
- organic evolution tends to create more complex forms of life, raising overall entropy but concentrating order locally
- Teilhard de Chardin’s noosphere, the thinking envelope of the Earth
- throughout nature, main trend is the increase in capacity for information processing, storage and analysis. DNA not just data, but data processor.
- the function of the energy marshaled by an organism or society not just to sustain and protect structure, but to guide the marshaling.
- secret of life not DNA but *zero sum (zs)/ nonzero sum (nzs) games* (to better pass on one’s DNA - the 'meaning of life').

‘laws of nature’:

1. all nature/ human interactions can be broken down into zs/nzs components (any nzs game has zs dimension - ie, exchange)
2. new technologies => new, richer forms of nzs interaction -&gt; new social structures evolve that realize this rich potential
3. nzs situations produce more positive sums than negative =&gt; more complex webs of interdependence
4. war and trade/production are basic zs/nzs interactions, the former ‘pushing’, the latter ‘pulling’ humans together in greater cooperation (war really is negative sum game tho may induce technology to compensate for lose of surplus). Nghbring tribes will either fight or trade as basis of interaction.
- informal IOUs are classic expression of nzs - hunter-gatherers. Inuit: the best place to store your surplus is in someone else’s stomach. Hunting riskier than gathering so social complexity higher among hunters who rely on big game. Shoshone surroundings less conducive to rapid cultural evolution (desert).
- data costless but beneficial - swapping is oldest form of nzs interaction.
- evolution of reciprocal altruism - designed to bring beneficial exchange (generosity, gratitude/obligation, empathy for and trust in kin and ‘friends’ (reciprocators) =&gt; some degree of social structure built into our genes. Ultimately symmetrical. Moral indignation/ grievance at (laziness, stinginess, cheating or parasitism) also grounded in genes to help us play nzs games profitably. Evolved independently numerous times in mammalian world (primates, dolphins, bats, impalas) and in fish.
- when technology of production develops, relations of production change (Marx)
- trade is the underlying nzs relation (no surplus produced, bargaining distributes value in zs way between buyer and seller, but both benefit from more efficient use of produce ie, nzs).
- enlightened self-interest, unsocial sociability (Kant) - tension between zs and nzs is creative
- this survival mechanism, supplemented by natural hierarchical principle and concomitant pursuit of social status (both survival and status principles intended to maximize possibility of passing on genes), gives rise to cultural evolution and self-consciousness
-status/ leadership drive manifests as inherent bisexuality. Y chromosome is conqueror’s (alpha male’s) through history.
-creation of nzs out of zs via: cooperation, increase number of players => division of labor, displace ‘enemy’ (negative component in game) onto nature.
-pre-money ‘big man’ or chiefdoms used centralized planning to create nzs (next stage is kingdom/ state). Stalin organized SU as chiefdom (planning, religion)
-Potlatch - assemble an audience for large-scale altruism between villages to ensure debt recorded in public mind. (shows role of ritual/ religion in distribution, creating cultural continuity and encouraging altruism). A kind of ‘waging peace’.
-faster social evolution where richer environment, but not just from greater surplus, but from higher population (bigger social brain), more concentrated population (cheaper transportation (Invisible Hand) and communications (‘Invisible Brain’)) and faster population growth (pressure to war and/or increase production).
-war ironically produces peace but at a higher-order unsociability (victor controls). Maintaining peace without war much more difficult.
-money, writing, printing are main technological revolutions
-social structures that encourage spread of memes (units of cultural info) outperform others
-tendency in history for ‘progress’ but political chance (and communications/ transportation limitations) can slow down/ speed up the process. China turned inward and built wall in 14th-17th cc. Europe a patchwork of small warring states (stimulating nzs interactions). ‘Barbarians’ challenge ossifying society, and then quickly absorb most useful memes.
-industrial revolution - not ‘Protestant mentality’ but Jewish mentality
-fluctuation of disintegration/ integration (small nations of Europe competitors -> meme sharing but logic of market -> larger nations over time). Technological evolution periodically favors centralization of power, when new kinds of info technology (writing, video, computer) first appear.
-Hugo Grotius “Law of War and Peace” 1625 “waging of war tended to be self-defeating, producing negative sums. Herbert Spencer: “From war has been gained all that it had to give.”
-Hayek - economy as info-processing system, condemned SU for distorting info processing, slowing it down, creating inefficiencies
-McLuhan emphasized differences between media in the way it shaped culture (sensory properties) but most important is they are all instruments of communication, persuasion, coordination. The economics of a given medium is the key to its social effects (monopoly control of press vs decentralized internet)
-transition to supranational governance without war would be unprecedented (Kant, Hegel, Clausewitz) but possible (war unwinnable, world already united via trade, environmental and social/ health problems are common to all and require cooperation). Trade agreements (greater nzs) induce greater integration (judicial, regulatory, financing). ‘Unsocial’ part of equation (greed and hatred) outlived their usefulness.
-but next stage of supranational governance preceded by ‘transitional instability’ because conditions of integration either US$/ IMF etc or new international institutions.
-trade-off between freedom and order. nzs => no unilateral control over your future, requiring cooperation
-Teilhard - trade-off between freedom and order solved in realm of morality/ spirit (Point Omega). “Humanity is building its composite brain beneath our eyes. Through the logical and biological deepening of the movt drawing it together, it will find its heart, without which the
ultimate wholeness of its powers of unification can never be full achieved.” (The Future of Man 1969) ie, brotherly love, Christian charity to planetary level. Wright suggests: everyone will like enough different kinds of people to make hating any one type problematic. Think: noosphereS. 
as we come to see this historical social evolution, we can as a society begin to shape history 
-various cultures developed to preserve and protect genetic information and to guide this protection process over time (Jews especially successful) 
-cultural evolutionism revived by Leslie White 1943 “Energy and evolution of culture” 
-info is structured form of matter or energy whose generic function is to sustain and protect structure in the face of entropy. 
-Stephen Jay Gould - there is no 'progess' in evolution 
-a collection of organisms can function as an organism - colonial invertebrates (corals, ant colonies) total interdependence to pass on genes. B chromosome a parasite; it can hurt the organism’s chances of reproducing but by attaching to all the cells, it maximizes its own ability to reproduce. [J in diaspora monopolizing trade and production as closed tribe] 
-why consciousness (c)? c is ability to make analogy. 

Robert Wright, The evolution of God, 2009 
-teleology in nature? Natural selection preserves those genes (and memes (Dawkins)) that happen to act as if they were pursing a strategy. Memes are units of cultural info that spread through a culture like genes through a gene pool, and encourage nzs interaction. Logic of evolution towards greater complexity, nzs, etc -> Humans are the lucky winner. But there’s always a winner of every 'game'. Consider evolution as process of epigenesis, the unfolding of a single organism, the whole biosphere, with humans as biosphere’s maturing brain (noosphere’s noosphereS). But higher purpose isn’t just the mundane transmission of genes intergalactically. 
-Zoroastr - God not omnipotent but in pitched battle with an evil spirit, suffering as prerequisite for 'soul building', or maybe God faces metaphysically imposed design constraints. 
-is there any directionality in a spiritual or moral dimension? Biological evolution created ‘goodness’ by inventing altruism (and ‘evil’ by creating zs greed and hatred) and then surrenders center stage to cultural evolution. Challenge of cultural evolution is to cancel war as regulator of nzs interactions (human and human-nature), to expand humanity’s moral compass via great nzs interaction, always reaffirming basic truth: equal moral status of all human beings. Philo: mutual need is what weaves God’s diverse creatures - people, plants, animals - into a whole. 
[Wright concentrates on interaction between humans or between elements of nature, but human-nature (including other species) interactions can be zs (nonzero sum too)] 
-banker elite increasingly control the zero sum/ nonzero sum dialectic - higher level social evolution. control trade, banking, accumulate capital through exploiting the British empire and building control in industry in the US, gaining control of distribution through the fusion of both (Marx’s vol 1->2->3). Also support both sides in wars, making any zero sum war a nonzero sum progress for them.]