

Consilience: The Unity of Knowledge

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CHAPTER 1 – THE IONIAN ENCHANTMENT PAGE 3

1 – 5 He tells the history of his personal enchantment with the idea of unified concilience – going back to 1947.

CHAPTER 2 – THE GREAT BRANCHES OF LEARNING PAGE 8

10 – Here he shows the possibility and dynamics in interlocking environmental policy, ethics, social science and biology. [Here, as in his ending, E. O. integrates via environmentalism – rather than culture in natural selection. This is weak. It undergirds his globalist convictions. He gives too much power to the frontal lobe.]

12 – The world really encourages concilience so the humanities, “enterprises of culture” will eventually weave into science.

CHAPTER 3 – THE ENLIGHTENMENT PAGE 15

15 – The Enlightenment sought to unify humanity under science, but failed.

16 – War continued. Robespierre happened.

18 – Still Condorcet applied mathematics to social sciences.

20 – He thought history could be mathematically understood to predict the future.

30 – Bacon imagined such a unity too. He created the scientific method.

32 – Descarte and Newton made a mechanical world, but had to disavow putting man in it to appease the church.

44 – Derrida and Foucault are anti-science. All is a construct.

CHAPTER 4 – THE NATURAL SCIENCES PAGE 49

53 – The laws of physics transcends culture.

54 – And scientists have descended into minutia.

62 – You must discover something or you count for nothing in science. You fall in this hierarchical system. Make a discovery and your reputation is set forever.

CHAPTER 5 – ARIADNE’S THREAD PAGE 72

73 – Science has not reached the edges of the humanities. We must get to where we can follow a thread from the atom to culture.

75 – EOW found the glands that generate pheromones.

79 – Sacred plants, analyzed by chemists, are no longer mysterious.

82 – Freud got dreams wrong. They are a part of the memory editing process. The molecular process of dreaming is near understood.

86 – We do have archetypes, but they are evolutionary based (snakes).

94 – Biologists suffer from physics envy.

95 – Complexity theory is the search for algorithms used in nature that display common features across many levels of organization.

96 – Check the Origins of Order by Stuart Kauffman. E. O. is not ready to join this camp.

99 – Biology, however, may be able to marshal evidence for complexity theory.

102 – We should look into how cells interact with their environment. This will, apparently, provide an allegory for man in his.

CHAPTER 6 – THE MIND PAGE 105

107 – Academics don’t like to speak of evolutionary progress. He wants to do so. There is no preset goal. But life does get able to make more decisions.

Only now is mind-body dualism being torn down.

109 – “What are the cellular events that compose the mind?” is a better question than “create the mind?”

Phineas Gage!

115 – From an engineering standpoint, it is best to have functions of the brain in clumps.

119 – Mind is, at root, “the coded representation of sensory impressions and the memory and imagination of sensory impressions.”

120 – What reviews all this info? Nothing. Daniel Dennett said, there no ‘Cartesian theater,’ where scenarios are played out.

121 – S. J. Singer said ‘I link: Therefore I am.’ He discusses short and long term memory.

122 – The startle response is impervious to will. Facial expressions too.

123 – Emotions match winning scenarios programmed from instinct and learned from prior experience. No disembodied mind floats above emotion. Emotion, neuroscience indicates, seems to be the driver.

124 – Consciousness satisfies emotion by the physical actions it selects in the midst of turbulent sensation.

124 – Primary emotions are like those that cause you to run when footsteps race behind you. Secondary emotions (same mechanisms) respond to personalized life events.

125 – 126: Meaning is the linkage among the neural networks created by spreading excitation. Decision making is competitive selection between scenarios made by instinctive favorable states. The persistency of emotions is called mood. The ability to generate alternative scenarios and act is called creativity. Scenarios that don’t make sense is insanity.

127 – What of David Chalmers hard problem of how subjective experience arises from brain? Science explains feeling, art transmits it. We can get the subjective impression from a person and see the objective reality simultaneously.

128 – “Art is the means by which people of similar cognition reach out to others in order to transmit feeling.”

129 – We are material. So what of free will? Much of what we decide is done subconsciously. But he sides with free will.

131 – If running the thought experiment, ‘What if we knew every molecule in the body and the environment, would we know the next thought / action?’ No. Because quantum like, the act of observing would change the configuration of the brain.

That and the mathematics of chaos in a cascading neural system. The next move cannot be known or fully predicted.

And, free will is biologically adaptive.

132 – He doesn’t think AI will happen for decades or even centuries.

CHAPTER 7 – FROM GENES TO CULTURE PAGE 136

138 – “Culture is created by the communal mind, and each mind in turn is the product of the genetically structured human brain. Genes and culture are therefore inseverably linked. But the linkage is flexible to a degree still mostly unmeasured.

He pegs a link on snakes and serpents in dreams.

139 – “Certain cultural norms also survive and reproduce better than competing norms, causing culture to evolve in a track parallel to and usually much faster than genetic evolution.” But the link is never totally broken.

[Here he misses the fact that parasites nearly always co-habit a space and they often kill the host.]

141 – Genetic drift adds little to evolution and most is neutral. Choice is more important.

142 – In 1952 Alfred Kroeber and Clyde Kluckhohn melded 164 definitions of culture and came up with the following: “Culture is a product; it historical; includes ideas, patterns, and values; is selective; is learned; is based upon symbols; and is an abstraction from behavior and the products of behavior.”

“Omnis cultura ex cultura: All culture comes from culture.” Not so. Genes!

143 – “Bonobos and other great apes possess high levels of intelligence by animal standards but lack the singular human capacity to invent rather than merely to use symbolic language.”

They are, though, masters of Machiavellian intelligence.

144 – We are the babbling ape. We start talking early and never shut up. Babies alone engage in ‘crib speech.’

145 – Archeologists see the downward migration and lengthening of the voice box.

146 – He is looking for the basic unit of culture: Episodic memory gets perception and is gone fast, semantic memory is meaning and lingers. But where are the nodes that connect semantic meaning with the brain?

148 – He and Charles J. Lumsden refined Dawkin’s idea of meme in 1981. It is the node of semantic memory and its correlates in brain activity.

148 – Culture is to be the science / social science bridge, though it has an ethereal feel.

149 – In different cultures he seeks the “norm of reaction.” The textbook example is the amphibious arrow head shape. In shallow water it becomes a lily pad, in shape; in deep water it is eelgrasslike ribbon that sways back and forth.

150 – We see the same interaction in Sulloway’s 1996 book *Born to Rebel*. Later-borns are less likely to identify with the roles and beliefs of the parents. They tend to become more innovative and accepting of political and scientific revolutions than first-borns.

151 – Here we speak of heritability percentages: Marathon runners are 80% due to environment and 20% due to genes.

152 – Genes’ impact are increased by environmental selection. People who are good at music start to hang out with musicians.

155 – People bicker hereditarian versus environmental causes of behavior. In Europe and the United States it is settled, it is usually in the mid-range.

Nuturists think that culture is on a very long leash, if held at all. Hereditarians believe the leash is short, causing cultures to evolve major features in common.

The divergence between Parisians and Kalahari hunter – gatherers are primarily a result of divergence in history and environment, and are not genetic in origin.

157 – He discusses the origin (Hereditarian and environmental) of schizophrenia. He says this interacts with culture in creating art, despotism, religion.

158 – Research is biased to look at big effects. Over 1,200 physical and psychological disorders have been tied to single genes.

160 – What we think we know can be expressed via linking 3 determining levels of biology. Universals of culture, epigenetic rules of social behavior, and behavioral genetics.

In a classic 1945 compendium George P. Murdock found 67 cultural universals: “age-grading, athletic sports, bodily adornment, calendar, cleanliness training, community organization, cooking, cooperative labor, cosmology, courtship, dancing, decorative art, divination, division of labor, dream interpretation, education, eschatology, ethics ethno-botany, etiquette, faith healing, family feasting, fire-making, folklore, food taboos, funeral rites, games, gestures, gift-giving, government, greetings, hair styles, hospitality, housing, hygiene, incest taboos, inheritance rules, joking, kin groups, kinship nomenclature, language, law, luck superstitions, magic, marriage, mealtimes, medicine, obstetrics, penal sanctions, personal names, population policy, postnatal care, pregnancy usages, property rights, propitiation of supernatural beings, puberty customs, religious ritual residence rules, sexual

restrictions, soul concepts, status differentiation, surgery too-making, trade, visiting, weather control, and weaving.”

These are not just natural to our complex societies, termites have complicated societies and none of these. And they have reproduced complicated rules of behavior reproduced in every mound.

162 – We see this in Americas and the old world. In South America and the Middle East they brought wild plants under cultivation, formed viliages, created arts, priests, religions, invented pottery, wove clothes. Domesticated local animals, invented writing, created classes for nobles, priests, warriors, craftsmen and peasants. Empires grew. Priests made elaborate tombs and prepared for the after life.

163 – Sociobiology tells us that 1) We also have prepared learning. We are prepared to learn some kinds of information and avoid others. 2) Our behaviors are adaptive.

164 – There are epigenetic rules in perception and in drawing perception, memory, and emotional coloring together in secondary epigenetic rules that lead the mind to predisposed decisions rather than overly predetermined decisions.

Infants can distinguish certain sorts of tones. By 4 months they like harmony, not out of tune notes.

165 – Loud sound creates the Moro reflex. In 4 – 6 weeks this is replaced by the startle response. The body is positioned as though to absorb a coming blow.

Chemical tastes are known quickly and paired with expressions. In all cultures 2/3rds to ¾ of all words describing senses refer to hearing and vision.

Social bonds are also predetermined. Babies see faces and their mothers very early.

166 – Babies smile within 2 – 4 months and it elicits affection in mothers. Blind children make the same expressions. “Each culture molds its meaning into nuances determined by the exact form and context in which it is displayed” It can turn into irony and mockery.

Family classifications and related rules are also universal. In group, out group. Weddings, blessings, rites of passage.

Binaries are also widely used; as noted by structuralists. But they do not tie it to biology.

168 – Now what are the biological basis? Somewhat heritable. We are learning. Dyslexia, for example.

169 – A mutation inducing outbursts of aggressive behavior has been found in one Dutch family. He also speaks of a “novelty- seeking gene.” It makes people more impulsive and curious.

Most traits are polygenetic, spread out across chromosomes. One suppress another; that is epistatically. Then there is pleiotropy, the prescription of multiple effects by a single gene.

170 – Gender differences and sexuality will be big areas of future research.

171 – The gene Sry determines our sex.

172 – If all language were stripped away, we would still have “body odors, blushing, and other telltale reflexes, facial expressions, postures, gesticulations, and nonverbal vocalizations, all of which . . . compose a veritable dictionary of mood and intention.”

173 – Eyebrow lifting can indicate greeting, flirtation, approval, request for confirmation, thanking, or emphasis of a verbal message.

Color does not exist in nature. It exists in our minds. And, we know how it is broken into discreet patterns by our brains. This is universal (when words exist, they are found in middle of discreet ranges). Only 3 words: black, white, red. Five add green and yellow. Seven words for colors, add blue and brown.

CHAPTER 8 – THE FITNESS OF HUMAN NATURE – PAGE 178

185 – “Territorial expansion and defense by tribes and their modern equivalents the nation states is a cultural universal. The contribution to survival and future reproductive potential, especially of tribal leaders, is overwhelming, and so is the imperative of tribal defense.”

It is featured in the animal world some vital resource serves as a “density – dependent factor.” When the limit of a population comes from die offs or lowering of birthrates, territorial behavior follows.”

In contrast some species do not face population level limits due to resource limits, but by emigration, disease or predation. When such alternative density-dependant factors are paramount, and resource control is therefore not required, territorial defense usually does not evolve.

186 – Worker ants and social instincts are committed to the common good. We are very social but have ourselves and our kin as competing priorities. Cheating detection is a part.

188 – Incest avoidance comes from early proximity.

194 - This is the “Westermarck effect, that Freud found “preposterous,”

CHAPTER 9 THE SOCIAL SCIENCES – PAGE 197

198 – Medical sciences have concilience and social sciences do not.

200 – This reliance on folk wisdom to determine how people think made social scientists overestimate the potential of communism and underestimate ethnicity as a bond. “The theorists have consistently misjudged Muslim fundamentalism, which is religion inflamed by ethnicity.”

Margaret Mead, led a crusade against what they [Franz Boas and his crew] perceived (correctly) to be the eugenics and racism implicit in Social Darwinism.

Their fear of social Darwinism made them spin all cultures as equal. “During the 1960s and 1970s this scientific belief lent strength in the United States and other Western societies to political multiculturalism. . . it holds that ethnics, women, and homosexuals possess subcultures deserving equal standing with those of the “majority,” even if the doctrine demotes the idea of a unifying national culture.”

It also, ironically, ended up undermining the view of a common humanity and so went against heredity. If neither culture nor heredity human nature, what unites humanity? Then all is culture and what makes child labor, torture, and slavery wrong?

204 – Poor history of social sciences. Sociology was tied to nature. The Standard Social Science Model (SSSM) “views culture as a complex of system of symbols and meanings that mold individual minds and social institutions. It also eschews the import of biology in any sense.

CHAPTER 10 THE ARTS AND THEIR INTERPRETATION PAGE 229

238 – “The exclusive role of the arts is the transmission of the intricate details of human experience by artifice to intensify aesthetic and emotional response.” Very individualistic. [So we get no bonding for war function. Not even coordinating for the hunt.”

239 – Arts that prove enduring are intensely humanistic.

The special powers granted the arts by the genetic evolution of the brain include the ability to generate metaphors with ease and move them about.

241 – “Imitate, make it geometrical, intensify: That is not a bad three-part formula for the thriving pulse of the arts as a whole.”

243 – He is into archetypes.

245 – We are the only species in “psychological exile.” “The dominating influence that spawned the arts was the need to impose order on the confusion caused by intelligence.”

246 – Rather than an all-purpose machine, our mind runs algorithms that lead to reproduction. Art passes these on.

248 – Art is universal because in a threatening and bewildering dangerous world, “people reach out for power by any means they can find.”

250 – Beautiful women are a program.

252 - Average and then exaggerate the norms for max appeal. Hence the beauty industry.

Artists remain faithful to the innate universals of aesthetics.

CHAPTER 11 - ETHICS AND RELIGION PAGE 260

267 – Religions rise via hitching themselves on a state. Here a Bible quote has God telling Jews to “utterly destroy” Hittite and the Amorite and the Canaanite and the Perizzite and the Hivite and the Jebusite.” Deuteronomy 20:16 – 17.

268 – Selfish, prosperous people belonging to losing religions and ideologies are replaced by selfless, poor members of a winning religions and ideologies.”

269 – Science favors no tribe or religion. “It is the base of a truly democratic and global culture.”

272 – Is to ought is the naturalistic fallacy.

275 – The balance between cooperation and defection explains ethics.

276 – In Paleolithic tribes, some defect and they lose. Some show no initiative and they lose. A right balance appears.

278 – Ethics probably comes from many intersecting algorithms. “In some cases, such as quick hostility to strangers and competing groups, they [instincts] have become generally ill-adapted and persistently dangerous.”
[He prejudices and refuses to take a Darwinian perspective on this.]

280 – Global unity is coming. “It will be democratic, weakening the clash of rival religions and ideologies. History is moving decisively in that direction, and people are by nature too bright and too contentious to abide by anything else.”

Religions are like a super organism that lives peaks and dies.

281 – Religion is based on fear of death.

282 – The reduction in reproduction due to altruism must be offset by the group’s survival.

282 – Ecstasy and hyper religiosity are clearly biological.

283 – Here he parallels submission to a dominant in rhesus monkeys to submission to a God. It is a projecting of the alpha male.

285 – This mystical union with the larger is a part of our spiritual heritage.

287 – Even some scientists have replaced it with worship of the “everything.”

288 – Our uniting under such an unfolding into the whole is not demeaning.

289 – People can only be educated within a range of ethical systems. They thrive under some and wither under others.

CHAPTER 12 – TO WHAT END? PAGE 291

293 – “What really matters to humanity, a primate species well adapted to Darwinian fundamentals in body and soul, are sex, family, work, security, personal expression, entertainment, and spiritual fulfillment.” This is more important to us than other findings in science.

294 – Globalist blather quote - “In the long haul, civilized nations have come to judge one culture against another by a moral sense of the needs and aspirations of humanity as a whole. In thus globalizing the tribe, they attempt to formulate humankind’s noblest and most enduring goals.”

298 – He argues that all races are now blending. “Its main consequence is the gradual erasure of previous racial differences - those statistical differences in hereditary traits that distinguish whole populations.”

307 – Malthusian writing. population has soared, but will drop.

308 – The limit to world growth and consumerism will collide to kill us. Most futurists do not acknowledge China is the future.

311 – He concludes that global warming is coming and it is our fault due to CO2.