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Primal Social Connectedness: Ageing Productively in a State of Nature. Reality Check: Life Expectancy Increase Slows. Human Condition: Over-structured Lives. Q&A: Tuna Varieties. From the Journals: Omega-3 seals Leaky Blood-Brain Barrier; Fish Oil, Alzheimer's & Cognition; Child Obesity – Adult Sickness; Evolution of Menopause; Breast Milk Seeds Infant Gut Microbiome; Milk Increases Fractures, Inflammation and Death. Ancestral Psycho-sociology: Are Liberals Physically Weak? Ancestral Health: Our Living Gut - part XI.. Spreading the Word: Radio Interview with Josh Lane.

Primal Social Connectedness

Ageing Productively in a State of Nature



A long-term study of the Tsimane forager-farmers of Bolivia finds that productivity and social status peak long after does physical strength [1].

Between the ages of 40 and 60, many individuals reach a social and economic maximum when hard work and life experience bear fruit.

Tsimane women divide their time between horticulture, food processing, and childcare. Horticulture, compared to hunting, is productive enough that Tsimane between 40 and 70 wind up producing the majority of calories for their extended families.

And, because members of older generations are considered the best storytellers and advisors, their social now keep old people alive far stock also rises with age.

As adults age and their bodies become weaker, instead of ceasing to be productive, folks adaptively shift their behavior into arenas where their aging bodies perform very well. > p 2

Reality Check

Life Expectancy Increase Slows

There is much humbug talked about ever-increasing lifespans - as though the age at which people die today is any guide to how long a baby born today will live.

No, if you really want to know the outlook, ask pensions actuaries. They have to bet good money on how long they will have to pay it out decades into the future.

PriceWaterhouse Coopers, (PwC), the financial services firm, has **REDUCED** the projected life expectancy for a 65-year-old man by almost four months from the estimates made in 2015, and that of a 65-year-old woman by almost six months [2].

Says Raj Mody, PwC's head of pensions: "In the first decade of this century, there was a clear trend for improvements in life expectancy. Pension funds have typically been assuming this trend will continue when forecasting deficits. But over the last five years, that trend has changed and there is a growing view that it is not just a blip."

My View? With medical heroics and Loss of Creativity good public health engineering, we have now reduced the numbers of babies dying in infancy to nearly zero; with aggressive treatment we beyond their natural span. See:

- The Quagmire: How American Medicine is Destroying Itself, August 2011 [3]
- Docs Avoid Aggressive End-of-life Treatment to Themselves, July 2014 [4])

We have now hit the buffers. We have done everything > p.4.

Human Condition

Over-structured Lives

"We must be willing to get rid of the life we have planned so as to have the life that is waiting."

So said the renowned professor of comparative mythology, Joseph Campbell, April 2017 [5]. But his message is not getting through. Researchers talk of the 'schoolification' of childhood as children spend an ever-increasing portion of their time in educational institutions, being tutored, doing homework, and being schlepped from one structured activity to another. [6].

This study, which investigated the lives of 6-7 year-olds from their point of view, heard them complain that they had less time for themselves and that they were stressed by the continuous nagging to keep to schedule and perform.

My View? In a state of nature, children were largely left to themselves to make their own amusements and to live in the moment. See: Childhood, Deadly Harvest, p. 218 [7]. Childhood: Forager Indulgent or Modern Discipline? Sept 2011 [8]

A second study finds that structured working patterns stifle creativity [9]. This echoes the words of Tim Harford, the Financial Times economist, in his book 'Messy' [10], where he argues that inventiveness and original thinking come out of randomness and disorder - and that pre-planning, tidiness, and structure are enemies of creativity. His challenge: "How to be creative and resilient in a tidy-minded world".

My View? Humans are not >p.4

Questions

Tuna Varieties

Q. We cannot get yellow fin tuna here anymore only 'white' tuna chunks or whatever. Do you rate this other stuff?

A. With tuna I just take the view that none of it is likely to be a good source of omega-3. However, as a sea-food, all species of tuna are a good source of low-fat protein. Moreover, the fat content, albeit small, will consist of good fish oils.

So just choose what is convenient and pleasing.

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Ageing Productively in a State of Nature



From an evolutionary standpoint, the findings suggest that human fitness must, in addition, take account of complex social and intergenerational contexts; that our relatively long lifespans have evolved to maximize not only individual survival, but also the survival of children and grandchildren.

Aging can be seen as a passing of resources and wisdom to the next generation.

Good Heart Health too

A combination of physical fitness, limited diet, and challenges to the immune system from germs, viruses, funguses and parasites have given the Tsimane the best heart health observed in any human population.

"Tsimane have minimal obesity, hypertension, diabetes, heart disease and peripheral arterial disease" says Prof Michael Gurven, of UCal. Santa Barbara.

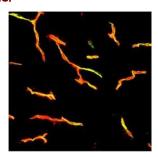
My View? The main message is that there is a good evolutionary reason why the human species has a grandparent generation: grandparents were essential for the survival of the human species. See Evolution of Menopause, p. 3 and Childhood, Deadly Harvest, p 218 [7]. Moreover, evolutionary processes seem to have hard-wired grandmothers to want to be with the grandchildren – and if they are not then they are unhappy as well.

A second message is that it is good to have a lifestyle which strongly challenges the immune system. These would be viruses, bacteria, funguses and parasites. See: Allergies: Hygiene Good, 'Old Friends' Germs, Good, Nov 2012 [11].

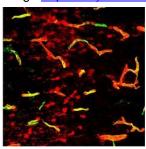
This chimes with the "hygiene hypothesis" which says that extreme INCREASE leakiness to let in curative cleanliness, and insufficient exposure to animals, dirt and 'good' germs, leads to a maladapted and dysfunctional immune system.

From the Journals

Omega-3 seals Leaky Blood Brain Barrier



Normal Brain Enlarge http://bit.ly/2uLiJX0



Leaky Brain Enlarge http://bit.ly/2eE0Hit

The blood-brain-barrier (BBB) is a layer of cells which line the brain's blood vessels. Their job is to keep out nasties in the blood from contaminating the brain.

However, for a number of reasons, the BBB can become leaky and let in bugs, viruses, funguses (like candida), and toxins (like gluten) which create mischief. They can be a factor in brain diseases such as Alzheimer's [12], Huntington's [13], epilepsy [14], multiple sclerosis [15], childhood had increased arterial

Parkinson's [16] and mental illness generally.

Now the vital role of DHA (an omega-3 fish oil) in keeping the BBB at just the right permeability has been uncovered [17].

However, the BBB, when it is working properly, keeps out many drugs that could be used to treat brain infections like meningitis and syphilis. The researchers are excited that it will be possible, by suppressing the DHA axis, to drugs.

My View? Frustratingly, in their haste to commercialize this knowledge with BigPharma, the researchers focus on how to WEAKEN the BBB and not on the opposite, how to strengthen an already leaky one.

So many questions! Does the BBB get enough omega-3 even if our diet is deficient? It's not worth taking the chance. For so many reasons, it is vital to have good omega-3 status and this is one more of them.

Does it have to be fish oil? Not necessarily. Human biochemistry can make DHA from vegetable alpha-linolenic acid – but only with difficulty - and it gets harder as we age. See: Next article.

Fish Oil - Alzheimers & Cognition In a separate study, researchers find that the two fish-oils, EPA & DHA, improve blood flow within the brain [18].

In particular, low omega-3 levels adversely affect regions important for learning, memory, depression and dementia.

My View? At least we have a clear indication from this research: for good brain health: eat your oily fish every day!

Vegetarians and vegans need to stoke up on rich sources of alphalinolenic acid: flaxseed oil, hempseed oil, and rapeseed (Canola) oil. See: Previous Article

Child Obesity - Adult Sickness

Researchers from the University of Surrey, UK, led by Dr Martin Whyte, found that adults who were obese in thickness and pre-diabetes. They

are now more likely to suffer from cardiovascular disease, high bloodpressure and diabetes [19].

In UK some 20% of 10-11 year olds were obese in 2015/16. Whyte said: "What we have found is that obesity in childhood can cause lasting arterial damage which will lead to life-threatening illness in mid-life."

My View? At the cost of putting enormous strain on the Health Service, it will take the pressure off the Pension Funds who will have fewer pensioners for less time. See **Life Expectancy Increase Slows**, p. 1.

Evolution of Menopause

Carla Aimé, under the tutelage of one of our readers, Michel Raymond about a third came from the areola of Montpellier University, France, posted her Grandmothering study at the recent EHBEA conference. I had the chance to discuss it with her then and now she has just had the study published in the prestigious journal PLOS [20].

Instead of having more children, a grandmother may pass on her genes more successfully by using her brain-power and experience to aid her existing children and grandchildren. Such an advantage could have driven the evolution of menopause in humans. So far, so good this is in line with the 'Grandmother Hypothesis' proposed by professor Kristen Hawkes of Utah University. See: Grandmothering Key to Human Lifespan, Feb 1999 [21] and Childhood, Deadly Harvest, p 218.

So what is new? Carla's contribution It adds to the growing evidence emphasizes the importance of brain- against milk-the-mischief-maker. power, not just child-care and food supply. The skills and experience acquired over a lifetime means that the grandparent's foraging is the most efficient of anyone in the forager band.

Moreover they pass these skills on to the grandchildren. Thus, by stopping having babies herself, the grandmother generates surplus resources which increase the ability of their children to have more children; and which also improves their grandchildren's chances of survival.

My View? It is a tragedy that today's ideologically driven institutions give no recognition to the insulin resistance."

vital role that grandmothers should be playing in the upbringing of our children. No, instead it is: "Bring on the day-care centers!"

See: Ageing Productively in a State of Nature, p. 1.

Breast Milk Seeds Infant Gut Microbiome

In Breast Milk's Innate Bacteria, Feb 2013 [22], I wrote about how researchers were surprised to find that mother's milk contains over 700 species of bacteria.

Now a study highlights how the infant's gut microbiome is seeded by breast feeding [23]. Most of the bacteria came from the milk, but (the pigmented area around the nipple).

Say the researchers: "The results underscore the importance of breast-feeding in the development of the infant gut microbiome."

My View? We are gradually uncovering the wondrous interconnectedness of natural processes. At the same time it highlights our excessive self-confidence when, in our arrogance, we think we can second-guess nature by, for example, promoting baby formula over breast feeding.

See: **Our Living Gut** serialization, p. 3.

Milk Increases Fractures, Inflammation and Death

over 20 years.

This paper, published in 2014, has only just come to my attention [24]. This is a study of a huge Swedish 'cohort' of some 61,000 women and 45,000 men who were followed for

A high milk intake was associated with higher death rate for both men and women and, because of hormonal changes, higher bone fracture rate for women. In addition, milk intake provoked oxidative stress and inflammation.

Say the researchers: "Importantly, those who consume high amounts of regular milk have an unfavorable cardiovascular risk profile, with higher blood pressure, insufficient 'good' HDL cholesterol, and higher

They suggest that it is the lactose "what done it". After all, researchers feed lactose to laboratory animals to provoke oxidative stress and chronic inflammation which, in turn, lead to early ageing and shorter life span.

My View? I rest my case! See: Dairy Products, Deadly Harvest, p 127 [25].

Ancestral Psycho-sociology

Are Liberals Physically Weak?

The more physically and/or facially formidable a male is, the less likely he is to bother about equality [26]. So finds a paper published in Evolution and Human Behavior. Chief researcher, psychology professor Michael E Price of Brunel University, UK, opines that in our ancestral past, physically powerful men could be sure of doing well and egalitarianism would work to their disadvantage.

Result: in today's world, physically weak men will gravitate to liberalsocialist egalitarian policies which cut down the tall poppies and which level the playing field for them.

My View? Could be a Just-so story - but intriguing to view our leftliberal-socialist leaders through this particular lens...

Ancestral Health

Our living Gut - part XI

Last month [27] we saw how gut dysbiosis is a factor in Metabolic Disorders, Obesity and Microbe Diversity. We continue

Gut Bugs and Uveitis

One major cause of human blindness is autoimmune uveitis, a disease of the retina. It is triggered by the activation of immune system T cells, but exactly how and where the T cells become activated in the first place has been a long-standing mystery.

Now a study finds that gut bugs are responsible [28] – but the study could not discover exactly how and which bugs they are - probably because it is not just one family of bugs, but many acting in some complex combination. Research continues apace on this groundbreaking insight into uveitis causes.

Next Month: Cold Changes Gut Bacteria.

Continued from Page 1

Life Expectancy Increase Slows

> p.1. ...to get everyone to live to their maximum genetic potential. This is high water: already we are seeing parents in their 70s and 80s of cancers and heart attacks in their 40s and 50s.

Moreover, with childhood obesity rocketing, we have a time-bomb of sickness and early death coming down the 'pike. See Child Obesity -Adult Sickness, p 2.

See: Maximum Human Lifespan, Oct 2016 [29]. See also: Longevity Myths, July 2014 [30].

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Over-structured Lives

> p.1. ...born to be tidy and scheduled. On the contrary, anyone who has had any dealings with foragers knows how they get up and burying their children who have died doing only as the mood takes them. And as they move around they leave a trail of rubbish behind them. LATEST: Radio Interview with Josh No, it was the revolutions: first agriculture, then industrial and finally technological, which got us into an ever tightening straitjacket of In this segment we talk about my structure, tidiness and time-keeping. Why? For **ECONOMIC EFFICIENCY!** Now we have a tiger by the tail and it is deuced difficult to say: "Stop the World I want to get off!"

See: Stress of Jobs for the Boys II. Dec 2011 [31]

Spreading the Word

EVENTS: http://bit.ly/bond-event Talks to private organizations

AUDIO: http://bit.ly/Bond-audio

Lane of KCAA out of southern California in his program "Here's to your Health" [32].

new book "Paleo in a Nutshell"

Direct link to mp3 file: http://bit.ly/Bond-Lane-radio.



Paleo in a Nutshell: Geoff's latest work encapsulates, concisely and easily, current thinking on living the way nature intended. www.paleo-nutshell.com

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- 1 Michael Gurven et al. The Tsimane Health and Life History Project: Integrating anthropology and biomedicine. Evolutionary Anthropology: Issues, News, and Reviews, 2017; 26 (2): 54 DOI: 10.1002/evan.21515
- 2 Financial Times, May 4, 2017: http://on.ft.com/2ufudRZ
- 3 http://bit.ly/S9uaNs
- 4 http://bit.ly/1yEuKuN
- 5 http://bit.lv/2uSkvBt
- 6 Ylva Odenbring. Childhood, free time and everyday lives... Early Child Development and Care, 2016; 1 DOI: 10.1080/03004430.2016.1250081
- 7 http://bit.ly/ch-8
- 8 http://bit.ly/1sX4jH2
- 9 Yeun Joon Kim, Chen-Bo Zhong. Ideas rise from chaos: Information structure and creativity. Organizational Behavior and Human Decision Processes, 2017; 138: 15 DOI:
 - 10.1016/j.obhdp.2016.10.001
- 10 Harford, Tim, Messy, Little, Brown (27) Oct. 2016), ISBN-13: 978-1408706763
- 11 http://bit.ly/1UVe2fX
- 12 J Alzheimers Dis. 2016 Sep 6;54(2):445-56. doi: 10.3233/JAD-160284. Breakdown of the Cerebrovasculature and Blood-Brain Barrier: A Mechanistic Link Between Diabetes Mellitus and Alzheimer's Disease. Goldwaser EL
- 13 Huntington's Disease iPSC-Derived Brain Micro-vascular Endothelial Cells Reveal WNT-Mediated Antigenic and Blood-Brain Barrier Deficits. Lim, Ryan

- G. et al. Cell Reports, Volume 19, Issue 7, 1365 - 1377
- 14 Oby, Emily; Janigro, Damir (2006). "The Blood-Brain Barrier and Epilepsy". Epilepsia. 47 (11): 1761-1774. doi:10.1111/j.1528-1167.2006.00817.x.
- 15 Waubant, Emmanuelle (2006). "Biomarkers indicative of blood-brain barrier disruption in multiple sclerosis". Disease Markers. 22 (4): 235-44. PMC 3850823 Freely accessible. PMID 17124345. doi:10.1155/2006/709869.
- 16 NPJ Parkinson's Dis. 2017 Jan 11;3:3. The gut-brain axis: is intestinal inflammation a silent driver of Parkinson's disease pathogenesis? Houser MC. DOI: 10.1038/s41531-016-
- 17 Chenghua Gu et al. Blood-Brain Barrier Permeability Is Regulated by Lipid Transport-Dependent Suppression of Caveolae-Mediated Transcytosis. Neuron, 2017; 94 (3): 581 DOI: 10.1016/j.neuron.2017.03.043
- 18 1. Daniel G. Amen, William S. Harris, Parris M. Kidd, Somayeh Meysami, and Cyrus A. Raji. Quantitative Erythrocyte Omega-3 EPA Plus DHA Levels Are Related to Higher Regional Cerebral Blood Flow on Brain SPECT. Journal of Alzheimer's Disease, May 2017 DOI: 10.3233/JAD-17028
- 19 O. Aiala, F. Mold et al. Childhood predictors of cardiovascular disease in adulthood. Obesity Reviews, 2017; DOI: 10.1111/obr.12561
- 20 Carla Aimé et al. Grandmothering and cognitive resources are required for the emergence of menopause and

- extensive post-reproductive lifespan. PLOS Computational Biology, 2017; 13 (7): e1005631 DOI: 10.1371/journal.pcbi.1005631
- 21 http://bit.ly/2v5o3W8
- 22 http://bit.ly/1mJMVXI
- 23 Association Between Breast Milk **Bacterial Communities and Establishment** and Development of the Infant Gut Microbiome. Pia S. Pannaraj, et al. JAMA Pediatr. 2017;171(7):647-654. doi:10.1001/jamapediatrics.2017.0378
- 24 BMJ. 2014 Oct 28;349:g6015. doi: 10.1136/bmj.g6015. Milk intake and risk of mortality and fractures in women and men Michaëlsson K et al.
- 25 http://bit.ly/DH-5
- 26 Price, M.E., et al., Is sociopolitical egalitarianism related to bodily and facial formidability in men?, Evolution and Human. Behavior (2017), http://dx.doi.org/10.1016/j.evolhumbeha v.2017.04.001
- 27 http://bit.ly/2eL79Fi
- 28 Reiko Horai et al. Microbiota-Dependent Activation of an Autoreactive T Cell Receptor Provokes Autoimmunity. Immunity, 2015; 43 (2): 343 DOI: 10.1016/j.immuni.2015.07.014
- 29 http://bit.ly/2gjNM1t
- 30 http://bit.ly/1yEuKuN
- **31** http://bit.ly/1KnJ92a
- 32 http://bit.ly/KCAA-Lane-Health