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Cogito, Tekhne, and *Ehrfurcht*: Schweitzer's Bioethics as Appreciation of Human Neuroanthropology in the Reverence for Life

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Abstract

Many mammal species exhibit social behaviors remarkably similar to hominin capabilities, such as complex communication, learning guidance, crafty tool-use, and cooperative assistance. Reciprocity, amity, teamwork, and beneficence are more the rule than the exception in 'super-social' species, including the great apes, and especially in the subsequent lineage from *Homo habilis* and *Homo erectus* to *Homo sapiens*. The co-evolution of cognition, *tekhne*, and morality served this descent to the human species very well. Furthermore, a reverence for harmony with animals was a cornerstone of humanity and humaneness. Humans' capacity to idealize communing relations with animals must have a deep history. What survives of this human-animal communality, despite the 'civilization' of animal cruelty, is a lasting capacity to recognize that animals have a will to live well, just like humans. Schweitzer's humanistic bioethics calls us back to its true humanity, an authentic anthropos, living in genealogical and ecological unity with all life.

Keywords

Human evolution, cognition, *tekhne*, sociality, morality, bioethics, neuroethics, Albert Schweitzer, animal rights.

Introduction

Cognition, tool-making, and morality represent three important and intertwined spheres of human socio-cultural activity. *Homo sapiens* inherited flexible cognitive capacities along with adroit tool-using abilities. Those capacities were never compartmentalized, although some brain processing is modularized. Whatever an organism is doing in practice is an activity keeping its brain operations working in concert. Coordination is the law of life at every scale. Technical skill is no exception. Tools were not developed or applied by their wielders in isolation. Even a simple spear is more effective while wielded for group hunting. The need for lasting consensus about cooperative interactions, sharing goods, and group comportment necessitated the development of morality. What must be done *rightly* has

everything to do with what must be accomplished daily, for the collective benefit *sustainably*.

How should humans rely upon their cognitive abilities, tools, and behavioral rules, for the sake of humanity and its ecologies? What is demanded is an appreciation and projection of ideals about humanity's better intentions and actions, while remaining cognizant of, and projecting beyond, what else already lives among us in shared habitats.

As developers and users of tools, both as a result of knowledge, and as a matter of insight and capability, our species can be characterized as *Homo technicus* as well as *Homo sapiens.* In this light, we argue that if humanity is rationally to regard and use the tools of its own design—as *Homo techno-logicus*—then we must remain *Homo ethicus*. In this essay, we posit that the teachings of Albert Schweitzer (1875–1965) and his contemporary Fritz Jahr (1895–1953), two early proponents of a literal *Bioethik*, an ethics centered on Reverence for Life, can be grounded in a philosophical anthropology that points the way to an authentically humane ethos.

Morality

The human capacity for appreciating moral worth and ethical values has its vital basis in our species' impressive cognitive capabilities. Intelligent activity, technological capacity, and ethical conscience are mutually implicated, in our mental life and our cognitive operations. What is so smart about our complex practices that we can stay heedless of their implications? Morality was an evolved capacity during the *Homo* progression to *Homo sapiens*, but moral thinking was no modular add-on. Isolating a 'moral region of the brain' cannot be warranted by either behavioral psychology or cognitive neuroscience. Very little about the human brain suggests any deep divisions, especially among the thick networking of the prefrontal cortex. The sophisticated cognitive operations of human intelligence are possible only due to close functional coordination(s) made possible by that dense interconnectivity.[1]

Interdependency within the brain, not surprisingly, matches the interdependencies of a species living within its lifeworld. Humans moralize because we socialize, and we socialize in order to cooperate and compete, by sharing in crafty practices accomplished through

[1] Jean Decety and Thalia Wheatley, *The Moral Brain: A Multidisciplinary Perspective* (Cambridge, MA: MIT Press, 2015).

tooling and toiling.[2] The entirety of the interconnected brain manages our practical activities, activities always enmeshed with surrounding matters. The *Homo* genealogy of the human species, and brain, underwent development and evolution here, for life in this world. To live, and live well, ancestral humans focused on the origins and sources of what was regarded as 'goodness' for survival and flourishing. That respectful orientation—a 'natural piety'—presumes a transcending direction at the limits and borders of the situations, places, and times of living ecology.

The work of Albert Schweitzer affords a disturbing vision of how humanity has diminished and despoiled its natural home. Cruelty towards animals, has been, and in many ways remains the norm rather than the exception. There is little that is civilized about humanity's wanton domination and destruction of so much of nature. 'Desecration' is none too strong a word for this abandonment of natural piety. Guilt and shame ought to be humanity's moral response, but avoiding responsibility occupies much of human preoccupation. Is nature merely the responsibility of some deity and/or the rebounding faculty of its own order, while humans carry on with a blasé sense of implicit or explicit anthropocentricism? Is dominion exclusively human, such that the rest of the living world is positioned to servitude? What vision of humanity in the image of a creator justified or ennobles the enslavement of other lives for the exclusivity of our species' own purposes?

Stirrings of a moral conscience can at least lead us to ask how anything could be so special about humans' bodies or brains that entitles such hubris to enslave other lives. Pro Schweitzer, we argue that our rationality only magnifies our moral responsibility, since our cognition, tools, and science have enabled us to surely know better. The competition and apparent 'cruelty' among animals in their struggle for survival may appear amoral to human eyes, precisely because human brains apply an egoistic perspective to social cognition and emotional control that guides our own conduct. Excusing humanity's 'civilized' cruelty towards non-human life supposes that the primacy of cooperation is focal to our own species, allowing us to justify a caricatured 'animalistic' hostility toward our habitat and its denizens. But we opine that such a perspective is inexcusable, given human rationality and the recognition of humanity's (and other species') mutual interdependency with the environment. Social cognition is axiomatically ecological cognition, given that social engagement and interaction is intrinsic to any sense and execution of *oikos logos*: an accounting and reasoning

[2] Frans B.M. de Waal, *et al.* (eds.), *Evolved Morality: The Biology and Philosophy of Human Conscience* (Dordrecht: Brill, 2014).

of the interactions of individuals and resources in the niches occupied. Natural rationality and natural piety cultivates human craftiness in order to empower an elevated reflective view that can expose and disavow our own selfishness. This reflective view cannot fixate on just humanity itself unless we indulge in self-deception. Humanity's accumulated and tool-enabled knowledge, given our occupation of environments of other species, extends morality so that we humans acknowledge and respect their non-human worth. Failure to do so portends a loss of our own humanity should the capacity for ecological cognition, and a concern for all life, be disregarded or degraded.

Schweitzer's ethical precept of *Ehrfurcht vor dem Leben*, Reverence for Life, presents a paradigmatic example of ecological cognition toward environmental concern, as exemplified in his invocation to "do no other than be reverent before everything that is called life ... [as] the beginning and foundation of all ethics."[3] To justify an abiding respect for all life forms (so to say, *óla gia bios*) requires a broadly common factor to explain why any degradation or destruction of life is wrong. The guiding question cannot be, 'Which creatures have the most in common with humans?' Comparisons with humanity (and the rankings that follow) are inept and irrelevant. *Anthropos* must not set the standard to an e*thos* for all life. When anthropic criteria get applied, animals of high intelligence, utility, or cuteness jump to the head of the line for respect and rights. Affording primacy to *bios* instead compels us to seriously ask, 'What do all living organisms have in common, by virtue of being alive?'

To locate the basis of an intrinsic worth unrelated to human values, such grounding must be simultaneously particular and universal. It must be something that each organism possesses qua being that particular organism; yet it must be evident within any and every other organism, as well. This need not be paradoxical, at least for biology, wherein functional and teleological explanations are not eliminable by simple reductionism. The unique answer, as Schweitzer discerned, is that living organisms are pursuing the processes of sustaining life, each in its own way(s). No creature is ever merely content to be in a present state of life at that instant of time. Something about an organism's activity, internally and externally, is carrying on with metabolic operations for trying to be living in the next moments, as well as this moment. It is this situatedness-toward-continuity that must be recognized, appreciated, and valued.

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[3] Albert Schweitzer, 'First Sermon on Reverence for Life', in *Reverence for Life: The Ethics of Albert Schweitzer for the Twenty–First Century*, eds. Marvin Meyer and Kurt Bergel (New York: Syracuse University Press, 2002), 68.

Biology can and should inform much about the essential nature of *bios*, specifically, about what is required to be alive. However, it is one thing to be able to observe the universality inherent to each particular organism's pursuit of life, and very much another thing to value every organism's actual life. Schweitzer finds no morality in simply regarding humans as animals. Indeed, he sometimes depicts *ethos* as anti-*bios*:

> [N]o spirit of loving-kindness is at work in the phenomenal world. The universe provides us with the dreary spectacle of manifestations of the will to live continually opposed to each other. One life preserves itself by fighting and destroying other lives. The world is horror in splendor, meaninglessness in meaning, sorrow in joy. Ethics is not in tune with this phenomenal world, but in rebellion against it. It is the manifestation of a spirit that desires to be different from the spirit that manifests itself in the universe.[4]

Schweitzer provides a view of humanity's intelligence as the basis for this human 'spirit', allowing our capacity to look higher and see farther. All the same, that spirit is grounded in a brain evolved for coordinating particular human proclivities, as social animals working together with the tools of our own design. But here, we caution against faulting technology as humanity's 'original sin' which expelled our species from some natural 'Eden'. Let us also refrain from treating technology as humanity's mere creation, and in so doing, letting us pine for a humanity still in some pure 'natural state'. Human technology created humanity, as tools were being iteratively created, and as the *Homo* lineage nurtured its hyper-social communities. Genus *Homo's* impressive capacities—*cogito, tekhne*, and *ehrfurcht*—are bound together because they evolved together for common fruitful purpose.

Ethics will remain incomplete until the philosophy of technology is properly addressed. Technology cannot be fully understood until artifacts are comprehended in terms of their artificers: we humans. A view of humanity's own nature must be implicated, to grasp the fundamental relationship between humanity and technology.[5] Shall this relationship be treated as accidental, or essential? The duality approach is most common, which assumes that

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[4] Albert Schweitzer, *The Teaching of Reverence for Life*, (New York: Holt, Rinehart, and Winston, 1965), 24–25.

[5] Maarten Franssen and Stefan Koller, 'Philosophy of Technology as a Serious Branch of Philosophy: The Empirical Turn as a Starting Point', in *Philosophy of Technology After the Empirical Turn,* eds. Maarten Franssen *et al.* (Cham, Switzerland: Springer, 2016),. 31–61.

'humanity' and 'technology' each have their own separable natures that are fully definable without reference to the other. For example, the view that 'humanity makes and uses technology' offers a dualistic approach, as 'making' and 'using' can be understood as external and contingent relations. The servility approach defines the nature of technology in terms of its creation and use by humans, but it does not think of humanity as essentially defined by technology.

For example, to say 'technology is produced and employed by humanity', offers a servility approach, by allowing technology to basically depend on humanity, without admitting an essential dependence of humanity on technology. To argue, for example, that humanity has become thoroughly reliant on the products provided by technology is to presume the servility standpoint also. A third conception is the unity approach: the nature of humanity and the nature of technology must each be essentially defined in terms of the other. For example, asserting that 'humanity and its technology emerged and mutually developed together' is a unity approach perspective, which requires humanity and technology to be defined in terms of the essence (i.e., *eidos*) of their mutuality, and the mutuality of their *eidos.* Accordingly, all human abilities, social practices, and interests are somehow interrelated with cognitive capacities for creating and utilizing *tekhne*.

The unity approach best explains why humans are able to understand what *tekhne* is, and what *tekhne* can do to both habitats and to ourselves over time. In this way, the unity approach does not afford any fundamental difference between who we are as human and what we accomplish as humans: *tekhne* is not external to humanity; it *is* what we are as ourselves. The easily asked question, "What happens if humanity becomes too dependent upon, or too extricated from its tools?" is not anthropologically informed and, we believe, is categorically incorrect. In sum, *anthropos is tekhne*.

Reaching the level of philosophical anthropology, we assert that the being (*Dasein*) and function (design) of being human is praxiological and technical (if not techno-*logical*) to the core. In this light, we view morality and *tekhne* as the twinned manifestations of human sociality. It is impossible to imagine the continued success of *tekhne* for group welfare without the sustained guidance of morality for social cooperation.

Tekhne

Paleo-archaeology is accumulating the evidence needed to depict the social and practical lives of *Homo* ancestors. Let *anthropos* encompass the several species that directly led to

humans. First, *Australopithecus* from 4 million years ago; second, *Homo habilis* starting 2.4 million years ago; third, *Homo erectus* from around 2 million years ago; and fourth, *Homo heidelbergensis* from 700,000 years ago. Finally, *Homo neanderthalensis* and *Homo sapiens*, emerging approximately 300,000 years ago.

Even if *tekhne* were only associated with *Homo sapiens* but no earlier ancestors, that would sufficiently show how *tekhne* is central to the functioning of our species. However, *tekhne* is much more deeply embedded in our long evolutionary history. *Tekhne* is far older than *Homo sapiens*, and it implicates enlarging cognitive abilities beyond mere 'tool use', including:

1) Using tools to modify things in the environment.
2) Modifying tools to work better for specific, and more specialized tasks.
3) Making tools specialized for the making and modification of other tools.
4) Teaching techniques for the proper use of specialized tools.
5) Teaching the young to make good tools.
6) Cooperating in making complex tools with specialized parts.
7) Cooperating in applying complex tools to group tasks.
8) Teaching techniques so that many people can use tools alone or in groups.

Each ability develops from the previous ability in enlarging social interactions, in turn permitting more sophisticated toolings and techniques. *Homo habilis* was exercising the first three abilities; *Homo erectus* gradually developed most of these capacities; *Homo Heidelbergensis* relied upon all of them, at least in some prototypical form; and *Homo sapiens* utilized all of them as the species emerged. These enlarging *tekhne* abilities are as much the result of social cognition as manual dexterity or foraging efficiency.[6]

[6] Sources to consult include Thomas Wynn and Frederick L. Coolidge (eds.), *Cognitive Models in Palaeolithic Archaeology* (Oxford: Oxford University Press, 2017); Dietrich Stout *et al.*, 'Archaeology and the Origins of Human Cumulative Culture: A Case Study from the Earliest Oldowan at Gona, Ethiopia', *Current Anthropology,* 60.3 (2019), 309–340; and Fiona Coward, 'Scaling Up: Material Culture as Scaffold for the Social Brain', *Quaternary International,* 405 (2016), 78–90.

Table I

Homo lineage species:	Tools:	Social abilities:	Cognitive abilities:
Australopithecus • 4,000,000 years ago–2,000,000 years ago • Brain size: 380–430cc	• "Lomekwian" choppers, edged without bifacing or symmetry	• Butchering carcasses • Hacking vegetation • Imitating other tool users	• Monitoring behavior of others • Direct reciprocity • Nothing artistic or symbolic
Homo Habilis • 2,400,000 years ago–1,500,000 years ago • Brain size: around 620cc	• "Oldowan" choppers and cleavers, edged with some bifacing but no symmetry	• Processing meat • Skinning animals • Processing vegetation • Cooperative hunting • Imitating other tool makers	• Understanding habits of others • Indirect reciprocity • Monitoring others' skills
Homo Erectus • 2,000,000 years ago–100,000 years ago • Brain size: 850–1100cc	• Early "Acheulian" choppers and cleavers, bifaced with some symmetry	• Teamwork and group practices • Morality enforcement • Hunting with tools • Processing animal skins • Control of fire • High group mobility	• Understanding plans of others • Learning from experiment • Monitoring others' ideas about oneself • Maintaining one's reputation
Homo Heidelbergensis • 700,000 years ago–300,000 years ago • Brain size: 1200cc	• Better "Acheulian" stone tools, smaller and bifaced with symmetry and harmonious design	• Life-long cooperation • Morality enforcement • Instruction of young • Specialized skills • Musicality • Etching and simple artistry	• Understanding intents of others • Mimetic language • Learning from instruction • Simple symbols • Disposal of the dead
Homo Neanderthalensis • 450,000 years ago–40,000 years ago • Brain size: 1500cc	• Late "Acheulian" stone tools, having ample symmetry and harmonious design	• Titualized performance • Specialized skills • Instruction of all young • Cooperative tool-making • Clothing, sheltering	• Anticipating intentions of others • Complex mimetic language • Singing, artistry, and cave painting • Burial of the dead
Homo Sapiens • 250,000 years ago–present • Brain size: 1300–1400cc	• A large variety of stone, bone, and wood implements, some requiring parts and assembly	• Advanced foraging and hunting • Life-long skill specialization • Education of all young • Group projects and complex rituals • Social roles and tribalism	• Understanding beliefs of others • Fully grammatical speech • Internalization of social roles • Spiritual/religious symbolism • Decorative and representational art

At a time when the *Homo* lineage was little more than simian-like, basic uses for simple tools made individuals more efficient, but not necessarily more cooperative. The supposition that tighter cooperation only arose due to growing affections among hominins misses the point— why did members of early *Homo* species have to care more about each other throughout adulthood, beyond affections of kinship? Obviously, small groups of adults gradually found it more beneficial to share in the increased bounty of goods yielded by regular cooperation, rather than just the meager gains achieved by selfish competition. Brain evolution from one *Homo* species to the next proceeded accordingly.

Where social cooperation is paramount, basic moral norms are salient. Supposing that the earliest moral rules were just conventional agreements discussed among late Stone Age humans has no biological or archaeological support. Ingrained moral practices and norms had to emerge during humanity's deep ancestry, evolving in *Homo erectus* and *Homo heidelbergensis* so as to promote the intensely cooperative practices of daily life that enabled such diversity of bountiful practices, and survival in and across environmental niches and conditions. *Homo sapiens* immensely benefitted from that evolutionary inheritance. Furthermore, since morality stabilizes cooperative practices, and cooperative practices increasingly involved and revolved around *tekhne*, there was never a wide cognitive gap between morality and *tekhne*. What they must have in common is the maintenance and transmission of norms about properly utilizing instruments, techniques, and products, all distributable and sharable among humans within and across generations.

As the burgeoning field of evolutionary cognitive archaeology is exploring, from *Homo habilis* to *Homo heidelbergensis* and then on to *Homo sapiens*, brain size was continually increasing while prefrontal cortical networks were enlarging to facilitate social monitoring and interacting. Only group tool use, improved via iterative attempts, and perpetuated through learning practices, permitted cooperation to enhance productivity far beyond the sums of individual effort. The tools themselves became more complex, due in large part to skill specialization and trust-enabled teamwork, which in turn yielded ever greater goods. Neither tool facility or sociality alone served as a primary driver for brain enlargement; rather, their joint development was largely responsible. *Cogito*, *tekhne*, and *ethos* jointly evolved in a reciprocally beneficial process of biocultural co-evolution to advance the same practicalities, yielding and sustaining group cooperation for mutual benefit within the group. Simply put, we posit that without smart *tekhne*, there's little need for morality; and without smart morality, no *tekhne*.

Schweitzer's Bioethics

As robust as human morality came to be, its mere possibility and actual emergence are vested in the deep roots of primate affections and sensibilities.[7] Although humans need not, and arguably should not, live as other animals do, as Schweitzer counseled, that does not mean that the human capacity for morality never had anything to do with animal heritage or humanity's long evolutionary road toward fully sapient behaviors. That evolutionary perspective was frequently rejected by many of Schweitzer's contemporaries, including those scientists able to accept Darwin's theory of evolution by natural selection. There was a regnant imperative to view humanity as elevated above all other animals, and this view dominated scientific perspectives on human culture. According to this presumption, although humans share certain anatomical and physiological traits with other animals, it was maintained that nothing about human sociality or morality was inherited through genealogical descent, or inspired by human contact with animals. That view of *anthropos* was rather common in the late nineteenth and early twentieth centuries, even as Darwin demonstrated human kinship with primates.[8] Many disciplines, from sociology and anthropology to linguistics and psychology, were founded on a premise of anthropic uniqueness. For example, language had to be exclusively human, needing nothing from primate ancestors; and so too with tool use, artistry, teamwork, ritual, and other practices that allegedly lacked precursors, prototypes (or even analogs or homologs) in other animals.

For Schweitzer, however, humanity shared more than superficial relationships with the world of animal life. In *Civilization and Ethics* (1929), Wilhelm Stern, a contemporary proponent of personalistic psychology, is cited to emphasize humans' moral kinship with animals:

> Man experiences sympathy with animals, as they experience it, only less completely, with him. Ethics are not only something peculiar to man, but something which, though in a less developed form, is to be seen also in the animal world as such.[9]

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[7] Franz de Waal, *The Bonobo and the Atheist: In Search of Humanism among the Primates* (New York: W.W. Norton, 2013).

[8] Consult the chapters of *The Cambridge History of Science: The Modern Social Sciences*, eds. Theodore M. Porter and Dorothy Ross (Cambridge: Cambridge University Press, 2003).

[9] Albert Schweitzer, *Civilization and Ethics*, trans. C.T. Campion (London: A & C Black, 1929), 193.

It is most fortunate for both humans and non-humans that the stirrings of sympathy and moral regard are distributed, however unevenly, across animal species. Altruism and benevolence were never an exclusively human characteristic, and humanity is not the only species deserving benevolence. If humanity regarded itself as unapproachably superior to the rest of life, it would be relatively easy to lose sight of what humans share with all life. Humans are still in and of the animal world, even if humanity strives to no longer live merely 'animal' lives. Commonalities rule life, and friendly amity follows commonality.

Appreciating a common ground to all life, what Schweitzer called the 'will to live', affords opportunity to gain insight to a human being's appropriate response and responsibility within the grand biotic spectacle. An authentic and powerful 'life ethics', what Schweitzer's contemporary, Fritz Jahr viewed as *Bioethik*, is the result: an achievement essential for the sake of humanity as much as for the good of animality (*vide supra et infra*). As philosopher Hannah Arendt noted, and cautioned against, far too many humans live out their lives much like humanity's caricatured view of animals: thinking little about the wider social responsibilities to which an (ethical) individual may aspire and act. Using other animals in service to our own will to live would be forgivable if we were indeed just animals ourselves. But we are not, and we truly know it.

Humans became aware of the crucial difference that membership in humanity must make, because relationships with animals demonstrated commonalities as well as dissimilarities. Appreciating a life lived in common inspires a sense of the communal. The bonds of biotic communality orient human regard and activity toward both *human* and *humane* duties. In Schweitzer's formulation, this a truly human realization:

> Ethics is responsibility without limit toward all that lives. As a general proposition, the definition of ethics as a relationship within a disposition to Reverence for Life does not make a very moving impression. But it is the only complete one. Compassion is too narrow to rank as the total essence of the ethical. It denotes, of course, only interest in the suffering will to live. But ethics includes also feeling as one's own, all the circumstances and all the aspirations of the will to live, its pleasure, too, and its longing to live itself out to the full, as well as its urge to self-perfecting.[10]

[10] Albert Schweitzer, *Albert Schweitzer's Ethical Vision: A Sourcebook*, ed. Predrag Cicovacki (Oxford: Oxford University Press, 2009), 138–139.

To internally prioritize the will to live for its own sake is a realization that extends one's moral concern externally, toward all living things similarly pursuing their own lives. This quotation concludes with Schweitzer's understanding of "Reverence for Life" as that deeply-felt human identification with the aspirations and pursuits of organisms themselves. Where one can profoundly identify with life, one can re-orient duties toward all life. Others' individual ends are not our own, but their lives deserve our respect. Put in more Kantian terms (that Schweitzer would recognize from his expressed debt to Kant), humans must treat living beings as ends unto themselves, not merely as means of and toward human ends.

Schweitzer and Jahr

Respecting every living being's own pursuit of life, as the bearer of intrinsic value, implies one's regard for their ends as having worth no less than our own. The centrality of the intrinsic value of all life has had many advocates during the twentieth century. Perhaps most representative was Jahr, who noted that certain philosophical systems and religious creeds avow that "a human being is in essence related to all creatures."[11] Jahr's principle for *Bioethik* reads: "Respect every living being on principle as an end in itself and treat it, if possible, as such!"[12] Only an orientation as profoundly motivating as reverence can elevate this abiding respect to its rightful place as the apical ethical principle. Accordingly, Schweitzer's bioethical axiom of Reverence for Life, establishes a 'biotic imperative': live life by making all of life one's primary moral priority. Jahr's *Bioethik* entails a "cosmopolis of ends": sustain ecosystems to allow for the fullest pursuit of all organic ends.[13]

Schweitzer's various accounts of his reflections that led to this ethical conclusion are

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[11] Fritz Jahr, *Essays in Bioethics 1924–1948*, ed. and trans. Hans–Martin Sass and Irene M. Miller (Münster: LIT Verlag, 2013), 25.

[12] Jahr, *Bioethics,* 28. See also Hans–Martin Sass, 'Fritz Jahr's 1927 Concept of Bioethics', *Kennedy Institute of Ethics Journal,* 17.4 (2007), 279–295; and José Roberto Goldim, 'Revisiting the Beginning of Bioethics: The Contribution of Fritz Jahr (1927)', *Perspectives in Biology and Medicine,* 52.3 (2009), 377–380.

[13] Iva Rinčić and Amir Muzur, 'Fritz Jahr: The Invention of Bioethics and Beyond', *Perspectives in Biology and Medicine,* 54.4 (2011), 550–556; Iva Rinčić and Amir Muzur (eds.), *Fritz Jahr and the Emergence of European Bioethi*cs (Münster: LIT Verlag, 2019).

beyond the scope of this essay.[14] He sometimes describes his final step as a 'mystical' insight to the unity of all life. This identification of what is essentially human with what is essential to any life does require an imaginative leap, transcending the superficial differences that exist between the organisms of the biotic world. Yet that speculation, seemingly taken without reason, could not be contrary to reason, because such a binding unity had latently been within us, only to be later uncovered by self-conscious reflection. The discernment of a deep vital unity permitting life, underlying all biotic phenomena pursuing life, could not be found by deduction, and would not be guessed at from induction.[15]

If a reverential unity with other life was 'built into' the human species, the eventual nature of humanity should somehow exhibit this reverence, even if individual people stray into habits of cruelty toward life. There is not a singular philosopher that can be credited as the first to have an abundant admiration for animals. Nor were philosophers the first to feel dismay and regret over their fellow humans' abuse of animals. Yet, we now gaze upon a human world that has fallen into often cruel and destructive ways of using animals only for our purposes. We believe that this tragic relationship with animals could not be the 'normal' human way, and should not stand as the 'norm' for the treatment of the non-human world.

Perhaps it has become too easy for 'civilized' and 'modern' peoples to project wanton cruelty onto the vast panorama of life. But herein lies the paradox. If humans will treat (non-human) animals destructively, it begs the question of which species are (by humanity's own definition) the more 'animalistic' or 'humane'. In other words, and to paraphrase Goethe, are the 'beasts' really as wantonly destructive and deliberately cruel (one could even say 'bestial') as the human species has become? Animals do in fact consume what they must when they must. Yet life driven by competitive necessity must be regarded as a forgivably innocent way of life, concerned more about taking only what is needed rather than taking all that can be taken to simply sate endless desire. Patterns of living and dying, through endless cyclical balances and re-balances, would have been evident to any eyes gazing with even primal curiosity upon the forests, savannahs, and fields spread out before them. Early *Homo sapiens* did not look at the world only to see evil and injustice. In nature, they witnessed a bounty they needed to share, and a brisk competitiveness with which they needed to keep up.

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[14] See David K. Goodin, *The New Rationalism: Albert Schweitzer's Philosophy of Reverence for Life* (Montreal: McGill–Queen's University Press, 2014).

[15] Normative ideas can however be brought into organization through abduction's hypothesizing, just as empirical facts receive systematization for scientific theorizing.

But competition does not mandate cruelty, and *cogito*—especially a *cogito* with capacity for a theory of mind—would support an equivalent capacity for consideration. Indeed, this construct is the foundation of the proverbial 'golden rule' that is prevalent in most every construct of human regard and comportment.

Schweitzer's ethics proves visionary again. Simply put, being human requires being humane, a cornerstone to any worthy cultural practice.[16] That duty was essential to the ways that humans created 'humanity' as concept and *ethos*. But early *Homo sapiens* couldn't have projected human traits onto animals in order to understand them. They didn't have a conception of what it meant to be human, since 'humanity' was still developing after human DNA had evolved. Animals, and their ways, were easy to observe. It was never the case that a cognition of animals' worth depended on human recognition of ourselves. In early human history, matters were quite the reverse. The growing sense of human worth was guided by a respect for animals and their ways. Early *Homo sapiens* began to think about their own abilities and worth by respecting and mimicking animals. Respect that Stone Age humans held for animals did not arise from pitying compassion, but rather from sensing their own human inadequacy, given their inability to accomplish most things that animals did with ease.

Play and Myth

Humanity's natural proclivities are all accomplished by the same brain; a brain that evolved in a human species that developed within habitats replete with animals. Earlier species, such as *Homo habilis* and *Homo erectus*, could only relate to animals as either predator or prey. By the time of *Homo heidelbergensis*, *Homo* was becoming a top predator too. Other top predators and large herbivores demanded *Homo sapiens'* rapt attention, and therein enabled insight to the ways that mutual dependence is a general law of nature. Mimesis was used in play: play-acting could embody what the animals were able to do with their 'superior wisdom'. Animals could be trusted to know where the good water could be found. Animals always anticipated seasonal changes. Animals used efficient ways to hunt and kill. Their ways had to become human ways, too. To the sapient human mentality, animals were part of life and partners in life endeavors. Small game for snaring became little friends for taming.

[16] James Giordano and Julia Pedroni, 'The Legacy of Albert Schweitzer's Virtue Ethics to a Moral Philosophy of Medicine', in *Reverence of Life Revisited: Schweitzer's Relevance Today*, eds. David Ives and David A. Valone (Newcastle: Cambridge Scholars Publishing, 2007), 141–151.

The migrations of large herbivores had to be tracked, their habits had to be understood, and their abilities had to assessed. Apex predators' stealth and skill were admired, and often emulated.

Throughout human cultural development, from around 250,000 years ago until 15,000 years ago, *Homo sapiens* had ample time to focus upon and gain insight from what it meant to be a particular kind of animal among other animals. Before early *Homo sapiens* could think about being especially human, they observed how they 'fit' and functioned among the animal species surrounding them. Regarding animals as agents with purposes, which is hardly a misrepresentation, animal ways infused the ways that humans danced, played, and ritualized their own beliefs and plans. *Homo sapiens* could not begin by first anthropomorphizing animals, having no idea of '*anthropos*' before 'humanity' as a set of universal cultural practices had fully emerged. Early *sapiens* did not, and could not, view animals as 'like us' but those early humans could imagine themselves akin to animals, in idealized and ritualized forms. Scaffolding upon that human capacity to emulate whatever can be observed, the lives of animals were the evident environing dramas for our imaginative reenactments. Such idealizations of animals' distinctive ways were our way of effectively zoomorphizing 'us' during the early stages of cultural development towards full 'humanity'.

Everything changed for recent humanity. The Neolithic revolution, however prolonged and diffuse, allowed settled humans to depend on annual grains and domesticated animals. Following the rise of agriculture, exploitations of animals dominated human relationships with species that were considered valuable. What *are* animals? To be 'animal' had meant being predator, prey, partner, and finally prisoner; but that final relation of mastery necessitated an excusing rationalization, so there arose fresh myths of humans' earthly dominion. In the earliest of these myths (circa 90kya—50kya), gods are great because they first create a nutritive world and animal brethren, and then arrange for teachers (often in animal forms) to instruct proto-humans in respectful customs towards animals and the environment.[17] Myths about gods installing humans as gardening caretakers and animal dominators are a post-Neolithic and political rationalization for intensive agriculture and its social stratifications.

[17] Michael Witzel, *The Origins of the World's Mythologies* (New York: Oxford University Press, 2013).

Conclusion

As both Schweitzer and Jahr proclaimed, no 'civilization' can license an ethics of domination and cruelty, over other humans or non-humans. At the very least, we should deeply regret the fates of animals falling under humans' planet-wide dominion. Pity is nice, but hardly enough. Early humans did not pity the suffering of animals; not because of any lack of admiration or sympathy, but rather because they appreciated the necessities to the cycle(s) of life. Reverence does not depend upon compassion or pity; to be sure, it is not so simple a feeling. Reverence is devout respect for the basic sources of nourishment and guidance. Directed towards ultimate sources of all goodness, it becomes natural piety. However, reverence blends well with felt bonds of amity and kinship. Early humans could projectively imagine how bonds of mutual inter-dependence determine which animals are living and dying, and in some cases, why. They had begun to understand what ecological interdependence looks like, as it played out in front of their eyes on a daily and seasonal basis. Spiritual fellowship with animals (not just sympathy towards animals) was, and still is, an original virtue (i.e., an '*Ur*-virtue') to an affirming ecological orientation.

Humans did not invent community. Socializing and communing has been a typical evolutionary path throughout much of the animal world. Many mammal species exhibit altruistic and cooperative behaviors as components of their strong sociality. Humans' evolutionary continuity with mammals is confirmed in neurology and psychology, inclusive of core moral tendencies that *Homo sapiens* share with other primates. Animals, and especially social mammals, can display a range of behaviors remarkably similar to hominin capabilities: complex communication, learning guidance, crafty tool-use, and cooperative assistance, for example. Reciprocity, amity, teamwork, and beneficence are more the rule than the exception in super-social species, including the great apes, and in the subsequent lineage from *Homo habilis* and *Homo erectus* to *Homo sapiens*.

Once again, the combination of *cogito*, *tekhne*, and *ethos* served the evolution of the human species very well. Human *tekhne* of tracking, foraging, and hunting fostered communality with animals. In many ways, humanity yearned to be akin with them, as models, teachers, and providers. Humans dramatized their respect for animals with sacrificial restorations of harmony. The rituals bespoke strivings toward equity: 'We must take, but we must reverentially replenish those resources'. This reverence for harmony with animals was a cornerstone of humanity and humaneness. Humans' capacity to idealize communing relations with animals must have a deep history. Children easily think about animals as agents with

plans that include relations with people. Taming animals for play and companionship is a universal proclivity across humanity. *Homo sapiens* have probably always had some natural affinity toward and with animals. Human amity and comity with animals were extended to include herbivores that were hunted, and later to predators that were feared. This contributed to chimeric art and totemic myth, wherein humans adapted animal ways to invent cultural ways.

Humanity took itself to be beholden to alliances with (seemingly) cooperative animals, well aware of an abiding dependency upon them. Early humans asked, 'Why do those animal kinds allow us to kill them, while perennially rebirthing more to be available over and over again?' They projected onto animal relations the lesson already learned from harvesting plant foods: the vegetative cycle of seeding, cultivating, harvesting, decaying, and re-generating. Humans directed sacrifices in sympathetic magic towards regenerating animal kinds essential to human survival. The first sacrifices were probably not offered to gods; primeval rituals were acts of reverence and reconciliation with regard to animals, so that their replenishment can reliably sustain human needs in turn. It cannot be coincidental that Cro-Magnon and aboriginal art about idealized animal forms and animal-human chimeras could be the first depictions of deified beings, and animal spirits play an oversized role in the world's oldest oral myths.

What survives of this human-animal communality, despite the 'civilization' of animal cruelty, is a lasting capacity to recognize that animals have and enjoy their own ways in their own habitus. Inarguably, humans too have a will to live well, just as animals evidently do. What could be right about undeserved human domination, enslavement and wanton destruction of other animals? In such ways humanity is destroying itself, not just materialistically or ecologically, but also morally by disrespecting and diluting humaneness. Intellectually, technologically, and ethically, there is only one direction forward consistent with the evolutionary opportunities that drove the human species onwards. Schweitzer's humanistic bioethics calls the human species back to its true humanity, an authentic *anthropos*, which developed an *ethos* through a genealogical and ecological unity with *bios*. In accord with Schweitzer, following a long line of philosophers who situate humanity within a larger cosmic whole, we opine that the future of humanity-in-the-world will be best served by a bioethics that is syncretic, sensitive to, and respectful and proactively supportive of a natural ecology.