnes in 2013. www.fastcodesign.com/1671297/infographic-watch-nyc-get-buried-under-its-co2-emissions

One tonne of carbon, mixed with oxygen, becomes 3.667 tonnes of carbon dioxide. For Earth as a whole, 36 billion tonnes of CO₂ were released in 2013 from human activities.

- For the full Peak Carbon by 2034 Table, see www.journeytothefuture.ca
- 375 The David Suzuki Foundation: www.davidsuzuki.org

Katerva Awards: www.katerva.net

- 376 Telepresence: www.cisco.com/c/en/us/products/collaboration-endpoints/immersive-telePresence/index.html
- 377 The radiative forcing potential of different climate geoengineering options, by T. M. Lenton and

N. E. Vaughan. Atmospheric Chemistry and Physics Discussions, 2009. www.tinyurl.com/cg24wa

Drones are changing the face of conservation. Illegal Logging Portal, May 29, 2013. www.illegal-logging.info/content/drones-are-changing-face-conservation

Global Forest Watch: www.globalforestwatch.org

Greenpeace - Forest Solutions: www.greenpeace.org/international/en/campaigns/forests/solutions/

Using the Google Cloud to Stop Illegal Logging. Bloomberg Business Week, Feb 24, 2014. www.businessweek.com/articles/2014-02-24/using-the-google-cloud-to-stop-illegal-logging

Biodiversity app logs insects by their telltale call. New Scientist, Aug 31, 2013. www.newscientist.com/article/mg21929324.000-biodiversity-app-logs-insects-by-their-telltale-call.html

379 To what extent could planting trees help solve climate change? Guardian, Nov 29, 2012. www.theguardian.com/environment/2012/nov/29/planting-trees-climate-change

What can one million trees do? Mother Nature Network. www.mnn.com/money/sustainable-business-practices/sponsorstory/what-can-1-million-trees-do-infographic

Plant for the Planet: www.plant-for-the-planet.org

China replanting forests to fight pollution. Vancouver Sun, March 23, 2014.

www.vancouversun.com/Business/asiapacific/Chuck+Chiang+China+replanting+forests+fight/9651435/story.html

Building the Great Green Wall of China. BBC Future, Dec 12, 2012. www.bbc.com/future/story/20121211-the-green-wall-of-china

- 381 Great Green Wall: www.thegef.org/gef/great-green-wall
- Soil Carbon Sequestration Impacts on Global Climate Change and Food Security, by Rattan Lal. Science, June 11, 2004. www.sciencemag.org/content/304/5677/1623.abstract

Restoring the Earth: Planting Trees to Sequester Carbon. Plan B 3.0: Mobilizing to Save Civilization, by Lester Brown, Chapter 8. www.earth-policy.org/books/pb3/PB3ch8 ss6

Carbon Sequestration and Climate Change. Soil as a World Heritage. May 2012. A presentation by Rattan Lal: http://presenter.cfaes.ohio-state.edu/link/Ratan_Lal_5-7-12_- Flash %28Large%29 - 20120507 03.37.06PM.html

Historically, farmland soils stored as much as 2.3 trillion tonnes of carbon. Farming has caused the loss of between 200 and 300 billion tonnes.

383 Rebuilding the Earth's Soils. Virgin Earth Challenge, March 26, 2014. www.virginearth.com/2014/03/rebuilding-the-earths-soils

A new soil carbon app for Scottish farmers. James Hutton Institute. <u>www.hutton.ac.uk/news/new-soil-carbon-app-scottish-farmers</u>

- 384 Grasslands map: http://environment.nationalgeographic.com/environment/habitats/grassland-map/
- Half the world's soil carbon = as much as 1.6 trillion tonnes.

A Pleistocene Park. Can Wooly Mammoths Save the World? Virgin Earth Challenge, Nov 11 2013. www.virginearth.com/2013/11/a-pleistocene-park-pt-1

Pleistocene Park: www.pleistocenepark.ru/en/

The Big Thaw, by Adam Wolf. Stanford Magazine, October 2008. www.pleistocenepark.ru/files/Wolf PleistocenePark StanMag.pdf

- 387 How to green the desert and reverse climate change. Allan Savory TED Lecture, March 2013. (He overstates the case, but that does not diminish the fundamental soil science.)

 www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change.html
- Tengerism: <u>www.facebook.com/tengerism-101755349935936/timeline/</u>

Wolf Totem, by Jiang Rong (2004). www.amazon.com/Wolf-Totem-Novel-Jiang-Rong/dp/0143115146

In Bethesda Maryland, where Martha Holdridge has been using management intensive grazing, soil testing by West Virginia State University demonstrated a five-year increase in soil carbon content in the top two inches from 4.1% to 8.3%, storing an additional 4 tons of carbon per acre over five years (1.8 tonnes per hectare per year). If this could be replicated on 3.4 billion hectares of grassland, it could sequestrate 6 billion tonnes (6 Gt) of carbon a year. See http://soilcarboncoalition.org/opportunity

Soil organic matter needed to bring down atmospheric carbon: http://soilcarboncoalition.org/calculation

For detailed discussion, see *Challenges and opportunities for carbon sequestration in grassland systems. A technical report on grassland management and climate change mitigation.* FAO, 2010. www.fao.org/fileadmin/templates/agphome/documents/climate/AGPC_grassland_webversion_19.pdf The IPCC estimates that grasslands, forestry and agriculture could sequester approximately 8 Gt CO₂ a year at a carbon price of \$100 a tonne CO₂.

390 The Biochar Solution by Albert Bates: www.newsociety.com/Books/B/The-Biochar-Solutio

International Biochar Initiative: www.biochar-international.org

Sustainable biochar to mitigate global climate change. Nature, August 2010. Dominic Woolf, et al. www.nature.com/ncomms/journal/v1/n5/full/ncomms1053.html

Refilling the Carbon Sink: Biochar's Potential and Pitfalls, David Levitan, Environment 360. http://e360.yale.edu/feature/refilling the carbon sink biochars potential and pitfalls/2349

What is seagrass? www.seagrasswatch.org/seagrass.html

Seagrass stores more carbon than forests. ABC Science, May 22 2012. www.abc.net.au/science/articles/2012/05/22/3508277.htm

Blue Carbon—The Role of Healthy Oceans in Binding Carbon, UNEP 2009. www.grida.no/publications/rr/blue%2Dcarbon

The Salish Sea: www.salishsea.org

Geo-engineering with iron might work after all. New Scientist, 12 July 2012. www.newscientist.com/article/mg21528744.100-geoengineering-with-iron-might-work-after-

all.html

Dumping iron at sea can bury carbon for centuries, study shows. Guardian, July 18, 2012. www.guardian.co.uk/environment/2012/jul/18/iron-sea-carbon

- Chemtrails: US Patent 5003186 www.tinyurl.com/an375s was taken out by the Hughes Aircraft Company in 1991 for spray nozzles; the approach is described in Chapter 28 of *Policy Implications of Greenhouse Warming* (1992) www.tinyurl.com/cwe9ho One of the concept's pioneers, the physicist Edward Teller (founder of the A-Bomb), describes the details in a 1997 paper *Global Warming and Ice Ages: Prospects for Physics-Based Modulation of Global Change*, prepared for the 22nd International Seminar on Planetary Emergencies in Sicily, August 20-23, 1997. www.tinyurl.com/69nj2b It is very unfortunate that the matter of chemtrails has been taken up by conspiracy thinkers and conflated with climate denial.
- Engineering the ocean. David Biello, Aeon, July 1, 2014. http://aeon.co/magazine/technology/cantiny-plankton-help-reverse-climate-change/
- 395 *Prospects for an Emergency Drawdown of CO2*, by William Calvin. Geo-Engineering blog, March 1, 2013. http://geo-engineering.blogspot.ca/2013/03/using-the-oceans-to-remove-co2-from-the-atmosphere.html

Professor William Calvin: http://williamcalvin.com

The Great CO₂ Cleanup: Backing Out of the Danger Zone, by William Calvin. www.amazon.com/Great-CO₂-Cleanup-urgent-ebook/dp/B005ZSQAX8

396 *Throwing rocks at CO*₂. Smart Planet, Jan 24, 2012. <u>www.smartplanet.com/blog/savvy-scientist/throwing-rocks-at-co2/275</u>

Smartstones, Olivine Foundation: http://alvastbedankt.nl

Olivine against climate change and ocean acidification. R.D.Schuiling and Oliver Tickell (no date). www.innovationconcepts.eu/res/literatuurSchuiling/olivineagainstclimatechange23.pdf

3.667 gigatonnes of absorbed carbon dioxide becomes 1 gigatonne of carbon.

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398

Method of Carbon Ecosequestration	Gigatonnes of carbon stored per year	
1. Temperate Rainforests	1.0	
2. Tree-planting	0.3	
3. Farmlands	1.5	
4. Grasslands	2.0	
5. Biochar	0.1	
6. Ocean seagrass	0.25	
7. Ocean iron plankton fertilization	0.5	
8. Ocean plankton downwelling	0.2	
9. Olivine	0.1	
Total	5.95	

400 PPM: Can Artificial Trees Help Pull CO₂ from the Air? Scientific American, May 9, 2013. www.scientificamerican.com/article.cfm?id=prospects-for-direct-air-capture-of-carbon-dioxide

Carbon Engineering: cost-effective chemical capture of carbon directly from the air. Virgin Earth Challenge, July 2, 2013. www.virginearth.com/2013/07/carbon-engineering-cost-effective-chemical-capture-of-carbon-directly-from-the-air

Scientists are building a system that could turn atmospheric CO2 into fuel. Science Alert, July 22, 2015. www.sciencealert.com/scientists-are-building-a-system-that-could-turn-atmospheric-co2-into-fuel

Carbon nanofibres made from CO2 in the air. BBC News, Aug 16, 2015. www.bbc.com/news/science-environment-33998697

Chapter 16: Ethical Entropy

- 399 *How Wall Street captured Washington's effort to rein in banks*. Reuters, April 9, 2015. www.reuters.com/investigates/special-report/usa-bankrules-weakening
- For this and many other banking insights I thank Joris Luyendijk, author of *Swimming with Sharks: My Journey into the World of the Bankers*. Guardian Books, 2015. https://bookshop.theguardian.com/catalog/product/view/id/297220/
- "Estimates of the face value of all derivatives outstanding top a quadrillion (1,000 trillion) dollars, or more than 14 times the entire world's annual GDP. By comparison, the total value of all the stocks trading on the New York Stock Exchange is roughly \$15 trillion." Why Derivatives May Be the Biggest Risk for the Global Economy. Time Magazine, March 27, 2013. http://business.time.com/2013/03/27/why-derivatives-may-be-the-biggest-risk-for-the-global-economy
 - In December 2014, the BIS reported the notional value of all over-the-counter derivatives at \$630 trillion, the gross market value at \$20 trillion. See www.bis.org/statistics/dt1920a.pdf
- 402 *U.S. banks moved billions of dollars in trades beyond Washington's reach*. Reuters, Aug 21, 2015. www.reuters.com/investigates/special-report/usa-swaps/
 - Why tax havens will be at the heart of the next financial crisis. Tax Justice Network, Sept 3, 2015. www.taxjustice.net/2015/09/03/why-tax-havens-will-be-at-the-heart-of-the-next-financial-crisis
 - *Understanding Financial Interconnectedness. IMF, October 2010.* www.imf.org/external/np/pp/eng/2010/100410.pdf
- See *Swimming with Sharks: My Journey into the World of the Bankers*, by Joris Luyendijk. Guardian Books, 2015. https://bookshop.theguardian.com/catalog/product/view/id/297220/
- 404 Canada household debt ratio hits new record of 163.3%. Financial Post, March 12, 2015. http://business.financialpost.com/personal-finance/debt/canada-household-debt-ratio-hits-new-record-of-163-3
 - *3 reasons the average American may be worse off than Greece.* Fortune, July 9, 2015. http://fortune.com/2015/07/09/3-reasons-average-americans-may-be-worse-off-than-greece
- For the Pompeii story and the nastiness quote, see *The Winning of the Carbon War*, by Jeremy Leggett (2015). www.jeremyleggett.net

- Bretton Woods Conference: https://en.wikipedia.org/wiki/Bretton_Woods_Conference
- Credit for this analysis is due to Yanis Varoufakis, economist and former Greek finance minister, and his book *The Global Minotaur: America, Europe and the Future of the Global Economy*. http://yanisvaroufakis.eu/books/the-global-minotaur Debit for any misunderstanding of his analysis is mine.
- For an excellent real-time analysis of the carbon bubble crisis, see *The Winning of The Carbon Wars*, by Jeremy Leggett. www.jeremyleggett.net
- There are many possible triggers for the next crash. John Lanchester suggests panic in the Eurozone caused by defaults, and a country dropping out of the currency. There could also be a meltdown caused by automatic stock trading, or by the housing bubble bursting in China.

I.O.U: Why Everyone Owes Everyone And No-One Can Pay, by John Lanchester. Penguin, 2010. www.amazon.com/I-O-U-Why-Everyone-Owes-One/dp/1439169861

The Looming Threat That Could Initiate the Next Economic Collapse, Alternet, Sept 17, 2012. www.alternet.org/economy/looming-threat-could-initiate-next-economic-collapse

The Next Financial Crisis Will Be Hellish, And It's On Its Way, by Addison Wiggin. Forbes, June 1, 2011. https://www.forbes.com/sites/greatspeculations/2011/06/01/the-next-financial-crisis-will-be-hellish-and-its-on-its-way/

Could the Global Bond Market cause another Global Financial Crisis in 2013? International Policy Digest, Jan 5, 2013. www.internationalpolicydigest.org/2013/01/05/could-the-global-bond-market-cause-another-global-financial-crisis-in-2013/

410 Bond bubble threatens financial system, Bank of England director warns. Guardian, June 12, 2013. www.guardian.co.uk/business/2013/jun/12/bond-bubble-threatens-financial-system

Meltdown 2015? Arturo Bris. IMD Business School, Switzerland, August 2014. www.imd.org/research/challenges/TC060-14-meltdown-2015-arturo-bris.cfm

This is no recovery, this is a bubble – and it will burst. Ha-Joon Chang, Guardian, Feb 24, 2014. www.theguardian.com/commentisfree/2014/feb/24/recovery-bubble-crash-uk-us-investors

Feeding the Bubble: Is the Next Crash Brewing? Spiegel, Dec 3, 2013 www.spiegel.de/international/business/cheap-central-bank-money-contributes-to-dangerous-bubbles-a-936823.html

The Crash of 2016: The Plot to Destroy America—and What We Can Do to Stop It, by Thom Hartmann. Twelve, 2013. www.amazon.ca/The-Crash-2016-Destroy-America/dp/0446584835

Another Financial Crisis Is Looming—Here's Why and How It Will Play Out. David Dayen, Alternet, March 26, 2014. www.alternet.org/economy/another-financial-crisis-looming-heres-why-and-how-it-will-play-out

- The Progressive Agenda to Combat Income Inequality: http://progressiveagenda.us
- 412 Fast-track Hands the Money Monopoly to Private Banks Permanently. Ellen Brown, Web of Debt. June 11, 2015. http://ellenbrown.com/2015/06/11/fast-tracking-tisa-stealth-block-to-monetary-reform/

The Scariest Trade Deal Nobody's Talking About Just Suffered a Big Leak. New Republic, June 4, 2015. www.newrepublic.com/article/121967/whats-really-going-trade-services-agreement

- Wikileaks Trade In Services Agreement: https://wikileaks.org/tisa/
- With 'So Help Me God' Ethics Oath, Dutch Banks Seek Redemption. New York Times, Dec 12, 2014. http://dealbook.nytimes.com/2014/12/12/netherlands-asks-bankers-to-swear-to-god
- This description may be more suited to London bankers; less so to Canadian bankers.
- Thomas Piketty's Capital: everything you need to know about the surprise bestseller. Paul Mason, Guardian, April 28, 2014. www.theguardian.com/books/2014/apr/28/thomas-piketty-capital-surprise-bestseller
- The Universal Declaration of Human Rights: www.un.org/en/documents/udhr
- 417 'Deeply flawed operating manual.' thanks to Jeremy Leggett. www.jeremyleggett.net
 - 'A complete overhaul...completely new DNA.' thanks to Joris Luyendijk, *Swimming with Sharks: My Journey into the World of the Bankers*, p. 253. https://bookshop.theguardian.com/catalog/product/view/id/297220/
- See *The Empathic Civilization*, by Jeremy Rifkin. http://empathiccivilization.com

Chapter 17: Building a Cooperative Economy

- Joe Hill: http://en.wikipedia.org/wiki/Joe Hill
- Paul Robeson singing *Joe Hill*. <u>www.youtube.com/watch?v=n8Kxq9uFDes</u>
 - Joan Baez singing *Joe Hill*: www.youtube.com/watch?v=3p4vKd6tNO8
- Neve Shalom—Ocean of Peace—Wahat Al-Salam: http://nswas.org/
- 422 Yesh Atid: http://en.yeshatid.org.il
- The Compassionate Listening Project:
 www.compassionatelistening.org/store/books/2922/listening-with-the-heart-a-guide-for-compassionate-listening
- 424 *United Federation of Israel/Palestine*, by Kamal Nawash. Free Muslims Coalition. www.freemuslims.org/issues/israel-palestine.php

A unique conflict requires a unique solution. Federation of Israel-Palestine blog. www.pa-il.com/p/unique-solution.html

Palestinians and Israelis Activists for the Federal State: www.pa-il.org

An Israeli-Palestinian Federation Is Still the Way, by Uri Avnery. Haaretz, Aug 8, 2013. www.haaretz.com/opinion/1.540551

In Israel, water where there was none. Boston Globe. Nov 17, 2013.

www.bostonglobe.com/business/2013/11/17/can-mass-find-new-tech-sector-israel-desert/6QBRXoVnvqTKTOcHXj1MRO/story.html

'We woke up in a desert' – the water crisis taking hold across Egypt. Guardian, Aug 4, 2015 www.theguardian.com/world/2015/aug/04/egypt-water-crisis-intensifies-scarcity

Biblical Waters: Can the Jordan River Be Saved? National Geographic, Feb 22, 2014. http://news.nationalgeographic.com/news/2014/02/140222-jordan-river-syrian-refugees-water-environment

426 Ten Torah Tweets for Creation Care, by Rabbi Fred Scherlinder Dobb. http://coejl.org/resources/ten-torah-tweets-for-creation-care/

Green Prophet - Sustainable News for the Middle East: www.greenprophet.com

Tikkun magazine: www.tikkun.org

427 *I,000 Years Amnesia: Environmental Tradition in Muslim Heritage*, by Salim T.S. Al-Hassani http://muslimheritage.com/topics/default.cfm?ArticleID=1167

Gardens of Islam: www.muslimheritage.com/topics/default.cfm?ArticleID=309

The Gardens of Islam: Earthly Paradise Revisited. Dr. Safei Hamed, Texas Tech University Department of Landscape Architecture www.orgs.ttu.edu/aaff/Site%20Images/History6%20Gardens%20of%20Islam.pdf

Islam and Environmental Ethics. Sheikh Ahmad Kutty, The Islamic Institute of Toronto www.onislam.net/english/shariah/contemporary-issues/human-conditions-and-social-context/425844.html

Capital in the Twenty-First Century, by Thomas Piketty. Belknap Press, 2014. www.amazon.ca/Capital-Twenty-First-Century-Thomas-Piketty/dp/067443000X

Thomas Piketty: the French economist bringing capitalism to book. Larry Elliot. Guardian, May 2, 2014. www.theguardian.com/books/2014/may/02/thomas-piketty-capital-in-the-twenty-first-century-french-economist

429 Benefit Corporations: <u>www.bcorporation.net</u>

The Corporation: The Pathological Pursuit of Power, by Joel Bakan (movie and book): www.thecorporation.com

430 *Emilia-Romagna. Region in Italy Reaches 30% Coop Economy. Prezi* by Mitch O'Gorman. www.shareable.net/blog/region-in-italy-reaches-30-coop-economy

Economics, Cooperation and Employee Ownership. The Emilia Romagna Model, by John Logue. http://dept.kent.edu/oeoc/oeoclibrary/emiliaromagnalong.htm

How Successful Cooperative Economic Models Can Work Wonderfully... Somewhere Else. Frank Joyce, Alternet, July 23, 2013. www.alternet.org/economy/how-successful-cooperative-economic-models-can-work-wonderfully-somewhere-else

431 *Top 10 Reasons to Support Locally Owned Businesses*. Institute for Local Self-Reliance. www.ilsr.org/why-support-locally-owned-businesses

The Small-Mart Revolution: How Local Businesses are Beating the Global Competition. Michael Shuman, Berrett-Koehler, 2007. www.bkconnection.com/ProdDetails.asp?ID=9781576753866

Local Dollars, Local Sense: How to Shift Your Money from Wall Street to Main Street. Michael Shuman, March 5, 2012. www.youtube.com/watch?v=jRwnx9wLEAE

The Benefits of Locally Owned Businesses. BALLE. http://bealocalist.org/economic-

development/planet-protection/benefits-of-locally-owned-businesses

Locally owned businesses can help communities thrive — and survive climate change. Stacy Mitchell, Grist, April 26, 2013. http://grist.org/cities/locally-owned-businesses-can-help-communities-thrive-and-survive-climate-change/

Buying local twice as beneficial to economy: study. Business Vancouver, June 4, 2013. www.biv.com/article/20130604/BIV0102/130609985/-1/BIV/buying-local-twice-as-beneficial-to-economy-study

432 Mondragon: <u>www.mondragon-corporation.com</u>

Basque co-operative Mondragon defies Spain slump. BBC News, Aug 13, 2013. www.bbc.co.uk/news/world-europe-19213425

The MONDRAGON Cooperative Experience: Humanity at Work. Management Innovation Exchange, May 11, 2012. www.managementexchange.com/story/mondragon-cooperative-experience-humanity-work

433 LOCO: http://locobc.com

BALLE—Be A Localist: http://bealocalist.org

- Resolution of Banking Crises: The Good, the Bad, and the Ugly. Luc Laeven and Fabian Valencia, IMF Working Paper, June 2010. www.imf.org/external/pubs/ft/wp/2010/wp10146.pdf
- Occupy Money: Creating an Economy Where Everybody Wins. By Margrit Kennedy. New Society Publishers, 2012. www.newsociety.com/Books/O/Occupy-Money
- The Swedish bank boss who likes to do things differently. BBC News, Jan 5, 2014. www.bbc.co.uk/news/business-25336448
- 437 JAK Bank: http://jak.se

JAK Bank Report video: www.youtube.com/watch?v=aW2pj109Cr8&fmt=18

How Interest-free Banking Works: The Case of JAK, by Ana Carrie. FEASTA Review #2. www.feasta.org/documents/review2/carrie2.pdf

438 Debtors Anonymous: www.debtorsanonymous.org

Debtors Anonymous Vancouver: http://debtorsanonymousvancouver.com/

73 Great Debt Elimination Tips, by Leo Babauta. http://zenhabits.net/73-great-debt-elimination-tips/

For a good analysis of the new cooperative currencies, see *Rethinking Money: How New Currencies Turn Scarcity into Prosperity*, by Bernard Lietaer and Jacqui Dunne. (Berret Koehler, 2013). www.amazon.ca/Rethinking-Money-Currencies-Scarcity-Prosperity/dp/1609942965

Global knowledge centre for community currencies: http://goin.org

Time Banks: http://community.timebanks.org/

440 Grameen Bank: www.grameen-info.org

Banker to the Poor: Microlending and the Battle Against World Poverty, by Muhammad Yunus. www.amazon.ca/Banker-To-The-Poor-Micro-Lending/dp/1586481983

Community Micro Lending, Victoria, BC: http://communitymicrolending.ca

KIVA - Loans that change lives: www.kiva.org

ZOPA - Peer-to-peer lending: www.zopa.com

- 441 Global Alliance for Banking on Values: www.gabv.org
- 442 70,000 Swiss businesses participate in WIR, http://en.wikipedia.org/wiki/WIR Bank
- *North Dakota's Economic "Miracle" It's Not Oil*, by Ellen Brown. YES Magazine. www.yesmagazine.org/new-economy/the-north-dakota-miracle-not-all-about-oil

How the Nation's Only State-Owned Bank Became the Envy of Wall Street, Mother Jones, March 27, 2009. www.motherjones.com/mojo/2009/03/how-nation's-only-state-owned-bank-became-envy-wall-street

Public Banking Institute: http://publicbankinginstitute.org

444 *Green Economy at Community Scale.* Tim Jackson and Peter Victor, Metcalfe Foundation, 2013. http://metcalffoundation.com/wp-content/uploads/2013/10/GreenEconomy.pdf

Totnes Local Economic Blueprint: www.transitiontowntotnes.org/groups/reconomybusinessnetwork/economic-blueprint/

Global Transition to a New Economy—Mapping a Green and Fair World: http://gtne.org/

The Public Bank Solution: From Austerity to Prosperity, by Ellen Brown. Third Millennium Press, 2013. www.amazon.ca/Public-Bank-Solution-Austerity-Prosperity/dp/0983330867

For an excellent analysis of the value of targeted investments, see 23 Things They Don't Tell You About Capitalism, by Ha-Joon Chong. (Bloomsbury Press, 2010). www.amazon.ca/Things-They-Dont-About-Capitalism/dp/B0071UF2YG

Mariana Mazzucato: *Government -- investor, risk-taker, innovator*. TEDGlobal, June 2013. www.ted.com/talks/mariana mazzucato government investor risk taker innovator

The Entrepreneurial State: Debunking Public vs. Private Sector Myths. Mariana Mazzucato, Anthem Press, 2013. http://marianamazzucato.com/projects/the-entrepreneurial-state

State of innovation: Busting the private-sector myth. Mariana Mazzucato, New Scientist, Aug 24, 2013. www.newscientist.com/article/mg21929310.200-state-of-innovation-busting-the-privatesector-myth

- BC Hydro and the BC Insurance Corporation
- 448 Liberate the Bank of Canada, Intrepid Think Tank Urges. The Tyee, April 17, 2015. http://thetyee.ca/Opinion/2015/04/17/Liberate-Bank-of-Canada/

Oh Canada! Imposing Austerity On The World's Most Resource-Rich Country. Ellen Brown, April 1, 2012. www.webofdebt.com/articles/canada.php

Chapter 18: Earth's Furthest Dream

- 449 *Study: US is an oligarchy, not a democracy.* BBC News, April 17, 2014. www.bbc.com/news/blogs-echochambers-27074746
- 450 *'Fat Cat' Backlash: Swiss Executive Pay Debate Gets Ugly.* Spiegel, Nov 22, 2013. <u>www.spiegel.de/international/europe/swiss-debate-about-1-12-executive-pay-cap-initiative-heats-up-a-935114.html</u>
 - US CEOs break pay record as top 10 earners take home at least \$100m each. The Guardian, Oct 22, 2013. www.theguardian.com/business/2013/oct/22/top-earning-ceos-100m-paychecks-record
- 451 After Piketty, the ownership revolution. Gar Alperovitz. Al Jazeera, June 17, 2014. http://america.aljazeera.com/opinions/2014/6/piketty-capital-cooperativeownershipworkerowned.html
- 452 CEO Slashes \$1 Million Salary To Give Lowest-Paid Workers A Raise. Huffington Post, April 14, 2015. www.huffingtonpost.com/2015/04/14/gravity-payments-raise n 7061676.html
- 453 *Study: The Rich Really Are More Selfish.* Time, Aug 12, 2011. http://moneyland.time.com/2011/08/12/study-the-rich-really-are-more-selfish
- The Spirit Level Why Equality is Better for Everyone, by Richard Wilkinson and Kate Pickett. Penguin, 2009. www.amazon.ca/The-Spirit-Level-Equality-Societies/dp/1608193411
 - The Equality Trust: www.equalitytrust.org.uk
- Why women are good for business, by Claire Braund, Exec Director, Women on Boards. www.womenonboards.org.au/pubs/articles/1112-why-women-are-good-for-business.htm
 - 30% Club: www.30percentclub.org.uk
 - *Testosterone and high finance do not mix: so bring on the women.* Observer, June 19 2011. www.guardian.co.uk/world/2011/jun/19/neuroeconomics-women-city-financial-crash
- Dutch Kids Pedal their own Bus to School. Coexist. <u>www.fastcoexist.com/1679248/dutch-kids-pedal-their-own-bus-to-school</u>
- 457 Colourful 'solar glass' means entire buildings can generate clean power. Guardian, Feb 12, 2013. www.theguardian.com/environment/2013/feb/12/printed-solar-glass-panels-oxford-photovoltaics
- Wangari Matthai: www.ecology.com/2011/10/24/wangari-maathai-quotes
- As tech threatens jobs, we must test a universal basic income, by Federico Pistono, New Scientist, Sept 30, 2015. www.newscientist.com/article/mg22830413-300-as-tech-threatens-jobs-we-must-test-a-universal-basic-income
 - Federico Pistono: www.federicopistono.org
- 460 Basic Income Earth Network www.basicincome.org

The Basic Income Debate in Finland, by Kaisu Suopanki: http://transform-network.net/journal/issue-112012/news/detail/Journal/the-basic-income-debate-in-finland.html

A Town without Poverty? Canada's only experiment in guaranteed income finally gets reckoning, by Vivian Belik. www.dominionpaper.ca/articles/4100

What About Just Guaranteeing Everyone a Basic Income? Katie Hyslop, The Tyee, May 12, 2012. http://thetyee.ca/News/2012/05/15/Guaranteed-Basic-Income

Why we should give free money to everyone. Rutger Bregman, de Correspondent. December, 2013. https://decorrespondent.nl/541/why-we-should-give-free-money-to-everyone/31639050894-e44e2c00

The Dutch City of Utrecht Is Doling Out Free Money For A 'Basic Income' Experiment. Huffington Post, July 10, 2015. www.huffingtonpost.ca/2015/07/10/utrecht-basic-income n 7770648.html

For a thorough analysis of measures to tackle poverty and inequality, see *Inequality: What can be done?* By Anthony Atkinson. (Harvard University Press, 2015). www.amazon.ca/Inequality-What-Can-Be-Done/dp/0674504763/ The proposal for a Citizen's Endowment and the costing of the Endowment and the Citizen's Income have both been inspired by his book.

See also *A Better Place on Earth: The Search for Fairness in Super British Columbia*, by Andrew MacLeod. (Harbour Publishing, 2015). www.amazon.ca/Better-Place-Earth-Fairness-Columbia/dp/1550177044

How Much Income Tax Could Canada's Top 1% pay? Lars Osberg, Economics Department, Dalhousie University, June 3, 2015 http://myweb.dal.ca/osberg/classification/conference%20papers/How%20Much%20June%203.pdf

- 462 Average Inheritance in Canada Approximately \$100,000. BMO Financial Group, July 8, 2014. https://newsroom.bmo.com/press-releases/bmo-investorline-study-average-inheritance-in-can-tsx-bmo-201407080956149001 Increased to \$150,000 for 2032.
- *The Wayfinders*, by Wade Davis. CBC Massey Lectures, 2009. House of Anansi Press, page 195. www.amazon.ca/Wayfinders-Wade-Davis/dp/0887848427
- Preamble to the Universal Declaration of Human Rights: Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world... therefore...(Article 1) All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood. www.un.org/en/documents/udhr/
- My appreciation for this kind of counseling (which I have practiced with success) goes to Bernard Haldane, who invented it after World War II when asked to provide careers counseling services to returning veterans. See www.dependablestrengths.org No connection to Bernard Haldane & Associates, who have the license to use his name.
- 466 Vancouver Time Bank: http://lmtimebank.org/blog/front-page
- In 2014, 6,650 Vancouver households were in core need and at critical risk of homelessness, including 5,000 people in Single Rooming Occupancy hotels in need of replacement. In March 2014, the annual homeless count found 2,770 homeless people in the larger Metro Vancouver region, with 1,798 in Vancouver. 2014 Metro Vancouver Homeless Count Preliminary Report. April 23, 2014. http://stophomelessness.ca/wp-content/uploads/2008/09/Preliminary_release_report_final_April_23_14_to_be_posted.pdf
- 468 Study finds huge health challenges for Vancouver's SRO hotel residents. Vancouver Sun, Aug 9, 2013.
 www.vancouversun.com/news/Study+finds+huge+health+challenges+Vancouver+hotel+residents/8771178/story.html

- One Last Walk with Judy Graves. The Tyee, April 12, 2013. http://thetyee.ca/News/2013/04/12/Judy-Graves/
- 470 Recovery Coaching: http://en.wikipedia.org/wiki/Recovery_coaching
- 471 Prostitution in Sweden: http://en.wikipedia.org/wiki/Prostitution in Sweden
 - Sweden's Prostitution Solution: Why Hasn't Anyone Tried This Before? Solutions Journal, July 2015. www.thesolutionsjournal.com/node/237351
- 472 Canadian Housing First Toolkit. http://housingfirsttoolkit.ca
- Help the Homeless comparative cost analysis: http://helpthehomeless.wordpress.com/2009/07/13/success-with-other-models/

Canada Could End Homelessness. And It'll Only Cost You \$46 A Year. Huffington Post, Aug 13, 2015. www.huffingtonpost.ca/2015/08/13/housing-first-federal-election n 7949510.html

Among many initiatives underway in 2012, Vancouver's Street to Home aims to create 3,700 units of secure, sheltered housing with supportive services by 2020: http://streetohome.org

- 474 Greater Vancouver Food Bank Society: www.foodbank.bc.ca
 - Hunger Count, 2013. Food Banks Canada. www.foodbankscanada.ca/FoodBanks/MediaLibrary/HungerCount/HungerCount2013.pdf
- 475 Man who forced French supermarkets to donate food wants to take law global. Guardian, May 25, 2015. www.theguardian.com/world/2015/may/25/french-supermarkets-donate-food-waste-global-law-campaign
- The Freire Project: <u>www.freireproject.org</u>
- *Report to show aboriginal prison population has risen to 23%.* CTV News, March 7th 2013. www.ctvnews.ca/canada/report-to-show-aboriginal-prison-population-has-risen-to-23-per-cent-1.1184973
 - Aboriginal corrections report finds 'systemic discrimination'. CBC News, March 7, 2013. www.cbc.ca/news/canada/story/2013/03/07/canada-aboriginal-prison-population-report.html
- 478 It costs \$113,000 a year to lodge a federal prisoner. Toronto Sun, Feb 28, 2012. www.torontosun.com/2012/02/28/it-costs-113000-a-year-to-lodge-a-federal-prisoner-report
- Idle No More: www.facebook.com/IdleNoMoreCommunity
- 480 America's angriest white men: Up close with racism, rage and Southern supremacy. Michael Kimmel, Salon, Nov 17, 2013.

 www.salon.com/2013/11/17/americas_angriest_white_men_up_close_with_racism_rage_and_southern_supremacy

Racism as Projection: How early childhood can help it take root. Helene Lewis, Rhodes Journalism Review, August 2001. www.rjr.ru.ac.za/rjrpdf/rjr no20/racism as prjection.pdf

Chapter 19: Building a Circular Economy

481 Before I Die... Build Your Own Wall: http://beforeidie.cc/site/build-your-own-before-i-die-wall/

482	Grass Frames, Vancouver's bamboo bicycle frame company: http://grassframes.ca
	Design for Impact. Bamboo cycles, 2012. http://design-for-impact-bamboocycles.blogspot.ca
483	Green Angel Energy: http://greenangelenergy.ca
	WUTIF Capital: http://wutif.wordpress.com
484	See <i>Nothing to Envy: Ordinary Lives in North Korea</i> , by Barbara Demick. Spiegel & Grau, 2010. www.amazon.ca/Nothing-Envy-Ordinary-Lives-North/dp/0385523912
485	Inside North Korea's Environmental Collapse. Phil McKenna, PBS Nova, Mar 6, 2013. www.pbs.org/wgbh/nova/next/nature/inside-north-koreas-environmental-collapse/
486	Aram Hur and Indigo Sowon, Busan, South Korea: www.indigoyouthbookfair.net/english/sowon/sowon_01.html
487	Sovereignty summer schools: http://apihtawikosisan.com/sovereignty-summer-schools
488	The Highland clearances: http://en.wikipedia.org/wiki/Highland_Clearances
489	More than making things: A new future for manufacturing in a service economy. Andrew Sissons, The Work Foundation, March 2011. www.theworkfoundation.com/assets/docs/publications/284_more%20than%20making%20things.pdf
490	Ponoko: www.ponoko.com
491	3-D Printers have a Dirty Secret. Smart Planet, July 25, 2013. www.smartplanet.com/blog/bulletin/3d-printers-have-a-dirty-secret/25035
	How green is 3D printing? Global Climate Change News and Analysis, Sept 3, 2013. www.rtcc.org/2013/09/02/how-green-is-3d-printing
	Environmental Impacts of 3D Printing. Autodesk Sustainability Workshop, Nov 22, 2013. http://sustainabilityworkshop.autodesk.com/blog/environmental-impacts-3d-printing
492	For an example of a top-notch Canadian bike manufacturing company, see Devinci: www.pinkbike.com/news/Devinci-factory-tour-2011.html
	3-D scanner: <u>www.matterform.net</u>
493	3-D writing pens: inhabitat.com/the-75-3doodler-is-the-worlds-first-3d-printing-pen
	Microsoft Office Labs vision 2019: www.istartedsomething.com/20090228/microsoft-office-labs-vision-2019-video
494	The IntelliWheels Automatic Gear-Shifting system for wheelchairs. GizMag, June 21, 2011. www.gizmag.com/intelliwheels-ags/19300/
	Horizon sports trike: www.kickstarter.com/projects/587439462/the-horizon-electric-bike-adaptive-all-terrain-awe

Coming soon: airless smart tires. Smart Planet, Nov 4, 2012. www.smartplanet.com/blog/bulletin/coming-soon-airless-bicycle-tires/4598

495	One order of steel; hold the greenhouse gases. MIT, May 8, 2013. http://web.mit.edu/newsoffice/2013/steel-without-greenhouse-gas-emissions-0508.html
496	POSCO aims to halt CO2 via hydrogen steelmaking. Reuters, Nov 27, 2009. www.reuters.com/article/2009/11/27/posco-carbon-idUSSEO205120091127
497	HyWind –The World's First Full Scale Floating Wind Turbine https://en.m.wikipedia.org/wiki/Hywind
498	Carbon Nanotubes Boost Power of Lithium Battery. Scientific American, June 22, 2010. www.scientificamerican.com/article/carbon-nanotubes-boost-power-of-lithium-battery
499	Energy Return on the Northern Gateway Pipeline, by Chris Peters (P. Eng). www.bcsea.org/blog/bruce-mackenzie/2012/04/30/energy-return-on-northern-gateway-pipeline
500	Behind the Numbers on Energy Return on Investment. Mason Inman, Scientific American, April 11, 2013. www.scientificamerican.com/article.cfm?id=eroi-behind-numbers-energy-return-investment
	EROEI of Renewable Energy, by Jamie Bull, May 19, 2010. http://oco-carbon.com/2010/05/19/eroei-of-electricity-generation/
	Solar: <i>Energy Payback of Solar Rocks it!</i> EROI 8-10. Clean Technica, March 15, 2013. http://cleantechnica.com/2013/03/15/energy-payback-of-solar-rocks-it-graph
	Wind: <i>Meta-analysis of net energy return for wind power systems</i> . EROI 25. Renewable Energy Jan 2010. www.sciencedirect.com/science/article/pii/S096014810900055X
501	For non-Canadians: in Canada's federal government, the Liberals are the equivalent of the US Democrats; the Conservatives are the equivalent of the Republicans. Canada's federal New Democratic Party (NDP) is similar to Bernie Saunders' style of Democrats. Trudeau became Prime Minister in October 2015, and one of his clear campaign promises was to end Canada's 'First Past The Post' voting system. See Fair Vote Canada: www.fairvote.ca
502	Elizabeth May: www.greenparty.ca/en/meet-elizabeth
503	Transforming a steam heating monolith into a green energy Lego system. Green Energy Futures: www.greenenergyfutures.ca/blog/transforming-steam-heating-monolith-green-energy-lego-system
	UBC's district heating - An old idea with a renewable energy twist. Green Energy future, YouTube, March 2, 2013. www.youtube.com/watch?v=-iRK-8KMjfE
504	Architecture 2030: www.architecture2030.org
	2030 Pallette: A Network Of Interconnected Actions for the planning and design of sustainable and resilient built environments: www.2030palette.org
	Empire State Building Retrofit Surpasses Energy Savings Expectations. Rocky Mountain Institute, May 31, 2012. http://blog.rmi.org/blog.empire_state_retrofit_surpasses_energy_savings_expectations.

505 *Health effects of nano-articles*. Institut de recherche Robert- Sauve en sante et en sécuritedu travailwww.irsst.qc.ca/media/documents/PubIRSST/R-469.pdf

2030 Districts: www.2030districts.org

Extended Producer Responsibility Canada:
--

Product Stewardship Institute, USA: www.productstewardship.us

- 507 Leading San Francisco's Quest To Recycle All Trash by 2020. An interview with Jack Macy. Yale Environment 360, May 22, 2014.

 http://e360.yale.edu/feature/interview_jack_macy_putting_san_francisco_on_the_road_to_zero_waste/2767/
- Is Your Company Ready for the Circular Economy? Eric Hellweg, Harvard Business Review, Jan 25, 2013. http://blogs.hbr.org/cs/2013/01/is your company ready for the.html

Ellen MacArthur Foundation: www.ellenmacarthurfoundation.org

509 The 10 Worst Landfill Sites in the World. London City Waste Clearance. http://londoncitywasteclearance.co.uk/blog/10-worst-landfill-sites-world

Common sense and the city: Jaime Lerner, Brazil's green revolutionary. Guardian, Nov 5, 2009. www.theguardian.com/environment/blog/2009/nov/05/jaime-lerner-brazil-green

UN Sustainable Development Knowledge Platform: https://sustainabledevelopment.un.org

- Victoria City of Gardens was once a City of Garbage. The Green Diet, by Susan Pearse, June 1, 2012. www.thegreendiet.ca/recycling/victoria-city-of-gardens-was-once-a-city-of-garbage
- Nature-source heat is the term I invented to cover the technological 'family' of solar air-source, ground-source, water-source, sewage-source and ice-source heat, extracted by means of a heat pump.
- Windowfarms: www.windowfarms.org
- 513 Dan Pink: The puzzle of motivation. TED Lecture, July 2009. www.ted.com/talks/dan pink on motivation.html

How Intrinsic Motivation is Crowded Out and In, by Bruno Frey. Rationality and Society, July 1994. http://rss.sagepub.com/content/6/3/334.short

Employee engagement: a sustainability super-strategy? Guardian, Nov 12, 2013. www.theguardian.com/sustainable-business/employee-engagement-sustainability-strategy

New Iphone will likely have Fingerprint Sensor. Fast Company, July 30, 2013.

www.fastcompany.com/3015006/most-innovative-companies-2013/ios-7-code-points-to-biometric-fingerprint-sensor-on-new-ipho

Chapter 20: Green Business and Love at the Tree Frog Hotel

New York to Beijing in two hours without leaving the ground? Gizmag March 22, 2012. www.gizmag.com/et3-vacuum-maglev-train/21833

Evacuated Tube Transport Technologies: www.et3.com

Evacuated Tube Transport Technologies Video: http://et3.com/youtube-video-playlist-et3

Speed and efficiency: Evacuated tube transport: www.ioserver.com/et3.html

Tube Freight Transportation, by Lawrence Vance and Milton K. Mills. US Federal Highway

Administration. Public Roads, Autumn 1994.
www.fhwa.dot.gov/publications/publicroads/94fall/p94au21.cfm

Hyperloop Alpha: www.teslamotors.com/sites/default/files/blog_images/hyperloop-alpha.pdf

Sorry, Elon Musk – your Hyperloop is going nowhere. Guardian, Aug 16, 2013. www.theguardian.com/commentisfree/2013/aug/16/elon-musk-hyperloop-going-nowhere

Elon Musk's Hyperloop: A pipe dream? Los Angeles Times, Aug 16, 2013. http://articles.latimes.com/2013/aug/16/business/la-fi-hiltzik-20130818

Automated Transport Systems Bury Freight Traffic Underground. Industry Tap, Feb 9, 2014. www.industrytap.com/automated-transport-systems-bury-freight-traffic-underground/15489

- Elon Musk's SpaceX creates Hyperloop contest. USA Today, June 16, 2015. www.usatoday.com/story/money/cars/2015/06/16/hyperloop-pod-building-competition/28785631/
- 517 Shipping, World Trade and the Reduction of CO₂ Emissions. UNFCC, 2013. https://www.ics-shipping.org/docs/default-source/resources/environmental-protection/shipping-world-trade-and-the-reduction-of-co2-emissions.pdf
- 518 Skysails: <u>www.skysails.info/english/</u>
- 519 Ship makers take cues from sharks. DW, March 28, 2013. www.dw.de/ship-makers-take-cues-from-sharks/a-16707550
- 520 World's First Zero-Emission Vessel—E/S Orcelle: www.youtube.com/watch?v=IrXInfiTU-s
- Can airships revolutionize transportation in world's harshest environments? Business Traveller, Dec 10, 2013. http://edition.cnn.com/2013/12/09/business/airship-cargo-revolutionize-arctic-transportation/
- 522 *In the future, seaweed might fuel your car.* Smart Planet, March 5, 2012. www.smartplanet.com/blog/intelligent-energy/in-the-future-seaweed-might-fuel-your-car/13716
- 523 *Trans-Oceanic Tubes could be the Travel of the Future*. Dylan Shenker, March 26, 2012. www.psfk.com/2012/03/trans-oceanic-tubes-could-be-the-future-of-travel.html
- Rosie Emery, We're all Interconnected: www.youtube.com/watch?v=XnxOp_mOmy8
 Rosie Emergy: www.rosieemery.com Thanks, Rosie!
- 525 *Urban acupuncture for a healthier city*. Grist, July 22, 2011. http://grist.org/urbanism/2011-07-22-urban-acupuncture-for-a-healthier-city/
 - Orphaned Spaces: http://citystudiovancouver.com/projects/mapping-framing-vacant-spaces/
- 526 Edible Insects: Gross-Out or Global Food Solution? Dawn Starin, YES! Magazine, Feb 19, 2013. www.yesmagazine.org/planet/insect-foods-gross-out-or-global-food-solution
- 527 *Grub's up: can insects feed the world?* Guardian, Aug 5, 2013. www.theguardian.com/lifeandstyle/2013/aug/05/can-eating-insects-feed-world
- 528 Entirely invented. Author's indulgence.
- 529 Eating locusts: The crunchy, kosher snack taking Israel by swarm. BBC News, March 20, 2013.

www.bbc.com/news/magazine-21847517

Locusts: www.fao.org/ag/locusts/en/info/info/faq

Monsters of the Deep: Jellyfish Threaten the World's Seas. Samiha Shafy, Der Spiegel, July 11, 2013. www.spiegel.de/international/world/venomous-jellyfish-threaten-marine-life-and-beach-tourism-a-910388.html

Stung! On Jellyfish Blooms and the Future of the Ocean, by Lisa-ann Gershwin http://lisagershwin.com/stung.htm

Jellywatch: www.jellywatch.org

Are Jellyfish Taking Over the World? Discover Magazine photogallery http://discovermagazine.com/galleries/zen-photo/j/jelly#

Overfishing - A Global Disaster: http://overfishing.org/

The End of the Line: Imagine a World without Fish. Movie: http://endoftheline.com

Fish to Fork: The Campaigning Restaurant Guide: www.fish2fork.com

Overfishing. National Geographic. http://ocean.nationalgeographic.com/ocean/critical-issues-overfishing/

The End of the Line: How Overfishing Is Changing the World and What We Eat, by Charles Clover. University of California Press, 2008. www.amazon.ca/End-Line-Overfishing-Changing-World/dp/0520255054

Marine Protected Areas: www.mpaglobal.org/home.html

Protect Planet Ocean: www.protectplanetocean.org/introduction

Greenpeace Proposal for a global network of marine reserves covering 40% of the world's oceans: www.greenpeace.org/usa/oceans

- Vancouver Island Green Business Certification: www.vigbc.ca
- Climate Smart: https://climatesmartbusiness.com
- 534 California Green Business Program: www.greenbusinessca.org

EcoLogo (Canada): www.ecologo.org

Green America Business Certification: www.greenamerica.org/greenbusiness/certification.cfm

Green Business Certification Program, Montgomery County, Maryland: http://mcgreenbiz.org/

Green Business Bureau: www.gbb.org

Green Seal: www.greenseal.org

Institute for Green Business Certification (Canada): www.gbcertified.ca

Institute for Green Business Certification (US): www.gbcertified.com

535	Global Initiative for Sustainability Rating http://ratesustainability.org
	GISR video: www.youtube.com/watch?v=0RFFkXo-ZhM
536	Todmorden: Britain's greenest town. Sun, Aug 24, 2010. www.thesun.co.uk/sol/homepage/news/Green/3108456/Todmorden-lays-a-claim-to-be-Britains-
	greenest-town.html
537	New England Town Meetings To Challenge Corporate Personhood. Common Dreams, Feb 3, 2012. www.commondreams.org/headline/2012/02/03-2
	The Alliance for Democracy: www.thealliancefordemocracy.org
538	The B-Lab: www.bcorporation.net/what-are-b-corps/the-non-profit-behind-b-corps
539	Why Walmart's better supplier scorecard is a big deal. Greenbiz.com, April 9, 2012. www.greenbiz.com/blog/2012/04/19/why-walmarts-better-supplier-scorecard-big-deal
540	The Sustainability Consortium: www.sustainabilityconsortium.org
541	<i>The B Corps Handbook</i> , by Ryan Honeyman. www.amazon.ca/The-Corp-Handbook-Business-Force/dp/1626560439
542	How the Scots Invented the Modern World: The True Story of How Western Europe's Poorest Nation Created Our World and Everything in It, by Arthur Herman. Broadway Books, 2002. www.amazon.ca/How-Scots-Invented-Modern-World/dp/0609809997
543	Harriet Tubman: http://harriettubmanjourney.org
Cha	pter 21: Song of the Universe
544	The Expression Swing: www.gametime.com/expression
545	Video of a Street Workout in Kiev, Ukraine: www.youtube.com/watch?v=bvLQZVnz5WM
	Origins Parkour, Vancouver: www.originsparkour.com
546	Vaclav Havel: https://en.wikipedia.org/wiki/Václav_Havel
547	Grandparents Act: http://grandparentsact.wix.com/grandparentsact
548	Not quite the same, but the same intention: wil-ma provides London with a climbable structure of urban sanctuaries. Design Boom, Nov 8, 2014. www.designboom.com/architecture/wil-ma-faith-that-the-sky-is-not-falling-urban-sanctuaries-08-11-2014
549	First significant successful herring spawn in False Creek in more than 100 years. Global News, Feb 21, 2014. http://globalnews.ca/news/1165996/first-successful-herring-spawn-in-false-creek-in-more-than-100-years
	A herring revival spawned from the depths of darkness. Globe & Mail, March 3, 2012. www.theglobeandmail.com/news/british-columbia/a-herring-revival-spawned-from-the-depths-of darkness/article550737

 $Squamish\ Streamkeepers: \underline{www.squamishstreamkeepers.net/streamkeepers/Welcome.html}$

Humpback Whale feeding technique (video): www.youtube.com/watch?v=vJvfjiCTvq4

- Rewilding a City: The Vancouver Example. This City Life, 2014. http://thiscitylife.tumblr.com/post/80581023186/rewilding-a-city-the-vancouver-example
- For more delicious homegrown recipes see *The Zero Mile Diet*, by Carolyn Herriot. Harbour Publishing, 2010. www.amazon.ca/Zero-Mile-Diet-Year-Round-Growing-Organic/dp/1550174819

The Zero Mile Diet Cookbook by Carolyn Herriot. Harbour Publishing, 2012. www.amazon.ca/Zero-Mile-Diet-Cookbook-Delicious-Homegrown/dp/155017567X

- Ban Killer Robots before They Become Weapons of Mass Destruction. Scientific American, Aug 7, 2015. www.scientificamerican.com/article/ban-killer-robots-before-they-become-weapons-of-mass-destruction
- 553 Global Zero: www.globalzero.org
- For an earlier design, see http://damp-dry.com/2008/home-appliances/energy-saving-homemede-washers
- World Pogo Records: www.xpogo.com/records
- Projects in Place: http://projectsinplace.org
- 757 Record warm ocean temperatures pose threat to B.C. salmon. CBC, July 14, 2015.

 www.cbc.ca/news/canada/british-columbia/record-warm-ocean-temperatures-pose-threat-to-b-c-salmon-1.3151406
- 558 City encourages Vancouverites to plant thousands of trees. MetroNews, April 22, 2013. http://metronews.ca/news/vancouver/643898/city-encourages-vancouverites-to-plant-thousands-of-trees/

Treekeepers: http://treekeepers.ca

Downtown Eastside Poetry: http://thetyee.ca/Books/2012/06/15/Downtown-Eastside-Poetry

Here is Bud Osborne's full poem:

Never believe
that the last word has been spoken
by those who could destroy things
rather than by those who could create
more life.
We can't withstand it alone.
We need to help each other
in direct ways,
in spiritual ways
of hope
— with a vision of the future
and what we are going to be leaving
for people coming along
behind us.

560 *Legends of Vancouver*, by E. Pauline Johnson (Tekahionwake). http://digital.library.upenn.edu/women/johnson/vancouver/vancouver.html

5	K'ayacht'n is a Squamish greeting saying 'Welcome'.
5	Atoms in the human body: $7x10^{27}$ http://education.jlab.org/qa/mathatom_04.html
	Stars in the Universe: 10 ²² -10 ²⁴ www.esa.int/Our_Activities/Space_Science/Herschel/How_many_stars_are_there_in_the_Universeque
5	Earth Expected to Be Habitable for Another 1.75 Billion Years. Science Daily, Sept 18, 2013. www.sciencedaily.com/releases/2013/09/130918211434.htm
5	You can listen to <i>The Earth Anthem</i> here: https://soundcloud.com/guydauncey/the-earth-anthem-choir
5	The Journey of the Universe, with Brian Swimme: www.journeyoftheuniverse.org
	A Walk Through Time: www.globalcommunity.org/wtt/walk_menu
5	<i>Urban street lights are changing animal ecology</i> . New Scientist, 23 May 2012. www.newscientist.com/article/dn21844-urban-street-lights-are-changing-animal-ecology.html
5	In Pavement Lighting: www.tapconet.com/solar-led-division/in-road-warning-lights
50	Dazzling StarPath Pavement Lights Up the Night With Stored Solar Energy. Inhabitat, Oct 22, 2013. http://inhabitat.com/dazzling-starpath-pavement-glows-in-the-dark-to-provide-energy-free-illumination/
5	Smart Highway: Nighttime photo-luminescence on roads: www.studioroosegaarde.net/project/smart-highway/
5	A Brighter, Dimmer Future: Germany's Saviors of the Night. Spiegel, Nov 8, 2013. www.spiegel.de/international/germany/ambitious-efforts-to-reduce-light-pollution-in-germany-and-elsewhere-a-932352.html
	These motion-activated streetlights could cut L.A.'s energy use by 40 percent. Grist, Dec 27, 2013. http://grist.org/list/motion-activated-streetlights-tvilight/
	Street Fight: LED street lighting the newest challenge to old utility business models. Rocky Mountain Institute, Nov 26, 2013. http://blog.rmi.org/blog_2013_11_26 Street Fight
5	Phillips unveils poleless street lighting system. Gizmag, April 27, 2012. www.gizmag.com/philips-freestreet-suspended-street-lights/22335
5	Dial for Light: www.dial4light.de/dial4light/static/en/home.htm
5	Dark Sky Park, Abbotsford: www.fvas.net/dsp.html
	Dark Sky Viewing Nights, Canada: www.skynews.ca/resources/dark-sky-sites
	Publicly Accessible Telescope Viewing, USA: https://stardate.org/nightsky/public
5	Virgin Galactic: www.virgingalactic.com \$500,000: the price in 2032.
5	Lost in Space: Bone Density (NASA): www.nasa.gov/pdf/516065main_ALG_ST_BoneDensity%2012-23-10.pdf

The Rise of Chinese Space Junk. The Diplomat, Sept 13, 2013. http://thediplomat.com/2013/09/the-rise-of-chinese-space-junk/ The Persistent Problem of Orbital Debris. Secure World Foundation. http://swfound.org/spacesustainability-101/the-persistent-problem-of-orbital-debris/ Space Debris: http://en.wikipedia.org/wiki/Space debris NASA Clickworkers: http://nasaclickworkers.com/ Space Station Could Get Laser Cannon to Destroy Orbital Debris. April 30, 2015. www.space.com/29271-space-station-laser-cannon-orbital-debris.html 577 This Tim Hortons franchisee hired 82 disabled workers. Toronto Star, June 10, 2012. www.thestar.com/business/personal finance/2012/06/10/this tim hortons franchisee hired 82 d isabled workers.html 578 See The Way of Wyrd, by Brian Bates (1983). www.wayofwyrd.com 579 Sophie's World, by the Norwegian writer Jostein Gaarder (1991). www.amazon.com/Sophies-World-History-Philosophy-Classics/dp/0374530718 580 Revo-Lights: www.kickstarter.com/projects/revolights/revolights-join-the-revolution Night-Bikes: www.doobybrain.com/2011/12/03/night-bikes/ 581 Volvo Life-Paint: www.volvolifepaint.com 582 Kiwi Wearables: www.kiwiwearables.com 583 Could passthoughts replace the password? Dr. John Chuang, BBC Click, July 4, 2013. www.bbc.co.uk/news/technology-23105192 584 Nymi wristband: www.getnymi.com Wristband unlocks your devices with your heartbeat. New Scientist, Sept 7, 2013. www.newscientist.com/article/dn24141-wristband-unlocks-your-devices-with-your-heartbeat.html 585 Oculus Rift: www.oculus.com/en-us This Is How We'll Experience Storytelling In The Future. WIRED, April 23, 2015. 586 www.wired.com/2015/04/three-wild-sensations-frontier-storytelling/ 587 Flying the Birdly Virtual Reality Simulator. YouTube, Sept 2, 2014. www.youtube.com/watch?v=gWLHIusLWOc 588 Boreal Woodland Caribou: www.davidsuzuki.org/issues/wildlife-habitat/science/criticalspecies/boreal-woodland-caribou 589 VR Porn Reactions on Oculus From First-Time Virtual Reality Viewers. YouTube, Jan 21, 2015. www.youtube.com/watch?v=hLqVxC6JWIM

Chapter 22: Renovating Democracy

576

590 From Untitled, in To This Cedar Fountain by Kate Braid, 1995. www.katebraid.com

591	Opbrid—Automatic High Power Charging for Buses and Trucks: www.opbrid.com
592	In 2012, this area of Vancouver was a combination of wasteland, railways and railways yards. In the 1960s, two viaducts were built here in preparation for a proposed freeway into downtown Vancouver that would have gone right through Chinatown. It was stopped in 1967 after a huge protest, but the original viaducts remained. A public redesign contest for the area attracted 73 entries, which are accessible at www.viaductscomp.ca
593	Jane Goodall: www.janegoodall.ca/goodall-summer-1960.php
594	Cottonwood Urban Farm: Oasis in Peril. Vancouver Observer, Sept 20, 2012. www.vancouverobserver.com/city/cottonwood-community-gardens-oasis-peril In this future the farm has been saved and expanded to include animals.
595	Fractal Broccoli: www.wired.com/wiredscience/2010/09/fractal-patterns-in-nature
596	Friedensreich Hundertwasser: <u>www.hundertwasser.at</u>
597	Thanks to Golden Rose Paquette. If you wish to commercialize her recipe please consult with her first via the author. www.journeytothefuture.ca
598	Talk Green Vancouver: http://talkgreenvancouver.ca
599	Vancouver 2020: A Bright Green Future Action Plan: http://vancouver.ca/files/cov/bright-green-future.pdf
600	Improve My City! http://ec.europa.eu/digital-agenda/en/blog/improve-my-city
	PlaceSpeak: www.placespeak.com
601	Integral City: www.integralcity.com
	<i>Integral City</i> , by Marilyn Hamilton. New Society Publishers, 2009. www.amazon.ca/Integral-City-Marilyn-Hamilton/dp/0865716293
602	Developing Bioplastics from Wastewater Treatment. Jill Zeilstra-Ryalls, Ph.D Bowling Green State University. www.ohiowea.org/docs/02 Developing Bioplastics.pdf
	How raw sewage becomes biodegradable plastic. Christina Hernandez Sherwood. Zednet, May 26, 2011. www.zdnet.com/article/how-raw-sewage-becomes-biodegradable-plastic
603	Jaime Lerner, Curitiba. Social Earth: www.socialearth.org/sustainable-nye-city-3-curitiba-brazil
604	The term <i>cratophilie</i> was coined by the French writer Daniel Beresniak to designate the intoxication of power.
605	Liberals and conservatives don't just vote differently. They think differently. Chris Mooney, Washington Post, April 12, 2012. www.washingtonpost.com/opinions/liberals-and-conservatives-dont-just-vote-differently-they-think-differently/2012/04/12/gIQAzb1kDT_story.html
606	Declaration of Interdependence: Wikipedia http://en.wikipedia.org/wiki/Declaration_of_Interdependence
	Declaration of Interdependence by Will and Ariel Durant: http://www.interdependentproject.org/WillDurantDeclaration.pdf

	Declaration of Interdependence; Durant's Resolve. Eye on Faith, July 12, 2012. http://eyeonfaith.blogspot.ca/2012/07/declaration-of-interdependence-durants.html
607	A healthy environment should be a basic human right. David R. Boyd, Ecojustice, Feb 17, 2015. www.ecojustice.ca/a-healthy-environment-should-be-a-basic-human-right
	The Right to a Healthy Environment: Revitalizing Canada's Constitution, by David R. Boyd. UBC Press, 2012. www.ubcpress.ca/books/pdf/chapters/2012/TheRightToAHealthyEnvironment.pdf
	The Environmental Rights Revolution, by David R. Boyd. UBC Press, 2011. www.amazon.ca/The-Environmental-Rights-Revolution-Constitutions/dp/0774821612
608	Eradicating Ecocide. http://eradicatingecocide.com/the-law/
609	The Age of Napoleon, by Will and Ariel Durant. Simon and Schuster, 1975. www.amazon.com/Age-Napoleon-Story-Civilization-XI-ebook/dp/B004ZZVUQ4
609B	Introducing the Change the World Community Portal: www.slideshare.net/GuyDauncey/change-the-world-community-portalppt
610	How Humane is Your City? Treehugger, April 29, 2007. www.treehugger.com/natural-sciences/how-humane-is-your-city.html The Humane Index appears to have disappeared, but maybe it can be revived.
611	Ethiopia: Thousands driven out in land grab. UPI, Jan 18, 2012. www.upi.com/Business News/Energy-Resources/2012/01/18/Ethiopia-Thousands-driven-out-inland-grab/UPI-60071326912191/
612	Ethiopian Evangelists 'Pushing For Death Penalty For Homosexuals'. Huffington Post, May 3, 2013. www.huffingtonpost.co.uk/2013/05/03/ethiopian-evangelists-death-penalty-homosexuals_n_3208972.html
613	Fair Vote Canada: www.fairvote.ca
614	Compulsory Voting: http://en.wikipedia.org/wiki/Compulsory_voting#By_countries
615	California governor signs bill to automatically register people to vote. Vox, Oct 10, 2015. www.vox.com/2015/9/14/9319889/california-automatic-voter-registration
616	The tax credit would be revenue-neutral: taxes would go up by a tiny amount to cover the cost. Those who choose not to vote would lose out.
617	Youth electoral engagement in Canada. Elections Canada, 2011. www.elections.ca/res/rec/part/youeng/youth_electoral_engagement_e.pdf
	Labour plans to lower voting age to 16. Guardian, Jan 23, 2014. www.theguardian.com/politics/2014/jan/23/labour-voting-age-16-mayoral-elections
618	Federal political financing in Canada: https://en.wikipedia.org/wiki/Federal_political_financing_in_Canada
619	Best Practices. Nonpartisan Guide on Voter Mobilization. YouthVote Coalition, 2003. www.civicyouth.org/PopUps/YV Best Practices.pdf

Lack of contact with nature 'increasing allergies'. BBC News, May 8, 2012. www.bbc.co.uk/news/science-environment-17952320

620

Vancouver Urban Farming Society: www.urbanfarmers.ca

Vancouver Food Strategy, January 2013: http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF

Vancouver Food Policy Council: www.vancouverfoodpolicycouncil.ca

622 Italy court ruling links mobile phone use to tumor. Reuters, Oct 9, 2012. www.reuters.com/article/2012/10/19/us-italy-phones-idUSBRE89I0V320121019

Some studies show that cellphone use has exploded over the last decade with no parallel increase in brain tumors; others show an increase in tumors on the side of the brain where the phone is used after ten years among those who use the phone for more than an hour a day. Wikipedia: http://en.wikipedia.org/wiki/Mobile phone radiation and health

- Global Alliance for the Rights of Nature: http://therightsofnature.org
- 624 Vancouver commits to run on 100% renewable energy. Guardian, April 10, 2015.

 www.theguardian.com/environment/2015/apr/10/vancouver-commits-to-run-on-100-renewable-energy
- Vancouver commits to run on 100% renewable energy. Guardian, April 1, 2015.

 www.theguardian.com/environment/2015/apr/10/vancouver-commits-to-run-on-100-renewable-energy
- 626 How many Energy-Slaves Do We Employ? Jennifer Barker, August 2006. www.altenergymag.com/emagazine.php?issue_number=06.08.01&article=slaves
- 627 *3D Printing and the Future of Manufacturing*. Leading Edge Forum, Fall 2012. http://assets1.csc.com/innovation/downloads/LEF_20123DPrinting.pdf

China: Firm 3D prints 10 full-sized houses in a day. BBC News, April 25, 2014. www.bbc.com/news/blogs-news-from-elsewhere-27156775

What's Mine is Yours: The Rise of Collaborative Consumption, by Rachel Botsman and Roo Rogers. HarperCollins, 2010. www.amazon.ca/Whats-Mine-Yours-Collaborative-Consumption/dp/0061963542

 $Collaborative \ Consumption: \underline{www.collaborative consumption.com}$

Report: Sharing is the New Buying, Winning in the Collaborative Economy. Jeremiah Owyang, March 3, 2014. www.web-strategist.com/blog/2014/03/03/report-sharing-is-the-new-buying-winning-in-the-collaborative-econom y

PEERS - Making the sharing economy work for you: www.peers.org

- Freight-sharing: 123 Loadboard: www.123loadboard.com
- 630 *Could BC's Ferries be Electric?* Guy Dauncey, BCSEA, February 2015. www.bcsea.org//could-bcs-future-ferries-be-electric
- For a comparable contest, see the XPrize: www.xprize.org
- Green Methanol: http://en.wikipedia.org/wiki/Green Methanol Synthesis

Blue Fuel energy: http://bluefuelenergy.com

World's first green methanol production could end up in most Icelandic cars. IceNews, Nov 16, 2011. www.icenews.is/2011/11/16/worlds-first-green-methanol-factory-could-help-green-most-cars-in-iceland

Nordic Green Advanced Biofuels: http://nordicgreen.eu

Roadmap to a Renewable Methane Economy. Ari Lampinen, Finnish Biogas Association, 2012. www.cbg100.net/products/roadmap-to-renewable-methane-economy1

Spireth: Methanol as a clean, low-emission alternative ship fuel: www.spireth.com

Zero emissions trucks: An overview of state-of-the-art technologies and their potential. Eelco den Boer et al, CE Delft. International Council for Clean Transportation, 2013.

www.theicct.org/sites/default/files/publications/CE Delft 4841 Zero emissions trucks Def.pdf

The Future of European long-distance transport Scenario Report. Jens Schippl et al and The Danish Board of Technology, 2008. https://www.europarl.europa.eu/RegData/etudes/etudes/join/2008/417471/IPOL-JOIN ET(2008)417471 EN.pdf

Road Transport: Unlocking Fuel-Saving Technologies in Trucks and Fleets. Carbon War Room Report, Nov 2012.

www.grahampeacedesignmail.com/cwr/cwr2012 trucking finall download singles.pdf

Los Angeles Plans Pilot of Siemens eHighway. Sustainable Business News, May 17, 2013. www.sustainablebusiness.com/index.cfm/go/news.display/id/23714

SuperGreen: Supporting EU's Freight Transport Logistics Action Plan on Green Corridors. www.supergreenproject.eu

- Solar railways. See *On Track for Value: Improving the Value of our Rail Network*. WSP, February 2015.

 www.wspgroup.com/Globaln/UK/Whitepapers/rail/The%202030%20UK%20Railway%20White %20Paper%20February%202015%20-%20Updated%20-%20med%20res.pdf
- Hyperloop: Billionaire Tech Mogul's New Idea Could Revolutionize Travel Forever. Huffington Post, Sept 25, 2013. www.huffingtonpost.com/2012/09/25/hyperloop_n_1913683.html

Hyperloop Construction Starts Next Year With The First Full-Scale Track. Wired, Feb 26, 2015. www.wired.com/2015/02/construction-hyperloop-track-starts/

Hyperloop Alpha:

www.teslamotors.com/sites/default/files/blog attachments/hyperloop alpha3.pdf

- 637 *Could micro-algae fuel the world?* BCSEA webinar with Dr. John Benemann. June 11, 2013. (The answer is no...) www.bcsea.org/sites/bcsea.org/files/2013-06-11-webinar-microalgae-biofuels-2.pdf
- 638 *IBM creates breathing, high-density, light-weight lithium-air battery.* Extremetech, April 20, 2012. www.extremetech.com/computing/126745-ibm-creates-breathing-high-density-light-weight-lithium-air-battery

EADS's Botti Expects Hypersonic Air Travel Before 2030. YouTube, June 21, 2011. www.youtube.com/watch?v=WayH8s49EIo

- Record-Setting Electric Airplane Prepares for 250 MPH Flight. WIRED Magazine, July 23, 2013. www.wired.com/autopia/2013/07/yates-250mph-electric/
- 639 Distance-Based Vehicle Insurance as a TDM Strategy. Todd Litman, Victoria Transport Policy Institute, Dec 10, 2012. www.vtpi.org/dbvi.pdf
- Zaha Hadid: www.theguardian.com/artanddesign/2013/sep/08/zaha-hadid-serpentine-sackler-profile

LEED Platinum. Canadian Green Building Council: www.cagbc.org

Living Building Challenge: http://living-future.org/lbc

- Phase Change Energy Solutions: www.phasechange.com
- 642 *How much will sea levels rise in the 21st Century?* Skeptical Science. www.skepticalscience.com/sea-level-rise-predictions.htm
- Revisiting the Local Effects of Global Climate Change in the City of Vancouver. Bing Thomas Architects, August 7, 2012. www.btaworks.com/2012/08/07/revisiting-the-local-effects-of-global-climate-change-in-the-city-of-vancouver

A False Creek: www.afalsecreek.ca

- 644 Pete McMartin: Keeping back the sea and paying for climate change. Vancouver Sun, Dec 16, 2013.
 www.vancouversun.com/technology/Pete+McMartin+Keeping+back+paying+climate+change/92 93820/story.html
- The Grouse Grind: www.grousemountain.com/grousegrind

Chapter 23: Taking Down the Tax Havens

Action on 'untreatable' gonorrhea. BBC News, Feb 26, 2013. www.bbc.co.uk/news/health-21580620

Gonorrhea strain found to be 'resistant to antibiotics'. BBC News, July 11, 2011 www.bbc.co.uk/news/health-14078098

'Super gonorrhea' and other antibiotic-resistant bugs deemed urgent threat by CDC. NY Daily News, Sept 17, 2013. www.nydailynews.com/life-style/health/super-gonorrhea-drug-resistant-bugs-deemed-urgent-threat-cdc-article-1.1458729

- 647 *Canadian docs discover fungus that fights deadly superbugs*. Globe & Mail, June 25, 2014. www.globalnews.ca/news/1415703/canadian-docs-discover-fungus-that-fights-deadly-superbugs
- Research shows that this story of his would-be suicide is probably not true, although Brad did not know this. See *The Love Song of R. Buckminster Fuller*, New York Times, June 15th 2008. www.nytimes.com/2008/06/15/arts/music/15ster.html
- Tax Justice Network: www.taxjustice.net

Canadians for Tax Fairness: www.taxfairness.ca

650 The Top 10 Worst Tax Avoidance Corporations (US).

www.economicpopulist.org/content/top-10-worst-tax-avoidance-corporations

A Scandal: US Senator Bernie Saunders speaking in the Senate on corporate tax avoiders, March 30th 2011. www.youtube.com/watch?v=Sknt-UBRhxo&feature=player embedded

Microsoft's Use Of Low-Tax Havens Drives Tax Bill To 7 Percent Of Profit. Huffington Post, July 28, 2011. www.huffingtonpost.com/2011/07/28/microsoft-tax-havens-profit-bill n 911779.html

MPs attack Amazon, Google and Starbucks over tax avoidance. Guardian, Dec 3, 2012. www.guardian.co.uk/business/2012/dec/03/amazon-google-starbucks-tax-avoidance

- (Sm)art Investing: Rich Move Assets from Banks to Warehouses. Spiegel, July 24, 2013. www.spiegel.de/international/business/art-as-alternative-investment-creates-storage-business-tax-haven-a-912798.html
- Edmund Burke, *Thoughts on the Cause of the Present Discontents* 82-83 (1770) http://harpers.org/blog/2007/11/burke-on-why-men-of-good-will-must-unite
- There's good evidence that the experience of winning and being rich makes people feel more self-centered and entitled. *Study: High Social Class Predicts Unethical Behavior*. Wall Street Journal, Feb 27, 2012 http://blogs.wsj.com/ideas-market/2012/02/27/study-high-social-class-predicts-unethical-behavior/

Take Two 'Normal' People, Add Money To Just One Of Them, And Watch What Happens Next. Upworthy, July 12, 2013. www.upworthy.com/take-two-normal-people-add-money-to-just-one-of-them-and-watch-what-happens-next

- The Finance Curse: how oversized financial centres attack democracy and corrupt economies, by Nicholas Shaxson and John Christensen. Tax Justice Network, 2013. www.taxjustice.net/cms/upload/pdf/Finance Curse Final.pdf
- For websites that encourage this way of thinking and behaving, see www.escapeartist.com and www.escapeartist.com and www.escapeartist.com
- \$50 trillion is the figure for 2025 suggested in a personal communication from the author Nicholas Shaxson, based on a low assumed level of inflation. In 2012, the Tax Justice Network reported that global tax havens were hiding between \$21 and \$30 trillion. tn hoard hidden from taxman 13£ by global elite. Guardian, July 21, 2012. www.guardian.co.uk/business/2012/jul/21/global-elite-tax-offshore-economy
- For current data, see www.economist.com/content/global debt clock
- The Tax Justice Network estimates that if all global tax havens were closed, governments would collect \$255 billion a year in tax revenues.

Tax lost in havens costs \$255 billion a year. New Economics Foundation, March 27, 2005. www.taxjustice.net/cms/upload/pdf/tax losts costs.pdf

Developing nations alone are losing \$160 billion a year. Christian Aid estimates that since the UN Millennium Development Goals were set in 2000 the developing world has lost \$160 billion a year in tax revenues as a result of transnational corporation transfer mispricing and false invoicing.

Death and Taxes—the True Toll of Tax Dodging. Christian Aid, May 2008. www.christianaid.org.uk/images/deathandtaxes.pdf

£100 billion lost to tax 'flaws and holes'. New Green Deal Group, UK, April 2010.

www.greennewdealgroup.org/?p=168 The global total in 2032 may be closer to \$400 billion.

- Thanks to Nicholas Shaxson, author of *Treasure Islands: Tax Havens and the Men who Stole the World* for this suggestion. http://treasureislands.org/
- The Case for a Global Financial Transaction Tax, by Peer Steinbruck (Germany's Minister of Finance). 2009. www.project-syndicate.org/commentary/steinbruck1/English This suggests a global income of \$690 billion from a 0.05% tax. Updated for 2032 and increasing the tax to 0.1% suggests an income of \$2 trillion.

Robin Hood Tax: http://robinhoodtax.org

The Potential Revenue from Financial Transactions Taxes, by Dean Baker, Robert Pollin, Travis McArthur & Matt Sherman. Political Economy Research Institute and Center for Economic and Policy Research, December 2009: www.peri.umass.edu/fileadmin/pdf/working papers/working papers 201-250/WP212.pdf

- In 2012 global CO₂ emissions were 36 billion tonnes a year, including deforestation. The numbers here assume that carbon emissions have fallen to 22 billion tonnes a year by 2032, which is taxed at \$100 a tonne. By 2040, it is forecast to be 11 billion tonnes, taxed at \$300 a tonne. By 2050 it is forecast to be 4 billion tonnes, taxed at \$400 a tonne.
- In 2000, annual methane emissions were 600 MT, of which 60% (360 MT) were related to human activities. The fossil fuel industry produces 80-100 Mt per year, landfills 60 Mt, and the livestock industry 250 Mt, producing 400 Mt that is theoretically taxable. Globally, if 25% of this is realized (100 Mt), and methane was taxed at a similar level to carbon (in spite of the fact that it traps 34 times more heat over 100 years, 84 times more over 20 years), the resulting annual global income in 2032 for 100 Mt at \$100 a tonne would be \$10 billion.
- Reducing Obesity: Policy Strategies from the Tobacco Wars. Urban Institute, July 2009. www.urban.org/uploadedpdf/411926 reducing obesity.pdf

In the US, "A 10 percent tax on fattening foods...would yield more than \$500 billion in revenue over ten years". In Britain, "Adopting the tax would earn the Treasury £38bn a year".

Call to tax junk food ingredients to halt obesity. Guardian, April 2, 2011. www.theguardian.com/society/2011/apr/02/taxing-fast-food-ingredients

The Budgetary Implications of Marijuana Prohibition by Professor Jeffrey Miron et al. (2005) concluded a \$14 billion benefit to the USD, consisting of \$7.7 billion in saved expenditures on prohibition enforcement and \$6.2 billion in tax revenues. www.prohibitioncosts.org/mironreport/

For Canada, the Fraser Institute has estimated \$2 billion a year. *Should Governments Legalize and Tax Marijuana?* http://economics.about.com/od/incometaxestaxcuts/a/marijuana.htm

Analysis Finds Marijuana Legalization Could Yield California \$1.5-\$2.5 Billion Per Year: www.canorml.org/background/CA_legalization.html This suggests \$20 billion a year for the US, maybe \$100 billion a year for the world as a whole.

Colorado Raised More Tax Revenue From Marijuana Than From Alcohol. Time Magazine, Sept 15, 2015. http://time.com/4037604/colorado-marijuana-tax-revenue/ Colorado's population is 5.5 million, compared to California's 39 million. Colorado's \$70 million income would imply an income of \$490 million a year for California, which is 3-5 times less than the totals suggested above.

Hundreds of Economists Agree Marijuana Legalization Could Save U.S Taxpayers \$13.7 Billion

Global New Taxes Revenue 2% annual growth	2032 \$ billion	2040 \$ billion	2050 \$ billion
Closure of the tax havens	400	468	594
Marijuana Tax	100	100	100
Financial transactions tax	2000	2340	2970
Carbon Cap permit sales (50%)	1100	1650	800
Methane Cap permit sales (50%)	10	10	10
Junk food tax	250	200	100
	\$3860	\$4768	\$4574

US New Taxes Revenue and	2032	2040	2050
Savings	\$ billion	\$ billion	\$ billion
2% annual growth			
Close the tax havens	50	50	50
Fair taxes on the super-rich	50	60	70
5% federal sales tax	180	206	260
Reduced military budget	200	300	400
Financial transactions tax	300	350	445
Legalize drugs	20	20	20
Carbon Cap permit sales (50%)	110	165	80
Methane Cap permit sales (50%)	2	1	1
Junk food tax	25	50	10
Total (\$ billion)	\$937	\$1202	\$1336

As the rich become super-rich, they pay lower taxes. For real. Washington Post, June 4, 2015. www.washingtonpost.com/news/wonkblog/wp/2015/06/04/as-the-rich-become-super-rich-they-pay-lower-taxes-for-real

Super-Earners Targeted in California Tax Push as Revenue Surges. Bloomberg Politics, Sept 23, 2015. www.bloomberg.com/politics/articles/2015-09-23/super-earners-targeted-in-california-tax-push-as-revenue-surges

A tax on the super-rich in California is estimated to bring in \$6 billion. \$50 billion is an extrapolation for the US as a whole in 2032.

Why the 1% should pay tax at 80%. Guardian, Oct 24, 2013. www.theguardian.com/commentisfree/2013/oct/24/1percent-pay-tax-rate-80percent

- Canada's federal income from a 5% GST yielded \$11.8 billion in 2009. The US population is ten times larger, hence \$120 billion a year in 2012. \$180 billion is an extrapolation for the year 2032, assuming a 2% annual growth rate.
- In 2015, total global arms expenditure was \$1.77 trillion. The 2032 data assumes no further growth in expenditures. America's military budget was \$600 billion, so the \$200 billion savings assumes a 33% reduction.

 http://en.wikipedia.org/wiki/List of countries by military expenditures

- A Carbon Tax Would Cut The Deficit By \$1 Trillion (over ten years). Climate Progress, Nov 13, 2013. http://thinkprogress.org/climate/2013/11/14/2944781/carbon-tax-cut-deficit/
- For the US, estimates of the health benefits go as high as \$690 billion a year. See *Lives per Gallon: The True Cost of our Oil Addiction*, by Terry Taminen, Island Press, 2006 (Chapter 3). www.amazon.com/Lives-Per-Gallon-True-Addiction/dp/1597261017
- 671 Econ 101 is Killing America, by Robert Atkinson and Michael Lind. Salon, July 8, 2013. www.salon.com/2013/07/08/how "econ 101" is killing america/
- 5 Reasons Why a GPI Should Replace the GDP. Bob Willard, Sustainability Advantage, March 8, 2011. http://sustainabilityadvantage.com/2011/03/08/5-reasons-why-a-gpi-should-replace-the-gdp/
- Global Reporting Initiative: www.globalreporting.org
- Doha's most progressive country on climate change? Wales. Guardian, Dec 6, 2012. www.guardian.co.uk/environment/2012/dec/06/doha-most-progressive-country-wales
- B Corporation The Model Legislation: http://benefitcorp.net/attorneys/model-legislation
- 676 Spiral of banks warns of financial meltdown. New Scientist, Aug 2, 2012. www.newscientist.com/article/dn22132-spiral-of-banks-warns-of-financial-meltdown.html
- Public Banking Institute: http://publicbankinginstitute.org
- Out of thin air Why banks must be allowed to create money. Ann Pettifor, Prime Economics, June 25, 2014. www.primeeconomics.org/articles/out-of-thin-air-why-banks-must-be-allowed-to-create-money
 - Positive Money: www.positivemoney.org
 - Why we disagree with Ann Pettifor. Ben Dyson, Positive Money. June 27, 2014. www.positivemoney.org/2014/06/disagree-ann-pettifor
- 679 *Wall Street bail out \$14 trillion. Behind The Real Size of the Bailout.* Mother Jones, Dec 21, 2009. www.motherjones.com/politics/2009/12/behind-real-size-bailout
 - Bernanke's Obfuscation Continues: The Fed's \$29 Trillion Bail-Out Of Wall Street. L. Randall Wray, Huffington Post, Dec 14, 2011. www.huffingtonpost.com/l-randall-wray/bernankes-obfuscation-con b 1147291.html
- Regulatory Bumpus: the Battle over Re-Instating Glass-Steagall. Time, July 16, 2013. http://business.time.com/2013/07/16/regulatory-rumpus-the-battle-over-reinstating-glass-steagall/
 - *Full Reserve Banking: An analysis of four monetary reform plans* by Charlotte Van Dixhoorn. Sustainable Finance Lab Utrecht, The Netherlands, June 2013. http://sustainablefinancelab.nl/files/2013/07/Full-Reserve-Banking-Dixhoorn-SFL.pdf
- Welcome to tax-dodge city, USA. Guardian, April 10th 2009. www.theguardian.com/business/2009/apr/10/tax-havens-blacklist-us-delaware
 - The IMF's welcome rethink on capital controls. Guardian, April 6, 2009. www.guardian.co.uk/commentisfree/cifamerica/2011/apr/06/imf-capital-controls
- 682 Why Isn't Wall Street in Jail? Matt Taibbi, Rolling Stone, Feb 11, 2011.

1111 4	1:4: / / 1.		:-:1 20110216
www.rollingstone.com/	namewenewen	V_ICHT_WALL_CTreeT_IN_	1911-7111 1117 16
www.rollingstone.com/	ponitios/news/wn	y isiit waii street iii	u11-20110210

- The Bretton Woods Project—Critical Voices on the World Bank and the IMF: www.brettonwoodsproject.org
- For the clearest arguments supporting fair trade thresholds, see *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism*, by Ha-Joon Chang, the Cambridge economist. RH Business Books, 2008. www.amazon.com/Bad-Samaritans-Secret-History-Capitalism/dp/1596915986
- Association for the Advancement of Psychosynthesis: http://aap-psychosynthesis.org
- This is similar to the Internal Family Systems model developed by Richard Schwarz. See www.selfleadership.org
- Global psychosynthesis does not exist as an extension of individual psychosynthesis. Maybe it will some day.
- William Wilberforce: The Life of the Great Anti-Slave Trade Campaigner, by William Hague. Harper Press, 2007. www.amazon.ca/William-Wilberforce-Great-Slave-Campaigner/dp/0007228864
- "A flee clause is a provision included in a tax haven secrecy jurisdiction trust deeds requiring that the management and administration of a trust be changed to a different jurisdiction if a disadvantageous event occurs such as the breakdown of law and order in the place in which the trust is administered of the imposition of taxation on the trust." Financial Secrecy Index: www.secrecyjurisdictions.com
- 690 Search the Offshore Leaks Data: www.icij.org/offshore/search-offshore-leaks-data and http://offshoreleaks.icij.org/

Secret Files Expose Offshore's Global Impact. ICIJ, April 3, 2013. www.icij.org/offshore/secret-files-expose-offshores-global-impact

State Integrity Investigation: <u>www.stateintegrity.org</u>

America's Most Corrupt States. 24/7 Wall St. March 22, 2012. http://247wallst.com/2012/03/22/americas-most-corrupt-states

- 692 Nevada wins race to bottom on U.S. corporate governance. Yuk. By Nicholas Shaxson. Feb 23, 2012. http://treasureislands.org/nevada-wins-race-to-the-bottom-on-u-s-corporate-governance-yuk
- Barclays PLC had 315 tax haven subsidiaries in April 2009. Nicholas Shaxson, *Treasure Islands*, page 274. http://treasureislands.org/banks-are-the-biggest-corporate-users-of-tax-havens-by-far/
- 694 Welcome to tax-dodge city, USA. Guardian, April 10, 2009.
 www.guardian.co.uk/business/2009/apr/10/tax-havens-blacklist-us-delaware

Treasure Islands: Tax Havens, and the Men who Stole the World, by Nicholas Shaxson. www.treasureislands.org

To view the actual building, see http://g.co/maps/yyrnp

695 International Raging Grannies: www.raginggrannies.org

International Consortium of Investigative Journalists: www.icij.org/

- Secrecy For Sale: Inside The Global Offshore Money Maze: www.icij.org/offshore
- The International Consortium of Investigative Journalists will hopefully get there before Minny. Time will tell.
- 697 New York City Is Getting Futuristic Touchscreen Subway Maps. Gizmodo, March 20, 2013. http://gizmodo.com/5991520/new-york-city-is-getting-futuristic-touchscreen-subway-maps

Chapter 24: Worms and Horses

- 698 Gloria Steinem: www.gloriasteinem.com/about
- Two Wolves: A Cherokee legend. <u>www.firstpeople.us/FP-Html-Legends/TwoWolves-Cherokee.html</u>
- 700 Transparency International: The Global Campaign against Corruption: <u>www.transparency.org/</u>
- 701 Lab-grown neurons might repair Alzheimer's brains. New Scientist, March 4, 2011. www.newscientist.com/article/dn20197-labgrown-neurons-might-repair-alzheimers-brains.html
 - Alzheimer's breakthrough: ultrasound successfully treats disease in mice. Guardian, March 12, 2015. www.theguardian.com/society/2015/mar/12/alzheimers-breakthrough-as-ultrasound-successfully-treats-disease-in-mice
- 702 Unease among Brazil's farmers as Congress votes on GM terminator seeds. Guardian, Dec 12, 2013. www.theguardian.com/global-development/2013/dec/12/brazil-gm-terminator-seed-technology-farmers
- Animal Welfare Approved: http://animalwelfareapproved.org
- 704 Floating Solar A Crazy Big Idea? Guy Dauncey, BCSEA, March 20, 2015. www.bcsea.org/floating-solar-crazy-big-idea

Floating solar concentrator keeps its cool. CNET, Feb 24, 2012. http://news.cnet.com/8301-11386_3-57384413-76/floating-solar-concentrator-keeps-its-cool

Sunbots aim to slash the cost of solar arrays. New Scientist, Aug 16, 2013. www.newscientist.com/article/mg21929304.800-sunbots-aim-to-slash-the-cost-of-solar-arrays.html

- This planning innovation allows people to build homes and grow good food. See *Farm Villages*, by Guy Dauncey: www.slideshare.net/GuyDauncey/farm-villages
- Natural beekeeping: www.lynnfarms.ca/blog/2012/7/2/natural-beekeeping.html
- Working with and within nature using perennial food crops and restoration agriculture. Interview with Mark Shepard of New Forest Farm. Ethical Foods, Dec 2013. http://ethicalfoods.com/interview-mark-shepard-new-forest-farm/
 - Bailing Hay with Horses: http://wn.com/baling hay with horses
- An economic comparison of traditional and conventional agricultural systems at a county level, M.H. Bender, American Journal of Alternative Agriculture, Dec. 15, 2000, Vol. 16
 https://landinstitute.org/library-post/an-economic-comparison-of-traditional-and-conventional-agricultural-systems-at-a-county

- A Sustainability Comparison between Horse Traction and Tractor Traction on Small Farm Holdings in Ireland by Claire Morrissey. A Thesis Submitted for the degree of M.Sc. Sustainable Development to Dublin Institute of Technology, 2009.

 www.horsepowerinireland.com/uploads/4/0/2/9/4029783/dissertation_on_horse_traction_in_ireland.pdf
- If this sounds overly romantic, read and enjoy *The Dirty Life: On Farming, Food, and Love*, by Kristin Kimball, where she describes her experience of farming with horses. www.amazon.com/The-Dirty-Life-Farming-Food/dp/1416551603
- See *Dirt The Erosion of Civilizations*, by David Montgomery. www.amazon.ca/Dirt-Civilizations-David-R-Montgomery/dp/0520248708
- 712 First-Ever Scientific Estimate Of Total Bacteria On Earth Shows Far Greater Numbers Than Ever Known Before. Science Daily, Aug 25, 1998.
 www.sciencedaily.com/releases/1998/08/980825080732.htm

Soil weighs on average a tonne per cubic metre, and 1 kg of soil contains a trillion bacteria (10^{12}), so a tonne of soil contains a thousand trillion bacteria (10^{15}). A hectare of land is 10,000 square metres, so at a soil depth of 33 cm that's 3,333 cubic metres, weighing 3,333 tonnes. So a hectare of soil contains 3,333 x 10^{15} bacteria, or 3.3 x 10^{18} (3.3 million trillion). On this basis, Joey's Farm (80 hectares) contains 300 million trillion bacteria (3×10^{20}). Coming at the same calculation from a different direction, the world's total bacterial count is estimated at 5 x 10^{30} , 93% of which are in the soil subsurface, ie 4.5 x 10^{30} . The world's total vegetated land is 11.5 billion hectares, and Joey's Farm is 80 hectares, which is a 144 millionth of the total. This suggests that Joey's Farm contains 3 x 10^{22} bacteria, or 30 billion trillion, which is 100 times more than the previous estimate. Splitting the difference gives us 3 x 10^{21} , or 3 billion trillion bacteria.

- In Darwin's last book, *The formation of vegetable mould, through the action of worms*, his research told him that worms brought up ten to 20 tons per acre, or a 10th to ½" per year. Quoted in *Dirt The Erosion of Civilizations*, by David Montgomery. See 711 above.
- No-till organic farming: http://rodaleinstitute.org/our-work/organic-no-till
- 715 Hairy Vetch for Cover Cropping in Organic Farming www.extension.org/pages/18570/hairy-vetch-for-cover-cropping-in-organic-farming
- 716 Biochar: www.biochar.info

International Biochar Institute: www.biochar-international.org

The Biochar Solution: Carbon Farming and Climate Change, by Albert Bates. New Society Publishers 2010. www.newsociety.com/Books/B/The-Biochar-Solution

- Science 11 June 2004. www.sciencemag.org/content/304/5677/1623 'As well as enhancing food security, carbon sequestration has the potential to offset fossil fuel emissions by 0.4 to 1.2 gigatonnes of carbon per year, or 5-15% of the global fossil-fuel emissions.' By 2032, when carbon emissions have fallen from ten to five gigatonnes a year, this represents 10-30% of global fossil-fuel emissions.
- 718 Biogas Flows Through Germany's Grid Big Time, by Jane Burgermeister. July 17, 2008, Renewable Energy World. www.renewableenergyworld.com/rea/news/article/2008/07/biogas-flows-through-germanys-grid-big-time-53075

- 719 Mondragon: http://en.wikipedia.org/wiki/Mondragon Corporation
- 720 The income is based on small scale farming, as described in *All the Dirt—Reflections on Organic Farming* by Rachel Fisher, Heather Stretch and Robin Tunnicliffe, pp. 101 103. www.touchwoodeditions.com/book details.php?isbn upc=9781927129128

Michael Nyberg, of New Mountain Farm, Haliburton Farm, Victoria, BC, told me that he and his partner realize an annual income of \$60,000 off one acre, with \$10,000 in expenses, using the French method of intensive cultivation.

- 721 *Winter Vegetables A Wealth of Information*, by Jo-Ann Canning. www.mgabc.org/content/winter-vegetables-wealth-information
- 722 Technology to make language differences a thing of the past. Walter Hickey. July 12, 2012, Business Insider. www.businessinsider.com/15-advanced-military-research-projects-that-will-change-your-life-2012-7#technology-to-make-language-differences-a-thing-of-the-past-4
- 723 *Lyme disease pushes northwards*. Scientific American, March 23, 2012. www.scientificamerican.com/article.cfm?id=lyme-disease-pushes-northwards

Chapter 25: Feeding the World

- In 2011, 49,000,000 km² (4.9 billion hectares) of the world's land was classified as agricultural, of which 14,000,000 km² (1.4 billion hectares) was arable. HelgiLibrary: www.helgilibrary.com/indicators/index/agricultural-land-area
- 725 *Can Organic Farming Feed Us All?* Worldwatch Institute, May/June 2006. www.worldwatch.org/node/4060

Organic farming just as productive as conventional, and better at building soil, Rodale finds. Grist, Mar 26, 2011. http://grist.org/article/2011-03-25-rodale-data-show-organic-just-as-productive-better-at-building

Agroecological farming can double food produx in 10 yrs. GroundTruth, Mar 8, 2011. www.panna.org/blog/agroecological-farming-can-double-food-produx-10-yrs

John Jeavons: www.johnjeavons.info

Ecology Action: Biointensive Farming Growing Ecosystems of Hope for over 40 Years! www.growbiointensive.org

The Joy of Dirt, by Larry Gallagher, Ode Magazine, March 2012. http://odewire.com/50849/the-joy-of-dirt.html

Amount of land per person? Permies Discussion forum. www.permies.com/t/12422/community/Amount-land-per-person

Area Needed for a Raw Food Diet: 4,000 square feet: www.growbiointensive.org/FAQ/FAQ RawFood.html

The carbon foodprint of 5 diets compared. Lindsay Wilson, Shrink That Footprint: http://shrinkthatfootprint.com/food-carbon-footprint-diet

- 727 The China Study: <u>www.thechinastudy.com</u>
- 728 How Smart Is Your Home? Diane J. Cook. Science. Mar 30, 2012.

www.ncbi.nlm.nih.gov/pmc/articles/PMC3731753

Vegetarians 3 times less likely to suffer from dementia. *The incidence of dementia and intake of animal products: preliminary findings from the Adventist Health Study*. NCBI PubMed, 1993. www.ncbi.nlm.nih.gov/pubmed/8327020

Why Do Vegetarians Live Longer? Huffington Post. Oct 26, 2012. www.huffingtonpost.com/kathy-freston/plant-based-diet b 1981838.html

730 Salvestrols and Diet: www.salvestrol.ca/diet.asp

The Green and Red Diet: Professor Potter's Dietary Recommendations: www.salvestrol.ca/doc/redgreendiet2.pdf

- BC has around 600,000 hectares of farmland, and an assumed population of 5.5 million in 2032. The Agricultural Land Reserve was set up in 1973 to protect BC's farmland. www.alc.gov.bc.ca
- 732 Food Among the Ruins: Should Detroit Be Converted Into a Farming Mecca? Mark Dowie, AlterNet, April 29, 2010.

 www.alternet.org/activism/146667/food among the ruins: should detroit be converted into a farming mecca
- 733 Study Sees 'Global Collapse' of Fish Species. New York Times, Nov 3, 2006. www.nytimes.com/2006/11/03/science/03fish.html

Why illegal fishing off Africa's coasts must stop now. Stop Illegal Fishing, July 15, 2014. www.stopillegalfishing.com/news article.php?ID=1152

- 734 See Polly Higgins' inspiring book about her work, *Eradicating Ecocide*: www.eradicatingecocide.com
- 735 *Climate change will upset vital ocean chemical cycles*. University of East Anglia, Sept 8, 2013. www.uea.ac.uk/mac/comm/media/press/2013/September/ocean-plankton
- 736 Climate Change: The 40 Year Delay Between Cause and Effect. Skeptical Science, Sept 22, 2010. www.skepticalscience.com/Climate-Change-The-40-Year-Delay-Between-Cause-and-Effect.html
- 737 The dead sea: Global warming blamed for 40 per cent decline in the ocean's phytoplankton. Independent, July 29, 2010. www.independent.co.uk/environment/climate-change/the-dead-sea-global-warming-blamed-for-40-per-cent-decline-in-the-oceans-phytoplankton-2038074.html
- 738 The Hygiene Hypothesis—Farm Germs Might Be the Best Medicine. Council for Agricultural Science and Technology, June 15, 2012. http://cast-science.blogspot.ca/2012/06/hygiene-hypothesisfarm-germs-might-be.html
- Roman Catholic Women priests: http://romancatholicwomenpriests.org
- 740 Food Speculation. Global Justice Now. www.globaljustice.org.uk/food-speculation
- What Goldman Sachs should admit: it drives up the cost of food. Guardian, May 23, 2013. www.theguardian.com/commentisfree/2013/may/23/goldman-sachs-agm-drive-food-prices-up
- Economists Without Borders: http://economistswithoutborders.net/uk/
- Thanks to Brett Scott for the idea of trained Chartered Financial Activists. See *The Heretic's Guide to Global Finance: Hacking the Future of Money*, by Brett Scott. Pluto Press, 2013. Page

Brett Scott's blog: http://suitpossum.blogspot.ca/p/the-heretics-guide.html

Chapter 26: The Farm Village

_	
744	Hempcrete block construction: www.carbonaction2050.com/case-studies/hemp-block-construction
	Hempcrete: www.ialtenergy.com/hempcrete.html
	Rainwater storage: www.rainwaterconnection.com/home
745	See Drake Landing Solar Community, in Okotoks, Alberta. www.dlsc.ca
746	Passipedia—The Passive House Resource: http://passipedia.org
747	Elderflower Champagne recipe: www.farminmypocket.co.uk/growing/wild-food/elderflower-champagne-recipe
748	The Quarter Acre Farm: http://thequarteracrefarm.com
749	Lillian Broca: www.lilianbroca.com
750	Vancouver Maker Foundation: www.vancouvermakerfoundation.org
751	Teens Create A Way To Use Urine As Fuel. Forbes, Aug 11, 2012. www.forbes.com/sites/matthewdepaula/2012/11/08/teens-create-a-way-to-use-urine-as-fuel
752	Decomposting Bodies. What's the greenest way to dispose of human remains? James Glave. The Walrus, July/Aug 2009. http://thewalrus.ca/decomposing-bodies
	Promessa Organic Burial: www.promessa.se
753	Vacuum casting replication of micro-riblets on shark skin for drag-reducing applications. Journal of Materials Processing Technology, Dan-Yang Zhao, Jan 2012. www.sciencedirect.com/science/article/pii/S0924013611002597
754	The sayak is a Guy Dauncey invention. All rights reserved. Enquiries welcome.
755	Makerbots: www.makerbot.com
756	Open Source Ecology Global Village Construction Site: http://opensourceecology.org/wiki/Global_Village_Construction_Set
	Reversing the Mississippi (movie about Makers): http://reversingthemississippi.com
	GrabCAD Workbench: http://grabcad.com/
756B	The Garlicator: www.facebook.com/guy.dauncey/posts/10153121928961516
757	Researchers Use Carbon Nanotubes to Make Solar Cells Affordable, Flexible. Science Daily, Sept 27, 2011. www.sciencedaily.com/releases/2011/09/110927124914.htm

Future looks bright for carbon nanotube solar cells. University of Wisconsin-Madison News,

June 18, 2013. www.news.wisc.edu/21890

Elemental risk: Securing the raw stuff of modern life. New Scientist, Feb 11, 2015. www.newscientist.com/article/mg22530080.400-elemental-risk-securing-the-raw-stuff-of-modern-life.html

Chapter 27: The Demise of the Oil Industry

758 Early Television Exposure and Subsequent Attentional Problems in Children. Dimitri A. Christakis, MD, MPH et al, Pediatrics April 2004. http://pediatrics.aappublications.org/content/113/4/708.abstract

Parallels between attention deficit hyperactivity disorder and behavioral deficits produced by neurotoxic exposure in monkeys. Environ Health Perspectives, June 2000. www.ncbi.nlm.nih.gov/pubmed/10852836

Four Everyday Chemicals that Cause ADHD. Dr. Yannick Pauli, Sept 6, 2010. http://unritalinsolution.com/adhdblog/2010/09/06/four-everyday-chemicals-that-cause-adhd

Autism More Common Than Previously Thought: CDC Report Shows One in 54 Boys Identified. Science News, March 29th, 2012. One in 30 is a future high-level mark. www.sciencedaily.com/releases/2012/03/120329142630.htm

The worldwide prevalence of ADHD: is it an American condition? World Psychiatry, June 2003. www.ncbi.nlm.nih.gov/pmc/articles/PMC1525089

CDC: Childhood ADHD rate rises 22 percent. CNN Health, Nov 10, 2010. http://thechart.blogs.cnn.com/2010/11/10/cdc-childhood-adhd-rate-rises-22-percent

Reverse ageing by boosting cells' energy factories. New Scientist, Sept 28, 2013.

www.newscientist.com/article/mg21929364.200-reverse-ageing-by-boosting-cells-energy-factories.html

Blood transfusions rejuvenate mice. Could they do the same for humans? Guardian, May 5, 2014. www.theguardian.com/commentisfree/2014/may/05/blood-transfusions-rejuvenate-mice-humans

- 761 *Smart carpet detects falls and strange footsteps.* New Scientist, Sept 4, 2012. www.newscientist.com/blogs/onepercent/2012/09/smart-carpet-detects-falls---a.html
- Jawbone's Up is a smart wristband that aims to keep you healthy. Geek, Nov 4, 2011.

 www.geek.com/articles/gadgets/jawbones-up-is-a-smart-wristband-that-aims-to-keep-you-healthy2011114/
- 763 *The high cost of dying: what do the data show?* NCBI, Dec 2005. www.ncbi.nlm.nih.gov/pmc/articles/PMC2690284/
- Advanced healthcare directives (Living wills): http://en.wikipedia.org/wiki/Advance health care directive

67% of Canadians support legalizing assisted suicide: poll. National Post, Dec 29, 2011. http://news.nationalpost.com/2011/12/29/67-of-canadians-support-legalizing-assisted-suicide-poll

- Near death, explained. New science is shedding light on what really happens during out-of-body experiences -- with shocking results. Mario Beauregard. Salon, April 20, 2012. www.salon.com/2012/04/21/near_death_explained/
- 766 Huge Amount Of Fossil Fuels In Arctic: 90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of

Natural Gas. Science Daily, July 24, 2008. www.sciencedaily.com/releases/2008/07/080724115043.htm 90 billion barrels is less than three years supply at a global consumption rate of 32 billion barrels a year.

- 767 Athabasca Chipewyan First Nation: <u>www.acfn.com</u>
- Alberta report finds Fort Chipewyan has higher rates of three kinds of cancer. Global News, March 14, 2014. http://globalnews.ca/news/1227635/alberta-report-finds-fort-chipewyan-has-higher-rates-of-three-kinds-of-cancer/

Photo Essay: Fort Chipewyan lives in the shadow of Alberta's oil sands, by Ian Willms. This Magazine, Nov 1, 2011. http://this.org/magazine/2011/11/01/fort-chipewyan-photo-essay/

- Mining Watch: www.miningwatch.ca. The Initiative for Responsible Mining Assurance is a close equivalent of the Bella Terra Mining Code: www.responsiblemining.net/
- 770 Corporate Knights Magazine: www.corporateknights.com
- 771 Caribou Diversity Project: http://nricaribou.cc.umanitoba.ca/cariboudiversity It's not quite the same, but it gets close.
- Fossil Free Divestment: http://gofossilfree.org

Carbon Tracker Initiative: www.carbontracker.org

- Mayor Bloomberg gives \$50 million to fight coal-fired power plants. Washington Post, July 21, 2011. www.washingtonpost.com/national/health-science/mayor-bloomberg-gives-50-million-to-fight-coal-fired-power-plants/2011/07/20/gIQAEKKURI story.html
- 774 Bombshell Study: High Methane Emissions Measured Over Gas Field "May Offset Climate Benefits of Natural Gas". Climate Progress, Feb 8, 2012. http://thinkprogress.org/climate/2012/02/08/421588/high-methane-emissions-measured-over-gas-field-offset-climate-benefits-of-natural-gas

Methane and the greenhouse-gas footprint of natural gas from shale formations. Robert Howarth, Renee Santoro and Anthony Ingraffea. Climatic Change, March 2011. www.fe.doe.gov/programs/gasregulation/authorizations/Orders_Issued_2012/75. Howarth-EtAl-2011.pdf

- 775 Drake Landing Solar Community, Okotoks, Alberta. www.dlsc.ca
- Green Houston: www.greenhoustontx.gov

Houston Bike Plan: http://houstonbikeplan.org

For a detailed exposition, see *What's the Matter with White People? Why We Long for a Golden Age that Never Was*, by Joan Walsh. Touchstone, 2013. www.amazon.ca/Whats-Matter-White-People-Golden/dp/1118141067

Joan Walsh: www.salon.com/writer/joan walsh/

778 Center for a New American Dream: www.newdream.org

See *The Divide: American Injustice in the Age of the Wealth Gap*, by Matt Taibbi. Spiegel and Grau, 2014. www.amazon.ca/The-Divide-American-Injustice-Wealth/dp/081299342X

- Now I Understand Why People Believe What They Hear on Fox News... Sheila Kennedy, Oct 11, 2013. http://sheilakennedy.net/2013/10/now-i-understand-why-people-believe-fox-news/
- Wall Street's Frightening New Plan To Become America's Landlord. Think Progress, Jan 24, 2014. http://thinkprogress.org/economy/2014/01/24/3203471/wall-street-landlord
- 781 See Move To Amend: www.movetoamend.org

The Senate Judiciary Committee Just Backed an Amendment to Overturn 'Citizens United'. Moyers & Company, July 12, 2014. http://billmoyers.com/2014/07/12/the-senate-judiciary-committee-just-backed-an-amendment-to-overturn-citizens-united'/

The Crash of 2016: The Plot to Destroy America and What We Can Do To Stop It, by Thom Hartmann. Twelve, 2013. www.amazon.com/The-Crash-2016-Destroy-America/dp/0446584835

Thom Hartmann video: www.democracynow.org/2013/11/12/the crash of 2016 thom hartmann

- Women Are the Only Adults Left in Washington. TIME, Oct 16, 2013. http://swampland.time.com/2013/10/16/women-are-the-only-adults-left-in-washington
- 783 US CEOs break pay record as top 10 earners take home at least \$100m each. Guardian, Oct 22, 2013. www.theguardian.com/business/2013/oct/22/top-earning-ceos-100m-paychecks-record

Why the 1% should pay tax at 80%, by Emmanuel Saez and Thomas Picketty. Guardian, Oct 24, 2013. www.theguardian.com/commentisfree/2013/oct/24/1percent-pay-tax-rate-80percent

- For a first-hand account, see *Confessions of an Economic Hitman*, by John Perkins. Plume, 2005. www.amazon.ca/Confessions-Economic-Hit-John-Perkins/dp/0452287081
- John Oliver Brilliantly Tears Apart America's Broken Prison System. Business Insider, July 21, 2014. www.businessinsider.com/john-oliver-explains-problems-with-americas-prison-system-2014-7

Skyrocketing Prison Population Devastating US Society: Report. Common Dreams, May 2, 2014. www.commondreams.org/news/2014/05/02/skyrocketing-prison-population-devastating-us-society-report

Fewer Prisoners, Less Crime: A Tale Of Three States. The Sentencing Project, 2014. http://sentencingproject.org/doc/publications/inc Fewer Prisoners Less Crime.pdf

786 Were People Killing Giant Sloths in South America 30,000 Years Ago? National Geographic, Nov 20, 2013. http://news.nationalgeographic.com/news/2013/11/131120-giant-sloths-people-americas-ancient-archaeology-science

Humans may have reached the Americas 22,000 years ago. New Scientist, April 25, 2013. www.newscientist.com/article/dn23441-humans-may-have-reached-the-americas-22000-years-ago.html

Population history of the indigenous peoples of the Americas.

http://en.wikipedia.org/wiki/Population_history_of_the_indigenous_peoples_of_the_Americas

Chapter 28: The Secret Garden

788 Finnish Lessons, by Pasi Sahlberg: <u>www.finnishlessons.com</u>

Finland schools: Subjects scrapped and replaced with 'topics' as country reforms its education

system. Independent (UK), March 20, 2015. www.independent.co.uk/news/world/europe/finland-schools-subjects-are-out-and-topics-are-in-as-country-reforms-its-education-system-10123911.html

11 Ways Finland's Education System Shows Us that "Less is More". April 15, 2015. http://fillingmymap.com/2015/04/15/11-ways-finlands-education-system-shows-us-that-less-is-more

789 PISA 2012 results: www.oecd.org/pisa/keyfindings/pisa-2012-results.htm

How to escape education's death valley. Ken Robinson, TED Lecture, April 2013. www.ted.com/talks/ken robinson how to escape education s death valley.html

- 790 The Hundred Languages: www.innovativeteacherproject.org/reggio/poem.php
- 791 Reggio Emilia approach: http://en.wikipedia.org/wiki/Reggio Emilia approach

Reggio Children: www.reggiochildren.it/?lang=en

North American Reggio Emilia Alliance: www.reggioalliance.org

Reggio Children Foundation—Loris Malaguzzi Centre: http://reggiochildrenfoundation.org/?lang=en

- 792 Malala Yousafzai: www.malala.org/malalas-story
- 793 Freedom to be a kid without any safety rules. CBC, The Current. April 18, 2014. www.cbc.ca/player/Radio/The+Current/ID/2450779035/

When one New Zealand school tossed its playground rules and let students risk injury, the results were surprising. National Post, March 21, 2014. http://news.nationalpost.com/2014/03/21/when-one-new-zealand-school-tossed-its-playground-rules-and-let-students-risk-injury-the-results-surprised/

The Overprotected Kid. Hanna Rosin, The Atlantic, March 19, 2014. www.theatlantic.com/features/archive/2014/03/hey-parents-leave-those-kids-alone/358631

New Games Benefits – How Cooperative Games can benefit schools, groups and families. www.youtube.com/watch?v=uzpHiRmrdYU

Cooperative Games in the Primary School: www.pdst.ie/sites/default/files/Cooperative%20games%20in%20the%20Primary%20School 0.pdf

795 Building a Playground: http://besteducationpossible.blogspot.ca/2011 03 01 archive.html

Organic playground equipment: www.letthechildrenplay.net/2010/06/organic-playground-equipment.html

796 Edible Schoolyard NYC: http://esynyc.org

One of Vancouver's Greenest City goals is that all Vancouver residents should live within a five-minute walk of a park, greenway or other green space by 2020. *City of Vancouver, Access to Nature*: http://vancouver.ca/green-vancouver/access-to-nature.aspx

797 The St George Rainway: http://mtpleasantwatershed.wordpress.com

The Vancouver Society of Storytelling is very involved: www.facebook.com/pages/Vancouver-Society-of-Storytelling/125386724198672

798 The Learning Pyramid: www.simulations.co.uk/pyramid.htm

Constructivist Learning Theory: www.ndt-ed.org/TeachingResources/ClassroomTips/Constructivist%20 Learning.htm

799 Adopt-a-School: Two thousand children go hungry every day in Vancouver schools. Vancouver Sun, March 211, 2015.

www.vancouversun.com/news/Adopt+School+thousand+children+hungry+every+Vancouver+schools/10881222/story.html

Vancouver Sun: Adopt a School: www.vansunkidsfund.ca

Infographic: Poverty and Education: http://homelesshub.ca/blog/infographic-education-and-poverty

- 800 Power of Art: Can Painting Improve Your Grades? BBC News, March 25, 2013. www.bbc.co.uk/news/magazine-21890033
- 801 Estonia's Singing Revolution: <u>www.singingrevolution.com</u>
- 802 Ron Clark Academy: www.ronclarkacademy.com
- 803 *Textbooks to iPads it's not your parent's education.* Mercury News, Sept 17, 2012. www.mercurynews.com/saratoga/ci 21566110/textbooks-ipads-its-not-your-parents-education

Danish Democratic Schools Emphasize Student Choice (video): www.youtube.com/watch?v=4R72L6Tyab4

- There are not yet any universities making this simple requirement. It would be easy to do, giving schools two or three years notice to run the required Earth 101 courses.
- 805 Code Club, UK: www.codeclub.org.uk

Code Academy around the world: www.codecademy.com/afterschool

Kindergarten coders can program before they can read. New Scientist, July 26, 2013. www.newscientist.com/article/mg21929275.800-kindergarten-coders-can-program-before-they-can-read.html

806 Minecraft: https://minecraft.net/

Minecraft Teacher: http://minecraftteacher.tumblr.com

MinecraftEdu: http://minecraftedu.com

Wi-Fi in schools: *Safe & Smart 4 r Kids - reduce wireless radiation*. Aug 17, 2013 (video). www.youtube.com/watch?v=GJPTzaNkcUk

Wi-Fi in Schools - The Facts. Wi-Fi Australia. Dec 12, 2012 www.youtube.com/watch?v=kmcAXZ-o1K4

Love machine: Engineering life-long romance. New Scientist, 12 May 2012. www.newscientist.com/article/mg21428646.200-love-machine-engineering-lifelong-romance.html

809 Mind-Up: www.thehawnfoundation.org/mindup

Should Schools Teach Kids to Meditate? The Atlantic, Jan 27, 2014. www.theatlantic.com/education/archive/2014/01/should-schools-teach-kids-to-meditate/283229/

Meditation transforms roughest San Francisco schools. SF Gate, Jan 12, 2014. www.sfgate.com/opinion/openforum/article/Meditation-transforms-roughest-San-Francisco-5136942.php

The Virtues Project: <u>www.virtuesproject.com</u>

Tips for Keeping a Gratitude Journal: http://greatergood.berkeley.edu/article/item/tips for keeping a gratitude journal

Bullying Myths and Facts: www.bullying.org/external/documents/Bullying.org Bullying Myths-Facts%20Pamphlet.pdf

Relationships, by Guy Dauncey. Hobsons Press, 1988. An action-learning schools book, now out of print. Please contact the author if you are a schools publisher who is interested to discuss a new edition.

- This Brilliant Math Teacher Has a Formula to Save Kids' Lives. Huffington Post, May 3, 2014.

 www.huffingtonpost.com/glennon-melton/this-brilliant-math-teacher-has-a-formula-to-save-kids-lives b 4899349.html
- 813 Day of Pink: www.dayofpink.org
- Roots of Empathy: www.rootsofempathy.org

Feeleez—An Empathy Game for Children: http://attachmentparenting.org/blog/2008/09/02/feeleez-an-empathy-game-for-children/

We Day: www.weday.com

We Day Results and Impacts: www.freethechildren.com/about-us/our-model/results-and-impacts/

Roots and Shoots: http://rootsandshoots.org/

Congolese chimpanzees face new 'wave of killing' for bushmeat. Guardian, Sept 7, 2010. www.guardian.co.uk/environment/2010/sep/07/congo-chimpanzees-bushmeat

- The Leader in Me: www.theleaderinme.org
- Young Enterprise: www.young-enterprise.org.uk
- 819 New Conversations Initiative: <u>www.newconversations.net/communication-skills-workbook/listening</u>

Empathic Listening: www.beyondintractability.org/essay/empathic-listening

Western Antarctic ice sheet collapse has already begun, scientists warn. Two separate studies confirm loss is inevitable and will cause up to four metres of additional sea-level rise. Guardian, May 12, 2014. www.theguardian.com/environment/2014/may/12/western-antarctic-ice-sheet-collapse-has-already-begun-scientists-warn

Tundra Fires Could Accelerate Climate Warming. Science Daily, June 27, 2011. www.sciencedaily.com/releases/2011/07/110727131415.htm

Chapter 29: Telepathic Twins

- 821 *I've found the real reason so many children are obese.* New Scientist, March 3, 2015. www.newscientist.com/article/mg22530100.400-ive-found-the-real-reason-so-many-children-are-obese.html
- Obesogens: An Environmental Link to Obesity. Environmental Health Perspectives, Feb 2012. www.ncbi.nlm.nih.gov/pmc/articles/PMC3279464
 - Antibiotics might be fuelling obesity epidemic. Wired Magazine, Aug 12, 2012. www.wired.com/wiredscience/2012/08/antibiotics-obesity
- 823 Twin Telepathy and the Illusion of Separation by Diane Hennacy Powell, MD. Institute of Noetic Sciences, Noetic Now, April 2012. http://dev.noetic.org/noetic/issue-twenty-one-april/twintelepathy-and-the-illusion-of-separation/
- Supernormal: Science, Yoga and the Evidence for Extraordinary Psychic Abilities, by Dean Radin. Deepak Chopra Books, 2013. www.amazon.ca/Supernormal-Science-Evidence-Extraordinary-Abilities/dp/030798690X
- The fMRI scan is fictional. The scientific evidence for telepathy is extremely strong among one third of identical twins. See *Twin Telepathy: The Psychic Connection*, by Guy Playfair (Vega, 2003). www.amazon.ca/Twin-Telepathy-The-Psychic-Connection/dp/1843336863
 - Institute of Noetic Sciences: www.noetic.org
- Emergence, Top Down Causation and Reductionism. Interview with Professor George Ellis, University of Cape Town, South Africa. April 30, 2013. YouTube, www.youtube.com/watch?v=KfTHYB aDtk

Time to turn cause and effect on their heads. George Ellis, New Scientist, Aug 21, 2013. https://www.newscientist.com/article/mg21929300.400-time-to-turn-cause-and-effect-on-their-heads.html George Ellis's work does not lend direct credence to Pelly's ideas, but it opens a door in that direction.

Why can't the world's greatest minds solve the mystery of consciousness? Oliver Burkeman, Guardian, Jan 21, 2015. www.theguardian.com/science/2015/jan/21/-sp-why-cant-worlds-greatest-minds-solve-mystery-consciousness

- Human Connectome Project: Mapping the Human Brain Connectivity: www.humanconnectomeproject.org
- *Do Fish Feel Pain? The Debate Continues*. LiveScience, July 2, 2013. www.livescience.com/37921-do-fish-feel-pain-fish-pain.html

Underwater Suffering: Do Fish Feel Pain? Scientific American, Sept 19, 2009. www.scientificamerican.com/article.cfm?id=underwater-suffering-do-fish-feel-pain

Gratitude Journal: http://getgratitude.co

Chapter 30: Midsummer's Eve

- Andrea Reimer is a real person. In 2015 she was a Vancouver City Councillor. See http://vancouver.ca/your-government/andrea-reimer.aspx
 - In 2015 Finn Donnelly was Member of Parliament for Port Moody Coquitlam. http://findonnelly.ndp.ca
- 831 GoSunStove: www.gosunstove.com
- For great recipes using home-grown food, see *The Zero Mile Diet Cookbook*, by Carolyn Herriot. Harbour, 2012. www.amazon.ca/Zero-Mile-Diet-Cookbook-Delicious-Homegrown/dp/155017567X
- Ave Maria, Barbara Bonney (video): www.youtube.com/watch?v=aQVz6vuNq7s

Chapter 31: Into the Forest

- 834 Taizé: www.taize.fr/en
- 835 Tesla Motors: www.teslamotors.com/en CA/
- 836 *ZSW engineers build lithium-ion battery able to last for 27 years*. Phys Org, June 10, 2013. http://phys.org/news/2013-06-zsw-lithium-ion-battery-years.html

MIT's New Liquid Flow Batteries Could Make Refueling EVs as Fast as Pumping Gas. Inhabitat, June 6, 2011. http://inhabitat.com/new-liquid-flow-batteries-from-mit-could-make-refueling-evs-as-fast-as-pumping-gas/

Metal air battery. What's a metal air battery and why is Tesla interested in it? Katie Fehrenbacher, Sept 24, 2013. http://gigaom.com/2013/09/24/whats-a-metal-air-battery-and-why-is-tesla-interested-in-it/

Forget Battery Swapping: Tesla Aims to Charge Electric Cars in Five Minutes. MIT Technology review, July 16, 2013. www.technologyreview.com/news/516876/forget-battery-swapping-tesla-aims-to-charge-electric-cars-in-five-minutes/

Future Toyota Prius Plug In will have wireless charging, more EV miles. Green Autoblog, Sept 4, 2013. http://green.autoblog.com/2013/09/04/future-toyota-prius-plug-in-will-have-wireless-charging-more-ev/

How Tesla Is Driving Electric Car Innovation. Kevin Bullis, Technology Review, Aug 7, 2013. www.technologyreview.com/news/516961/how-tesla-is-driving-electric-car-innovation

Volvo's Body Battery Panels: www.youtube.com/watch?v=TD1tjSeQPoQ&feature=share

Volvo develops battery-infused carbon fiber body panels. Extreme Tech, Oct 19, 2013. www.extremetech.com/extreme/168964-volvo-develops-battery-infused-carbon-fiber-body-panels

Breakthrough for electric cars: Supercapacitors from miracle substance graphene charges batteries in 4 minutes. International Business Times, May 25, 2015. www.ibtimes.co.uk/breakthrough-electric-cars-supercapacitors-miracle-substance-graphene-charges-batteries-4-1502834

Giving cars their own version of the internet could reduce crashes by 80 percent. Grist, Dec 12, 2012. http://grist.org/list/giving-cars-their-own-version-of-the-internet-could-reduce-crashes-by-80-percent/

- Volvo debuts world's first cyclist detection system with full auto-brake. Tech Radar, March 28, 2013. www.techradar.com/us/news/car-tech/volvo-debuts-world-s-first-cyclist-detection-system-with-full-auto-brake-1141471
- Whiz-bang windshield improves drivers' night vision. Mother Nature Network, July 19, 2012. www.mnn.com/green-tech/transportation/stories/whiz-bang-windshield-improves-drivers-night-vision
- 840 Ford Could Save America Billions (if it got rid of side mirrors). Clean Technica, Aug 28, 2013. http://cleantechnica.com/2013/08/28/ford-could-save-america-billions-if-it-gets-rid-of-side-mirrors
- Wolvo Innovation: External Airbags Could Save Pedestrian Lives. Spiegel, July 14, 2012.

 www.spiegel.de/international/business/volvo-develops-external-airbags-to-protect-pedestrians-a-838664.html
 - External Airbags on Cars Update. Copenhagenize, Nov 12, 2012. www.copenhagenize.com/2012/11/external-airbags-on-cars-update.html
- 842 *Here's how Tesla Hits 'Ludicrous' speed.* Auto-weekly, July 21, 2015. http://autoweek.com/article/car-news/tesla-hits-ludicrous-speed
- 843 *MMDA fields drones to monitor traffic*. Enquirer News (Philippines) April 8, 2012. http://newsinfo.inquirer.net/173565/mmda-fields-drones-to-monitor-traffic
- Distance-Based Vehicle Insurance As A TDM Strategy. Todd Litman, Victoria Transport Policy Institute, December 10, 2012. www.vtpi.org/dbvi.pdf
- This Invention From India Is Going to Change The Way We Live Forever. Sharedots, March 18, 2014. www.sharedots.com/this-invention-from-india-is-going-to-change-way-we-live-forever-165.html
- W2V: Cars Communicating to Prevent Crashes, Deaths, Injuries. US Department of Transportation. www.transportation.gov/fastlane/v2v-cars-communicating-prevent-crashes-deaths-injuries
- Google driverless car: http://en.wikipedia.org/wiki/Google driverless car
 - Silicon Valley vs. Detroit: The Battle For The Car Of The Future. Forbes, May 27, 2013. www.forbes.com/sites/joannmuller/2013/05/08/silicon-valley-vs-detroit-the-battle-for-the-car-of-the-futur
- Smartphone becomes in-car head-up display. BBC News, July 8, 2013. www.bbc.co.uk/news/technology-23226569
- 849 Ultra-Low-Power Alcohol Vapor Sensors using Chemically Functionalized Multi-Walled Carbon Nanotubes. Mandy L. Y. Sin et al. IEEE, 2007. http://70.40.222.74/ftp/papers/ieee-tnano-2007-lysin.pdf
 - Feasibility of Transdermal Ethanol Sensing for the Detection of Intoxicated Drivers. Association for the Advancement of Automobile Medicine, Gregory D. Webster and Hampton C. Gabler, 2007. www.ncbi.nlm.nih.gov/pmc/articles/PMC3217504/
- *Volvo Invents a Solar Panel that Unfurls from the Car Trunk.* Wired Magazine, July 23, 2013. www.wired.com/design/2013/07/volvo-synthesis-architecture-solar-power-canopy

Private internet to beat the spooks. New Scientist, Dec 30, 2013. www.newscientist.com/article/mg22029485.400-2014-preview-private-internet-to-spooks.html					
	Get round internet censors using a friend's connection. New Scientist, Nov 2, 2013. www.newscientist.com/article/mg22029415.500-get-round-internet-censors-using-a-friends-connection.html				
852	XKeyscore: NSA tool collects 'nearly everything a user does on the internet'. Guardian, July 31, 2013. www.theguardian.com/world/2013/jul/31/nsa-top-secret-program-online-data				
853	Google Glass: www.g.co/projectglass				
	Google Glass—how it feels: www.youtube.com/watch?v=v1uyQZNg2vE				
854	TerraChart: www.mymcgee.com/terrachart				
855	Climate change impact of soil underestimated. Independent, Sept 17, 2011. www.independent.co.uk/environment/climate-change-impact-of-soil-underestimated-study-5522594.html				
856	If We Release a Small Fraction of Arctic Carbon, 'We're Fucked': Climatologist. Motherboard, Aug 1, 2014. http://motherboard.vice.com/en_ca/read/if-we-release-a-small-fraction-of-arctic-carbon-were-fucked-climatologist				
857	The ocean's shifting baseline. Daniel Pauly. TED Lecture, April 2010. www.ted.com/talks/daniel_pauly_the_ocean_s_shifting_baseline				
	Big-Fish Stocks Fall 90 Percent Since 1950, Study Says. National Geographic, May 15, 2003. http://news.nationalgeographic.com/news/2003/05/0515_030515_fishdecline.html				
858	The oceans are heating, acidifying and choking. New Scientist, Oct 9, 2013. www.newscientist.com/article/mg22029382.900-the-oceans-are-heating-acidifying-and-choking.html				
	Scientists zero in on what's causing starfish die-offs. PBS, June 17, 2014. www.pbs.org/newshour/updates/scientists-zero-whats-causing-starfish-die-offs				
859	Teilhard de Chardin: http://en.wikipedia.org/wiki/Pierre Teilhard de Chardin				
	American Teilhard Association: www.teilharddechardin.org				
	Sri Aurobindo: www.aurobindo.net				
860	Malcolm Knapp Research Forest: www.mkrf.forestry.ubc.ca				
861	Trails in the Malcolm Knapp Research Forest: www.vancouvertrails.com/trails/ubc-malcolm-knapp-research-forest/				
862	US-Canada Softwood Lumber dispute: http://en.wikipedia.org/wiki/Canada-United_States_softwood_lumber_dispute				
	Forest Stewardship Council Canada: https://ca.fsc.org				

Ford reveals solar-powered car with sun-tracking technology. BBC News, Jan 2, 2014. www.bbc.co.uk/news/technology-25575306

Forest Stewardship Council US: https://us.fsc.org

Forest Stewardship Council International: https://ic.fsc.org/

- Wildwood Tree Farm: Fifty Years of Selection Forestry. BC Ministry of Forests, July 1996. www.for.gov.bc.ca/hfp/publications/00092/note 03.pdf
- Wood-Works! http://wood-works.ca/bc

Towers Proposed For Paris Would Be The World's Tallest Wooden Structures. Gizmodo, June 7, 2015. www.gizmodo.com.au/2015/06/towers-proposed-for-paris-would-be-the-worlds-tallest-wooden-structures/

Gallant Enterprises: www.gallant.forestry.ubc.ca

50,000 soil species. *Soil ecology: What lies beneath.* Nature, Oct 29, 2008. www.nature.com/news/2008/081008/full/455724a.html

Millions of bacterial species revealed underfoot. New Scientist, Aug 25, 2005. www.newscientist.com/article/dn7904-millions-of-bacterial-species-revealed-underfoot.html

- 866 Earthworms. E-Fauna BC http://ibis.geog.ubc.ca/biodiversity/efauna/EarthwormsIntroduction.html
- What does a worm want with 20,000 genes? Jonathan Hodgkin, Genome Biology, Oct 17, 2001. www.ncbi.nlm.nih.gov/pmc/articles/PMC138976/
- 868 Worm Facts. University of Illinois Extension, http://urbanext.illinois.edu/worms/facts

Charles Darwin and Earthworms: www.sciencelearn.org.nz/Science-Stories/Earthworms/Charles-Darwin-and-earthworms

- 869 *Could ants change the course of climate change?* CBS News, Aug 1. 2014. www.cbsnews.com/news/can-ants-change-the-course-of-climate-change
- A History of American Agriculture 1776-1990: http://inventors.about.com/library/inventors/blfarm1.htm

Chapter 32: Hitch Hiking

- For a vastly greater discussion of this critically important theme, see *The Empathic Civilization:* The Race to Global Consciousness in a World in Crisis, by Jeremy Rifkin. Tarcher/Penguin, 2009. www.amazon.ca/Empathic-Civilization-Jeremy-Rifkin/dp/1585427659
- The Better Angels of our Nature—Why Violence has Declined by Stephen Pinker. Viking Adult, 2011. www.amazon.ca/The-Better-Angels-Our-Nature/dp/0670022950
- For a fascinating read that explores this perspective, see *Sapiens: A Brief History of Humankind*, by Yuval Harari. www.amazon.ca/Sapiens-History-Humankind-Yuval-Harari/dp/077103850X
- 874 Skully AR-1 *The World's Smartest Motorcycle Helmet*. Indiegogo. www.indiegogo.com/projects/skully-ar-1-the-world-s-smartest-motorcycle-helmet
- 875 1994 Chevrolet EV conversion: www.evalbum.com/3726

Walmart: 50 Years of Gutting America's Middle Class. Stacey Mitchell, Huffington Post, May 7, 2012. www.huffingtonpost.com/stacy-mitchell/walmart-50-years-of-gutti b 1650756.html

Big-Box Swindle: The True Cost of Mega-Retailers and the Fight for America's Independent Businesses, by Stacy Mitchell. Beacon Press, 2007. www.amazon.com/Big-Box-Swindle-Mega-Retailers-Independent-Businesses/dp/0807035017

Just how wealthy is the Wal-Mart Walton family? PolitiFact, Wisconsin. Nov 27, 2013. www.politifact.com/wisconsin/statements/2013/dec/08/one-wisconsin-now/just-how-wealthy-wal-mart-walton-family

How Wal-Mart's Waltons Maintain Their Billionaire Fortune. Bloomberg, Sept 11, 2013. www.bloomberg.com/news/2013-09-12/how-wal-mart-s-waltons-maintain-their-billionaire-fortune-taxes.html

- What This City Did With An Abandoned Walmart Is Absolutely Brilliant. Grow Food Not Lawns, Nov 5, 2014. http://growfood-notlawns.com/city-abandoned-walmart-absolutely-brilliant-youll-love/
- Jonas Salk: https://en.wikipedia.org/wiki/Jonas Salk
- 879 Sto:lo Nation: www.stolonation.bc.ca
- 4880 *Endemic' rape and abuse of Irish children in Catholic care, inquiry finds.* Guardian, May 21, 2009. www.guardian.co.uk/world/2009/may/20/irish-catholic-schools-child-abuse-claims
- New electric car 2x more fuel efficient than Nissan Leaf. Smart Planet, Sept 13, 2011.

 www.smartplanet.com/blog/thinking-tech/new-electric-car-2x-more-fuel-efficient-than-nissan-leaf/8477?tag=content;siu-container
- Massive Open Online Courses, aka MOOCs, Transform Higher Education and Science. Scientific American, March 13, 2013. www.scientificamerican.com/article.cfm?id=massive-open-online-courses-transform-higher-education-and-science
- 883 Seabird Island: www.seabirdisland.ca
- On-line courses: *Top US universities put their reputations online*. BBC, June 20, 2012. www.bbc.co.uk/news/business-18191589

The intelligent textbook that helps students learn. New Scientist, Aug 1, 2012. www.newscientist.com/article/mg21528765.700-the-intelligent-textbook-that-helps-students-learn.html

885 Trailblazer: http://trailblazersystem.com/trailhead.php

Chapter 33: Sustainability in the Suburbs

- I first heard this joke from Andres Duany, pioneer of the new urbanism and traditional neighborhood development. www.dpz.com/About/People
- Amazing new house proves that green doesn't have to mean expensive. Grist, Dec 23, 2012. http://grist.org/cities/amazing-new-house-proves-that-green-doesnt-have-to-mean-expensive/

Canadian Passive House Institute: www.passivehouse.ca

Passive House Institute US: www.passivehouse.us

There is a long history of water trading, but I can't find an example of the use of water conservation credits in a city.

To track progress, see The Water Network: www.thewaternetwork.org

Pocket Neighborhoods: http://pocket-neighborhoods.net

Project for Public Spaces: www.pps.org/blog

The Better Block: http://betterblock.org/

Jason Roberts - How To Build a Better Block. TEDx OU. www.youtube.com/watch?v=ntwqVDzdqAU

- For similar inspiration, see Vancouver City Commons Placemaking Course: www.villagevancouver.ca/events/vancouver-city-commons-placemaking-course-story-and-place
- 891 Solar Electric Light Fund: www.self.org
- Village Homes: www.villagehomesdavis.org

Village Homes, A Community by Design, by Mark Francis. <u>www.amazon.com/Village-Homes-Community-Architecture-Foundation/dp/1559631112</u>

Ashoka's Community Greens: Shared Parks in Urban Blocks: www.communitygreens.org

How to Design Our Neighborhoods for Happiness, by Jay Walljasper. YES! Magazine, July 26, 2013. www.yesmagazine.org/happiness/how-to-design-our-neighborhoods-for-happiness

- 893 *Happy City: Transforming Our Loves through Urban Design,* by Charles Montgomery. Doubleday Canada, 2013. www.amazon.ca/Happy-City-Transforming-Through-Design/dp/0385669127
- Metro Vancouver 2040: Shaping Our Future: www.metrovancouver.org/services/regional-planning/metro-vancouver-2040/Pages/default.aspx

 $\label{lem:lem:media/Documents/plans} \begin{tabular}{ll} Metro Vancouver Transport 2040 Strategy: $\underline{www.translink.ca/-}$ & $\underline{media/Documents/plans}$ & and $\underline{projects/regional}$ & $trategy/Transport\%202040/Transport\%202040.pdf \end{tabular}$

- A City that Runs on Itself, by Patrick Condon and students in the UBC School of Architecture and Landscape Architecture and the UBC School of Community and Regional Planning. Our World 2.0, March 28, 2012. http://ourworld.unu.edu/en/a-city-that-runs-on-itself
- 896 *IBM Watson:* www.ibm.com/smarterplanet/us/en/ibmwatson/

How much is a petabyte? http://mozy.com/blog/misc/how-much-is-a-petabyte/

There is a proposal to run an Interurban railway from Chilliwack to Abbotsford, Langley and New Westminster, using the existing goods line: see www.railforthevalley.com

Chapter 34: The Dinner Party

898 Vince Lombardi: www.brainyquote.com/quotes/authors/v/vince lombardi.html

- 899 *Slide for Berlin subway commuters*. Newslite, June 28, 2010. http://newslite.tv/2010/06/28/slide-installed-for-berlin-sub.html
- Shifting Assumptions in Science. Hokkaido-8 symposium, with Osman Bakar, Brian Josephson, Yasuhiko Genku Kimura, Manjir Samanta-Laughton, Elisabet Sahtouris, Akio Shoji, Enoé Texier and William Tiller. University of Cambridge, July 2008. http://sms.cam.ac.uk/media/687386

In this chapter, all of the scientists mentioned except Satyanendra Mukherjee are real. This makes it important to emphasize that all interpretations—or misinterpretations—of their work are strictly mine.

- 901 TEK Robotic Mobilization Device: www.matiarobotics.com
- 902 Sir Isaac Newton: The Universal Law of Gravitation http://csep10.phys.utk.edu/astr161/lect/history/newtongrav.html
- Thanks to Rupert Sheldrake for the analogy. See *The Science Delusion*, by Rupert Sheldrake. Coronet, 2012. Published in North America as *Science Set Free: Ten Paths to New Discovery*. Deepak Chopra, 2013. www.amazon.com/Science-Set-Free-Paths-Discovery/dp/0770436706/

Rupert Sheldrake: www.sheldrake.org and his blog: http://sciencesetfree.tumblr.com/

- 704 *The Astonishing Hypothesis: The Scientific Search for the Soul*, by Francis Crick. Scribner, 1995. www.amazon.ca/Astonishing-Hypothesis-Scientific-Search-Soul/dp/0684801582
- 705 Time to turn cause and effect on their heads. George Ellis, New Scientist, Aug 17, 2013.

 www.newscientist.com/article/mg21929300.400-time-to-turn-cause-and-effect-on-their-heads.html

Recognizing Top-Down Causation, by George Ellis, Professor of Applied Mathematics, FRS, University of Cape Town. Cornell FQXI Essay Contest. Dec 9, 2012. http://arxiv.org/abs/1212.2275 and http://arxiv.org/pdf/1212.2275.pdf

Downward Causation and the Neurobiology of Free Will. Murphy, Nancey; Ellis, George F.R.; O'Connor, Timothy (Eds.). Springer, 2009. www.springer.com/physics/complexity/book/978-3-642-03204-2

906 The Universe: Imagine the un-imaginable! Michel van der Meij, 2009 www.xiac.com/Universe/universe.html

How big is Earth, compared to the Universe? Joshua Kennon, March 6, 1011. www.joshuakennon.com/how-big-is-earth-compared-to-the-universe/

- Story recounted by Rupert Sheldrake (see above) in *The Science Delusion*, page 9.
- 908 See Consciousness: Confessions of a Romantic Reductionist, by Christof Koch. MIT Press, 2012. Pages 131-134. www.amazon.ca/Consciousness-Confessions-Reductionist-Christof-Koch/dp/0262017490
- Charles Darwin and the Vivisection Outrage. Scientific America, Oct 6, 2011. http://blogs.scientificamerican.com/primate-diaries/2011/10/06/vivisection-outrage/

Richard Dawkins on vivisection: "But can they suffer?" Boing Boing, June 30, 2011. http://boingboing.net/2011/06/30/richard-dawkins-on-v.html

Animal consciousness. Stanford Encyclopedia of Philosophy, Oct 13, 2010.

1 11	4	. 0 1	4			
httn://i	nlato	stantord	edu/	entries/	conscious	sness-animal/

The Reality of Consciousness. Peter Russell, SAND Conference, 2014. www.scienceandnonduality.com/conference-us/sand14-videos/

- 2013. www.huffingtonpost.ca/2013/08/08/lobsters-crabs-feel-pain n 3724909.html
- Bacterial gene numbers: http://bioscience.jbpub.com/cells/MBIO137.aspx

What does a worm want with 20,000 genes? Jonathan Hodgkin, Genome Biology, Oct 17, 2001. www.ncbi.nlm.nih.gov/pmc/articles/PMC138976/

- Andrew Watson, brother of the author Lyall Watson, told this story at a healing workshop I attended in London in the 1980s.
- 913 See Consciousness: Confessions of a Romantic Reductionist, by Christof Koch. Referenced above.
- While the evidence for telepathy in identical twins is very strong, the studies that Patrick refers to have not yet occurred.
- Referenced in *Sync: The emerging science of spontaneous order*, by Steven Strogatz. Penguin, 2003. Page 151. www.amazon.ca/Sync-Emerging-Science-Spontaneous-Order/dp/0786887214
- Max Planck, The Observer, Jan 25, 1931. Referenced in Today in Science History (scroll down to the quotes beginning with 'I': http://todayinsci.com/P/Planck_Max/PlanckMax-Quotations.htm
- Referenced in *The Genius of Science: A Portrait Gallery* by A. Pais. OUP, 2000. www.amazon.ca/Genius-Science-Portrait-Gallery/dp/0198506147

See also *Pauli's ideas on mind and matter in the context of contemporary science*, by Harald Atmanspacher. Journal of Consciousness Studies 13(3), 5-50 (2006). http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.437.5253&rep=rep1&type=pdf

- Eddington: *The Nature of the Physical World* (1928). The quote comes from the essay *Eddington's Universe* in a thoughtful blog by Orkney Islander Howie Firth. http://howiefirth.wordpress.com/2012/07/22/166/
- 919 Shifting Assumptions in Science. Hokkaido-8 symposium. See above. See also The Evolving Story of our Evolving Earth, by Elisabet Sahtouris, Ph.D. Seattle, November 4/5, 1999. www.ratical.org/LifeWeb/Articles/H3Kevolv.html

Elisabet Sahtouris: www.sahtouris.com

How to measure consciousness: A neuroscientist seeks to quantify our awareness according to a new metric: phi. Joshua Rothman, Boston Globe Ideas, Aug 19, 2012.

www.bostonglobe.com/ideas/2012/08/18/how-measure-consciousness/cl7K8Xk5elpGsNyl5TMlzM/story.html

Zero, mathematics and consciousness, by Shri Ashutosh Maharaj. Times of India, Feb 27, 2012. http://articles.timesofindia.indiatimes.com/2012-02-27/vintage-wisdom/30369983_1_zero-sage-universal-consciousness

Professional mathematicians may enjoy *Mathematical Foundations of Consciousness*, by Willard L. Miranker & Gregg J. Zuckerman, Yale University. Cornell University Archive, May 15, 2008. http://arxiv.org/pdf/0810.4339.pdf

921	For a rich source of debate, see A Quest for the Theory of Everything: www.toequest.com
922	Thales of Miletus: https://en.wikipedia.org/wiki/Thales
923	League of Nations Failures: www.historylearningsite.co.uk/league_nations_failures.htm
924	<i>The Phenomenon of Man</i> , by Teilhard de Chardin. Fontana paperback, 1969 edition, Postscript page 329. www.amazon.ca/Phenomenon-Man-Pierre-Teilhard-Chardin/dp/0061632651
	American Teilhard Association: http://teilharddechardin.org
	Teilhard de Chardin: http://en.wikipedia.org/wiki/Pierre_Teilhard_de_Chardin
925	<i>The Delusion.</i> A letter Einstein wrote on February 12, 1950: www.lettersofnote.com/2011/11/delusion.html
	<i>Einstein sleuthing</i> , by Nancy Rosembaum: http://blog.onbeing.org/post/241572419/einstein-sleuthing-by-nancy-rosenbaum-associate
926	How many atoms are in the human body? 7 x 10 ²⁷ http://chemistry.about.com/od/biochemistry/a/How-Many-Atoms-Are-In-The-Human-Body.htm
927	For a good survey of complexity theory, see <i>Complexity: Life at the Edge of Chaos</i> , by Roger Lewin. Macmillan, 1992. www.amazon.ca/Complexity-Life-at-Edge-Chaos/dp/0020147953
928	Are We in the Midst of A Scientific Revolution? Cassandra Vieten. Science and Non-Duality (SAND) Conference, 2014. www.scienceandnonduality.com/are-we-in-the-midst-of-a-scientific-revolution-cassandra-vieten/
929	Luigi Fantappiè: www-history.mcs.st-and.ac.uk/Biographies/Fantappie.html
930	Luigi Fantappiè and the physics of life, by Mary Leonard. Frontiers, March 17, 2013. http://frontiersmagazine.org/luigi-fantappie-and-the-physics-of-life/
	The Law of Syntropy: www.syntropy.org
	What is Syntropy? Antonella Vannini, Nov 2, 2008. www.18mind.com/mind/what is mind syntropy
931	<i>Self-organization</i> , by Hermann Haken, Institute for Theoretical Physics I, Center of Synergetics, University of Stuttgart, Germany. Scholarpedia: www.scholarpedia.org/article/Self-organization
	Molecular self-assembly. Wikipedia: http://en.wikipedia.org/wiki/Molecular_self-assembly
	Focus: Atoms Organize Themselves. D. E. Chang, J. I. Cirac, and H. J. Kimble. Physical Review Letters, 110. March 15, 2013. http://physics.aps.org/articles/v6/30
	Fabrication of atomic wires based on self-organization. Ch. Witt, M. Bode, R. Wiesendanger. Applied Physics A, September 1996. http://link.springer.com/article/10.1007%2FBF01567886
932	At Home in the Universe: The Search for Laws of Complexity, by Stuart Kauffman. Viking, 1995. www.amazon.ca/At-Home-Universe-Self-Organization-Complexity/dp/0195111303
	Stu Kauffman: Europe's Origin of Life Summit, by Suzan Mazur. Nov 2, 2012. www.scoop.co.nz/stories/HL1211/S00005/stu-kauffman-europes-origin-of-life-summit.htm

- Stu Kauffman: http://stuartkauffman.com
- Physicist George Ellis Knocks Physicists for Knocking Philosophy, Falsification, Free Will. John Horgan, Scientific American, July 22, 2014. http://blogs.scientificamerican.com/cross-check/2014/07/22/physicist-george-ellis-knocks-physicists-for-knocking-philosophy-free-will/
- 934 See The Selfish Gene, by Richard Dawkins. http://en.wikipedia.org/wiki/The Selfish Gene
- Prologue to a New Model of a Living Universe. Chapter by Elisabet Sahtouris in Mind Before Matter: Vision of a New Science of Consciousness. O Books, John Hunt, 2007.
 www.sahtouris.com/pdfs/MindBeforeMatterChapter.pdf

Elisabet Sahtouris: "In my scientific worldview, the universe is consciousness creating living systems within itself; thus ALL living systems are conscious, intelligent and can learn." www.sahtouris.com/#8 1,0,1

- A.N. Whitehead: http://en.wikipedia.org/wiki/Alfred North Whitehead
- 937 Syntropy: www.sintropia.it

The New Thermodynamics and Life Energy by Ulisse Di Corpo and Antonella Vannini. Syntropy, 2012. www.sintropia.it/english/2012-eng-2-3.pdf

- 938 Supernormal: Science, Yoga and the Evidence for Extraordinary Psychic Evidence by Dean Radin. Deepak Chopra Books, 2013. Chapter 9. www.amazon.ca/Supernormal-Science-Evidence-Extraordinary-Abilities/dp/030798690X
- 939 For further exploration, see The Center for Integral Science: www.integralscience.org
- *Rebuilding the Nervous System with Stem Cells.* National Institutes of Health. http://stemcells.nih.gov/info/scireport/pages/chapter8.aspx

Neural Stem Cells Regenerate Axons in Severe Spinal Cord Injury; Functional Recovery in Rats. Science Daily, Sep 13, 2012. www.sciencedaily.com/releases/2012/09/120913122834.htm

- Paralyzed man uses mind control to walk again. New Scientist, Sept 24, 2015. www.newscientist.com/article/dn28226-paralysed-man-uses-mind-control-to-walk-again
- Wikipedia entries on eschatology: http://en.wikipedia.org/wiki/Eschatology

Jewish Eschatology: http://en.wikipedia.org/wiki/Jewish eschatology

The Gifts of the Jews, by Thomas Cahill. Nan A. Talese/Doubleday, 1988. www.amazon.ca/Gifts-Jews-Thomas-Cahill/dp/0385482485

- The Post-Modernism Generator, written by Andrew Bulkak using the Dada Engine. www.elsewhere.org/pomo
- 944 *The Science Interview: Paul Davies.* Financial Times Magazine, Nov 15, 2013. www.ft.com/intl/cms/s/2/f2479d9a-4cc5-11e3-958f-00144feabdc0.html

Appendices

Investing in children: breaking the cycle of disadvantage. European Commission Recommendations, 2013.

 $\frac{www.eurochild.org/fileadmin/public/05\ Library/Thematic\ priorities/02\ Child\ Poverty/European\ \underline{Union/Recommendation\ Children\ en.pdf}$

Pharmacare 2020: http://pharmacare2020.ca

946