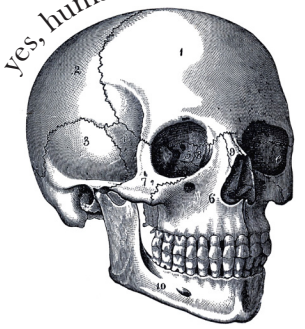
yes, human



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the things themselves" comes to mind, the search for a way to be before/beneath the merely conceptual.

A recent entry in the effort toward the direct and unmediated goes by the name of Thing Theory. Kicked off, at least in part, by Bill Brown's 2004 cultural studies book, *Things*.[23] Cognitive archaeologist Lambros Malafouris turned this emphasis into what he calls Material Engagement Theory.[24] His outlook foregrounds the role of things in the processes of human cognition, stressing the active collaboration between individual and material. As he puts it, with emphasis, "to think through things, in action, without the need of mental representation."[25]

We may be getting closer to directly challenging—and indicting—symbolic culture, whose advent and emergence became viral with domestication and civilization. The realm of estrangement and ruin, in every sphere. Each step into the symbolic has moved us toward alienation and destruction, as we now can more clearly see.

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example "Homo sapiens Is as Homo sapiens Was," is founded on the same premise, as the title makes clear.[14]

A new paradigm has emerged.

Looking back much further, we were walking upright more than four million years ago. 3.6 million-year-old footprints found in east Africa show two people walking together with a modern gait.[15] Until recently, the earliest known intentionally modified stone tools (from an Ethiopian site) were dated at 2.6 million years ago. But a 2015 discovery in Kenya has pushed that date back to 3.3 million years ago—a major find.[16]

In 2019, Justin Pargeter and John Shea provided the first extensive overview of prehistoric tool miniaturization, a practice that goes back to extremely early lithic tool-making.[17] That is, to at least 2.6 million years ago. These are often stunning creations, finely crafted tools less than half an inch long. They were used for cutting, piercing, scraping, etc. It becomes increasingly easy to grasp that we possessed significant capabilities far earlier than the lack of social and material complexity might imply. For this reason, Gowlett, Gamble and Dunbar have argued that "there is at least a 2 million-year social record that most be explored."[18]

From at least 1.5 million years ago, fire was a key development.[19] Hunting of small animals (e.g. rabbits by 400,000 years ago) and larger game (goats and deer) began much earlier than previously thought, according to 2019 *Science Advances* research.[20] The cognition required in stone knapping has long been understood as not substantially different from our own today.[21]

What stands out most to me is the absence of symbolic functioning among these early people. Recent findings underline impressive human capacities at earlier and earlier stages, but with no evidence of symbolic activity, much less of symbolic culture.

Civilization has made the symbolic the measure of intelligence and even of consciousness. Human capacities at remarkably remote times render this notion utterly ridiculous. There was a time when communication wasn't about trading symbols, when the the symbolic dimensions of art, number and time awareness did not exist. Robert Bednarik has addressed "Concept-Mediation Marking in the Lower Paleolithic,"[22] regarding very early intelligence in a non-symbolic world.

To me, what we now know of our very distant past leads to the question of the very nature of symbolism's reign over the planet. How to somehow get outside of representation, the symbolic, is a challenge that has been lurking—if not directly posed—for some time. Edmund Husserl's "to

INTRODUCTION

What does it mean to be human? Turns out we've been "human" for a very, very long time.

The reality that keeps presenting itself is that we've had what we think of as human capacities at ever earlier epochs and across Homo species. The evidence keeps pushing back deeper and deeper into prehistory, seemingly never in the direction of seeing more recent development as the limit for being somehow modern.

It used to be a given that "behaviorally modern" meant that of symbolic culture and not before. That assumption—and it was always an assumption—has been exploded. Symbolic artifacts are but a few tens of thousands of years old at best, whereas human abilities (e.g. finely crafted tools, seafaring skills) go back over a million years. Adam Brunn and Mark W. Moore make this point in their "Symbolic Revolutions and the Australian Archaeological Record" (*Cambridge Archaeological Journal* 15:2, October 2005). *The Journal of Human Evolution*, November 2020, disclosed that *Homo erectus* crafted a sophisticated 3-barbed tool from a large animal's rib over 800,000 years ago.

The implications of this fact are only beginning to be realized. To me, it undermines the centrality, if not the necessity of symbolic culture. We need to stop equating the symbolic dimension with intelligence. From almost the beginning of the emergence of the human species we were quite capable of all kinds of capabilities. Much of the landscape of these gifts may never be fully known but the following, mainly brief, pieces remind us of their scope. And in relatively the blink of an eye symbolic culture—number, art, literacy—showed up. Could it be mere coincidence that this paralleled the beginnings of the Fall into domestication/civilization with all its concomitant oppression and miseries? Hierarchy, private property, patriarchy, slavery, superstition, war, etc.

Community, intimacy with the natural world and each other existed for so very long, almost unimaginably so, which strongly suggests that if we once knew how to live without ruining the planet and ourselves, we might be able to do so again. Without domestication/civilization; that is, without domination of nature and humanity. Perhaps, ultimately, without the symbolic, whose appearance marked the beginning of ruinous decline.

FUTURE PRIMITIVE UPDATE

In the past couple of years there have been some very remarkable findings concerning the capacities of early humans.

These discoveries have reinforced and even considerably deepened some aspects of the general paradigm shift underway in recent decades. The work of Thomas Wynn and others has shown that Homo around one million years ago had an intelligence equal to our own. Anthropological orthodoxy now also views Paleolithic humans as essentially peaceful, egalitarian, and healthy, with considerable leisure time and gender equality.

The most recent material has to do with mental achievements and has radical implications similar to those in the other areas of pre-civilized life.

In late August 1999 University of Minnesota and Harvard anthropologists disclosed a narrowing of the size differential between men and women that began about 1.9 million years ago. The key factor was not so much the use of fire, which began then, but cooking of tuberous vegetables. Cooking reduced the need for bigger teeth, which predominated in males, and the sexes began to equalize in size. The fact of cooking, so long ago, is a considerable datum in terms of the capacities of early Homo. An upcoming issue of Current Anthropology will discuss this research in depth.

M. J. Morwood et al., in the March 12, 1998 issue of *Nature*, revealed evidence that humans used seagoing vessels 800,000 years ago in the western Pacific. The earliest previous evidence for sea crossings dates from about 50,000 years ago. This enormous revision of how long ago humans were able to construct vessels and guide them over miles of ocean actually elicits, according to the authors, a complete reappraisal of the cognitive capacity of early humanity.

In a related vein, a one-million-year-old skull found in Eritrea that possesses Homo sapiens features pushes back such an occurrence by 300,000 to 400,000 years. The September 1998 *Discover* magazine called this find a "breakthrough in human origins," noting that prior to this discovery, the earliest fossils with H. sapiens features dated to only 700,000 to 600,000 years ago.

The February 27, 1997 issue of *Nature* recounts the discovery of the world's oldest hunting weapons, a trio of 400,000-year-old wooden spears found in a German coal mine. It is not clear whether this repudiates the

WHEN WE WERE HUMAN

When did modern Homo sapiens show up? That is, how long have there been people like us? The answer has changed dramatically in recent years, with highly interesting implications.

The long-prevailing consensus was that Homo became modern about 40,000 years ago, in the Upper Paleolithic, around the time of the European cave paintings.[1] Wow, has this judgment been radically revised. In 1998 paleo-anthropologist Bernard Campbell found that we were modern 100,000 years ago.[2] 2002 saw John Noble Wilford claim that we were modern "by at least 130,000 years ago."[3] Robert Foley, in 1995, had already put the date as "certainly as far back as 110,000 years ago, and possibly as old as 140,000 years."[4] Homo sapiens is 150,000 years old according to Kenneth J. Guest, as of 2014.[5] In 2017, Tibayrenc and Ayala set the date at 200,000 years.[6]

The direction of this revision, and the rapid shift involved, are starkly clear. Galway-Witham and Stringer's "How Did Homo sapiens Evolve?" (2015) refers to "evidence for Homo sapiens in Morocco as early as 300,000 years ago."[7] In fact, in 2003 P.S.C. Tacon had already contributed "Behaviourally Modern at 300,000 Before Present: Was My Ancestor Brighter than Yours?"[8]

Precisely what the term "modern" involves/includes probably varies among the anthropologists and archaeologists just cited, but an overall updating and reassessment has arrived. Grant McCall argues that patterns of residential or home base activity in the Lower Paleolithic, as well as shared foraging and hunting practices, are the same as those of modern hunter-gatherers.[9] Home base development and use of fire by circa 400,000 years ago has led Nicholas Roland to a similar conclusion, based on evidence from China.[10] New fossil discoveries have overturned conventional thought about early Homo capacities, according to Leslie Aiello and Susan Anton.[11]

A key explanation of the depth of early Homo "humanness" is "The Revolution that Wasn't," by Sally McBrearty and Alison Brooks (2000).[12] They argued that the cognitive abilities of early members of our species were indistinguishable from our own. In a 2013 follow-up essay, they presented further research supporting the idea of a "cognitive unity" throughout members of the Homo sapiens species.[13] John J. Shea's work, for

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19. Nyree Findlay, "Gender and Lithic Studies in Prehistoric Archaeology," Diane Bolger, ed., *A Companion to Gender Prehistory* (Malden, MA: Wiley-Blackwell, 2013).
20. M. Dyble et. al., "Sex Equality Can Explain the Unique Social Structure of Hunter-Gatherer Bands," *Science* 348, 7 June 2015.

prevailing view that Homo engaged almost entirely in foraging or scavenging until about 100,000 years ago, but the find does clearly demonstrate high intelligence. The 6- to 7-foot long spears "required careful planning," utilizing the hardest ends of young spruce trees, with the thickest and heaviest part of the carved shaft about one-third of the distance from the spear point for optimal balance.

What these reports establish is that humans were cooking, traveling over seas, and skillfully making tools at generally much earlier times than previously suspected, and very much prior to any known existence of symbolic culture.

We are trained to equate intelligence with symbolic culture, though clearly this assumption is at variance with the record of human existence. Likewise, we tend to measure intelligence in terms of division of labor and domestication, those benchmarks of basic alienation. We are finding out a bit more about an intelligence that we know lived with nature instead of dominating it, and lived without hierarchy or organized violence. (Head-hunting, cannibalism, slavery, war all appear only with the onset of agriculture.)

On one level or another it seems, humans so very long ago and for so many millennia understood what a good thing they had. Healthy and free, they many have sensed that division of labor erodes wholeness and fragments the individual, leading to social stratification, imbalance, and conflict. They resisted it for more than a million or two million years, succumbing to civilization only quite recently, along with its consolation, symbolic culture.

THE WAY WE USED TO BE

How long ago did our humanness begin? Evidence keeps pushing back the dates by which we exhibited various capacities and achievements. It has reached the point, with almost certainly more revelations to come, of presenting us with grounds for a new understanding of humanity in the neighborhood of two million years ago.

This critical overview focuses on Homo erectus, who followed Homo habilis, the earliest human species, and survived for about 1.5 million years. But it must be taken into account from the start that the taxonomic framework itself, looking at life as basically taxa or species, is not only questionable but somewhat confused. D.W. Cameron points out the "explosion" in the recognition of new hominid species and the questions this introduces.[1] Separate species vs. continuity of species is an issue, for example. Xinzhi Wu and Poirier point to "a long recognized general morphological similarity between Chinese H. erectus and subsequent H. sapiens in China,"[2] suggesting that a reasonable classification for the populations of more than the last one million years would be to include them all within our own species, Homo sapiens. "Does Homo erectus exist as a true taxon or should it be sunk into Homo sapiens?" asks Wenke.[3] Perspectives, by the way, that imply the earlier and earlier emergence of human aptitudes. Taxonomic boundaries, then, are rather subjective constructs influenced by archaeological discoveries.

There are still a few who do not see "fully modern" hunter-gatherers in the picture until about 40,000 years ago,[4] but such a view is being rapidly revised. An Ethiopian site yielded this *Science Daily* headline: "The Oldest Homo Sapiens: Fossils Push Human Emergence Back to 195,000 Years Ago."[5] Even "early H. erectus," Gilbert asserts, is "very similar postcranially to modern humans."[6] Colin Tudge tells us, "There is no God-given law that says that Homo sapiens was or is the only bona fide species of human being," adding that "the very first people who were more or less like ourselves…date from about five hundred thousand years ago."[7]

But so often they were ignored altogether by researchers and scholars or looked at as strictly lower forms, consonant, for example, with the Aristotelian "Great Chain of Being" ranking all creatures along a continuum, from "beasts" to "higher" mankind, to the angels, etc. Similarly, some view Homo erectus as a creature of great but unrealized potential, failing to see our very early forbears on their own terms, for what they were in themselves.

We were beings who lived in direct touch with this Earth while avoiding the virus of symbolic pseudo-life, domestication, and civilization—but not for want of intelligence. Our species is unique, mainly in a negative sense, having brought ruin and estrangement to every corner of the world.

Women as Paleolithic tool-makers[19] brings to mind another dimension of hunter-gatherer band society. A 2011 study of 32 hunter-gatherer groups overturned an earlier assumption that such groups were composed mainly of people who were genetically related. Anthropologists Mark Dyble and Andrea Migliano found that most of them were not related, and that the level of non-relatedness increased with the level of gender equality in the band. They attributed the well-known band features of egalitarianism and cooperation to the conscious influence of women,[20] a powerful reply to those who have characterized references to hunter-gatherer gender equality as an illusory modern/ Romantic/leftist projection.

I think pre-domesticated life may remain an intriguing mystery in many, if not most respects. The perspectives it has already revealed, however, may be of profound importance in the always-worsening straits where Progress places us.

NOTES

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3. Erich Neumann, *The Origins and History of Consciousness* (Princeton, NJ: Princeton University Press, 1970).
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5. Sigmund Freud, *New Introductory Lectures on Psychoanalysis* (New York: Norton, 1933), p. 55.
6. Hal Whitehead and Luke Rendell, *The Cultural Lives of Whales and Dolphins* (Chicago: University of Chicago Press, 2014).
7. John Gurche, *Shaping Humans* (New Haven: Yale University Press, 2013), p. 126. Also Fred Spoor, "Paleoanthropology: The Middle Pliocene Gets Crowded," *Nature* 521 (27 May 2015).

Ethiopian find, half of a jawbone, dated from 3.3 to 3.5 million years. The latest evidence fuels the hominin vs. Homo discussion, but also raises questions as to the adequacy of those distinctions. "It makes us stop and rethink everything," said American paleoanthropologist Carol V. Ward.[9]

The fact that some extremely old fossilized remains have distinctly human features (e.g. shape of hands or feet, arm length)[10] only deepens the confusion, but the extent of cognitive capacities is a question of still greater significance.

Analysis of stone tools found near Lake Turkana, Kenya in 2011 verifies that they are 3.3 million years old, some 700,000 years earlier than those previously known.[11] The earliest previous evidence of tool-making, also from east Africa, was dated 2.6 mya. A similar, supportive find is that of bones from before 3.39 mya. "that show unambiguous stone-tool cut marks for flesh removal and percussion marks for marrow access."[12] The fashioning of even the simplest of stone tools is a feat of mind not exhibited by non-human primates even when trained by humans.[13] Much of what we know is extrapolated from the evidence of stone tools; they are artifacts that endure. There was likely a wealth of other activity whose traces have disappeared, e.g. woodworking, bone and antler tools, cordage from similar periods. A 2019 finding in southern Israel included 283 small precision tools used for butchering an elephant, dating from some 500,000 years ago.

We know that Homo erectus managed repeated sea crossings to the Indonesian island of Flores, a distance of at least 20 kilometers.[14] The discovery of 500,000-year-old stone-tipped spears in South Africa upset the long-standing opinion that such hafting was unknown before 300,000 years ago.[15]

The evidence record shows a clear pattern of developed abilities at ever-earlier times. Other recent findings support this, including a *Journal of Human Evolution* article that focuses on cooking at around 1.9 million years ago.[16] It discusses scavenged meat, arguing that Homo erectus would not have emerged without cooking. Eating carrion, which clearly took place at least this early, would not have been safe unless the meat was cooked. Ewen Calloway looks at 1.5 mya human footprints in Kenya as evidence of an early antelope hunt.[17] A September 2015 sensation was the announcement of a new species, Homo naledi, found in South Africa and dating from 2.5 to 2.8 mya. Of unusually modern appearance and possibly practicing deliberate burial vastly earlier than any known symbolic activity.[18]

Nadia Seremetakis cited a once whole sensory state and our separation from that primal and originary experience.[8] Who we are and what we are doing here might be enriched by considering what obtained at the beginning, and for so vastly long a time. In what Giorgio Agamben calls the age of "total management," we seem no longer recognizably either human or animal, lost in the movement toward a techno-existence.[9]

It is time to grant Homo erectus, using the term for present purposes, the humanness and abilities which are the species' due—notably ecological flexibility and premier generalist status in the world.

The ultimate origin of the hominid family is that of the first bipedal apes, roughly 7.5 million years ago, not forgetting the contrast between the quite hierarchical nature of extant great apes and egalitarian hunter-gatherers. Ape-like in many or most respects were the Australopithecines in the original hominid birthplace, East Africa, until about 3 million years ago. This is the very approximate date for the beginning of the first human species, Homo habilis, or "handy man." And close to 2 million years ago Homo erectus appears, "much more human in appearance, brain size, stature and culture," judges Donald Merlin, adding that "With this species, a major threshold had been crossed in human evolution."[10]

Stable social structures and home bases have indicated to many that for Homo erectus, sharing and cooperation—as with contemporary foraging societies—were key parts of an optimum survival strategy.[11] Homo erectus lasted close to 2 million years, all the way into the Neanderthal period about 200,000 years ago, during which time half of earth's mammal families became extinct. The persistence through time of Homo erectus is possibly the characteristic that stands out the most as we contemplate the potential brevity of Homo sapiens. Niles Eldridge reminds us that "That is, after all, the mark of success." Erectus was remarkably successful at persevering, which calls to mind the familiar adage, "If it ain't broke, don't fix it."[12] In balance with the world, Homo erectus' extreme durability of over 1.8 million years offers an extreme contrast with the continuously innovating and unstable Homo sapiens species.

To Paul S.C. Tacon it seems likely that "human ancestors have been behaviorally modern much longer than has generally been accepted," including Homo erectus.[13] There is clear evidence, for example, of very early stone tool use to butcher large mammals.[14] There is now, by the way, considerable weight in the literature to the effect that early Homo was not only an opportunistic scavenger of carcasses, but also a skilled

hunter.[15] Homo erectus, well adapted for life on the African savannah, tall and immensely strong, traveling far, with large brains, rich diets, cooking hearths, pair-bonding bands, simple and efficient technology.

It is possible to see the hallmark of human evolution in terms of a release from proximity, as if estrangement from sensual interface with the natural world, rather than intimacy with it, were a desired goal. As if the loss of community and place were just an inevitable given. But it is not only that "both human social structure and human intellectual capabilities appeared quite early," as Belfer-Cohen and Goren-Inbar have it.[16] "Primal versions of fidelity and truth, not simply sex and brute strength, had become key forces" in Homo erectus society.[17] The face-to-face bonds of early Paleolithic society provided immeasurably more connection than those of face-in-the-crowd mass society. Their world as experienced by any of its members must have been so much more multidimensional and in-depth than our own social existence. Here in itself are credible grounds for Leslie White's conclusion that "Hunting and gathering was unquestionably the most satisfying social environment man has ever lived in."[18]

More specifically, various physical and experiential shifts mark the arrival and maturation of Homo erectus. It was the first human species to possess a nearly hairless, non-ape-like skin and the first to have a projecting bony nose. Because erectus was a meat-eater, the species lacked the pot-bellied shape housing the bulky intestines required to digest a plant tissue diet. From the Australopithecines to Home erectus the size of the brain doubled; and while an Australopithecine male was typically about twice the size of the female, with erectus the difference narrowed greatly, to about what it is today.[19] Overall size doubled, and for the first time humans had an extended dependency period in infancy and an adolescent growth spurt.[20] From the fossilized east Kenya remains of so-called "Turkana boy" (1.6 mya) and earlier specimens it is clear that erectus was tall and lean, with arms and legs proportioned like ours. A body geared for endurance walking and running, like the famous Kenyan long-distance athletes of today.[21]

Anatomical shifts suggest increased longevity; increased size alone is an indicator of longer life, by the way. Hammer and Foler report that "longevity estimates are without exception larger" than previously thought,[22] while Swisher et al judge that the "average Homo erectus probably lived six years longer than the average Australopithecine—that is, 50 years as against 44."[23] H. Helmut finds that a "major extension of life potential

NEWS FROM PREHISTORY: AN UPDATE

Symbolic culture, the defining feature of modern humans, is quite recent; while non-symbolic culture—and intelligence—go back very much farther. About 30,000 years for the former, 3 million years in terms of the latter. I've addressed this before, most recently in "The Way We Used to Be,"[1] and the following is largely an extension or update of that essay.

Contra Henry de Lumley, the symbolic is not "one of the essential dimensions of human cognition."[2] We are the only human species to symbolize, and yet cognition certainly extends to our very, very distant forbears. We are symbolic animals, living within layers of symbolic representations where nothing is allowed to be merely itself. This conceit defines reality in countless ways. Consciousness, for example, can only take place within the symbolic. Erich Neumann sees the origin of consciousness in myth, to cite one baseless example.[3]

Communication cannot be properly said to take place unless it is symbolic. Michael Haworth has explored "Telepathy and Intersubjectivity in Derrida, Husserl and Levinas,"[4] and Freud had no trouble assuming that early humans were telepathic.[5] The cognition that enables expertise is not usually reliant on the symbolic, including language. We are slowly discovering more about the richness of pre-symbolic culture, including ever-earlier examples of Paleolithic intelligence.

Culture in the widest sense is far from solely possessed by humans. A fine reminder is *The Cultural Lives of Whales and Dolphins* by Hal Whitehead and Luke Rendell[6], about cetaceans who think, feel, and live communally in a web of culture developed about 30 million years ago.

Concerning our own family tree, in the beginning there were the hominin species (e.g. Ardipithecus, Australopithecus) and the Homo species. We were fully bipedal this side of 6 million years ago, but not yet "human." A fairly recent Ardipithecus ramidus find is a fossilized skeleton nicknamed "Ardi" who lived about 4.4 million years ago; a more famous ancestor is "Lucy" from 3.4 million years ago. Much debate continues as to the earliest appearance of humans (e.g. Homo erectus, Homo habilis).[7]

In March 2015 Kaye Reed of Arizona State University and her colleagues reported finding the oldest Homo fossil, dating back 2.8 million years, found in Ethiopia.[8] In June of the same year there was another

the Origin of Symbolic Behavior in and Out of Africa," in Paul Mellars, ed., Rethinking the Human Revolution (Cambridge, U.K.: David Brown, 2007), p. 276.

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72. Thomas Wynn, "Handaxe Enigmas," World Archaeology 27 (1995), p. 10.
73. Walker and Shipman, op.cit., p. 283.
74. Michel Serres, The Five Senses (New York: Continuum, 2009), p.186. It could be that signaling theory in anthropology and disjunction in philosophy may help provide alternatives to the symbolic's more or less exclusive claim on communication and knowledge. See Rebecca Bliege Bird and Eric Alden Smith, "Signalling Theory, Strategic Interaction, and Symbolic Capital," Current Anthropology 46:2 (April 2005); Adrian Haddock and Fiona Macpherson, eds., Disjunctivism (New York: Oxford University Press, 2009); Alex Bryne and Heather Logue, eds., Disjunctivism (Cambridge, MA: MIT Press, 2009).
75. G. Schweppenhaus, Theodor W. Adorno (Durham, NC: Duke University Press, 1009), p. 67.
76. Philippe Ariès (translated by Helen Weaver), The Hour of Our Death (New York: Alfred A. Knopf, 1981.
77. Loren Eiseley, The Unexpected Universe (New York: Harcourt, Brace & World, 1969), p. 191.
78. George E. Dimock, The Unity of the Odyssey (Amherst: University of Massachusetts Press, 1989), p. 10.
79. J.G.D. Clark, Economic Prehistory: Papers on Archaeology by Grahame Clark (New York: Cambridge University Press, 1989), p. 416.
80. Elias J. Bickerman, "Mesopotamia," in John A. Garraty and Peter Gay, eds., The Columbia History of the World (New York: Harper & Row, 1972), p. 49.
81. M.D. Petraglia et al., "A Case Study from India: Life and Mind in the Acheulean," in Clive Gamble and Martin Porr, eds., The Hominid Individual in Context (New York: Routledge, 2005), p. 217.
82. Charles Darwin, Voyage of the Beagle (New York: Penguin Books, 1989 [1839]. Introduction by Janet Browne and Michael Neve, p. 24.
83. Glenn C. Conroy, Reconstructing Human Origins (New York: W.W. Norton, 2005), frontispiece.

occurred with and after Homo erectus" based on "new calculations of Hominid maximum lifespan potentials," with erectus upper limits of 70 to 75 years.[24]

The species was the first to use fire, and lived in huts as well as caves.[25] Group size increased to about 100 on average, well beyond that of non-human primates or Homo habilis.[26] 1.8-million-year-old faunal remains obtained from different areas indicate a wide range of erectus activity, specifically that food was already being transported long distances to be shared at home bases.[27] Complex foraging and ranging behavior happened over greater and more diverse areas, greatly surpassing any earlier hominid species.

In fact, the emergence of Homo erectus coincides with its moving out across the world, which in itself is a difference from any other primates. This dispersal and its challenges constitute another marker of remarkable sapient development. Arrival in Java is verified as of 1.8 mya, in Dimansi in the Caucasus near the Caspian Sea from 1.8 to 1.96 mya, and in China around 1.9 mya. Huang Wanpo et al push this further, concluding that "new evidence suggests that hominids entered Asia before 2 mya."[28]

There is so very much of the human panorama, of course, that most likely will remain unknown to us. But the capability of our distant ancestors, though discerned through fragmentary, disconnected evidence rather than a seamless narrative, is revealing and provocative.

About 850,000 years ago, Homo erectus was able to manage repeated sea crossings to the Indonesian island of Flores, 20 kilometers at the minimum. Stone tools that date from that period could not otherwise have been there.[29] This finding was almost unbelievable in light of the previous consensus that only Homo sapiens could have practiced such navigation. As Robert Bednarik noted, "Lower Paleolithic seafarers were technologically and cognitively far more advanced than archaeologists had ever thought possible."[30] Nila Alperson-Afil and her colleagues have found evidence in Israel of the organization of living spaces for different activities. Although this behavior was long thought to have been exclusively the province of modern humans, this encampment is 790,000 years old.[31] Sophisticated wooden implements have been found in Germany, in use about 400,000 years ago. It is very rare that wood is preserved as long, but the hunting spears of Schoningen provide "a completely new insight into the developmental stage and culture of early humans."[32] Beautifully carved, the long spears were made of specially selected hard cores of larch and have a perfect balance and proportion.[33] These examples barely scratch the surface of what must have

been numerous techniques—outside the relatively common surviving stone tools—involving shell, bone, bamboo and other structural plant materials, cordage, skins, wrapping, and other ancient means to desired ends.

Richard Leakey wrote: "When I hold a Homo erectus cranium in my hand and look at it full face, I get a strong feeling of being in the presence of something distinctly human. It is the first point in human history at which a real humanness impresses itself so forcefully."[34] A being, perhaps, from the beginning of hunter-gatherer consciousness, impressing Leakey as a person. *Origins Reconsidered* goes on to find in erectus the real start of "the burgeoning of compassion, morality, and conscious awareness."[35]

An instructive instance is the remains of a woman who lived 1.7 mya, known by the museum registration number assigned to her, 1808. She had suffered from vitaminosis A, a "completely immobilizing" condition caused by ingesting too much carnivore liver or honey; yet she survived for some months after its onset. "The implication stared me in the face," wrote Walker and Shipman, "*someone else took care of her*," or she "wouldn't have lasted two days in the African bush."[36] Their conclusion: "This was the appearance of a truly extraordinary social bond."[37] There are certainly other cases as well, involving toothlessness, spinal cord conditions, etc., that give evidence of mutual aid and support from this time period.[38]

"Looking at the group structure of Homo erectus," according to George Frankl, "we can see that it was neither patriarchal nor matriarchal and we will be justified in calling it primal community."[39] Sarah Blaffer Hrdy finds that early sharing was spontaneous and automatic, and that both males and females started out "with an innate capacity for empathy for others and for nurture" which provided, for instance, a sense of emotional security in children back in the Pleistocene.[40]

The earliest exodus from the east African birthplace of humanity happened a lot earlier than once thought, and the mastery of fire probably accompanied that exodus, also far earlier than was thought. Boaz and Ciochon refer to Kenyan evidence of fire use "dated to an astonishingly early 1.7 million years ago."[41] But it now appears that fire was a crucial component of movement out of Africa, enabling settlement in colder climes and at higher altitudes. Uncooked food required massive, thick teeth; smaller teeth and thinner tooth enamel argue for cooked food, a very early evolutionary trend that continues to this day.[42] Kingdon finds that "firing foods, or cooking, was a 'tool' that neutralized bacteria and toxins, released nutrients, and allowed a vast expansion in the food base

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49. Christopher Stringer and Clive Gamble, In Search of the Neanderthals (New York: Thames and Hudson, 1993), p. 82.
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51. Boaz and Ciochon (2004), op.cit., p. 124.
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55. Semaw et al., "2.6 Million-year-old Stone Tools and Associated Bones from OGS-6 and OGS-7, Gona, Afar, Ethiopia," Journal of Human Evolution 45 (2003), p. 176.
56. Lawrence Barham and Peter Mitchell, The First Africans (New York: Cambridge University Press, 2008), p. 82.
57. Ibid., p. 157.
58. Ignacio de la Torre, "Evaluating the Technological Skills of Pliocene Hominids," Current Anthropology 45:4 (August-October 2004), p. 439.
59. Sheila Mishra, "The Lower Paleolithic: A Review of Recent Findings," Man and Environment xxxiii (1)-2008, p. 16.
60. de Heinzelin et al., "Environment and Behavior of 2.5 Million-Year-Old Bouri Hominids," Science 284 (April 23, 1999), p. 629. Also de la Torre et al., "The Oldowan Industry of Peninj and its Bearing on the Reconstruction of the Technological Skills of Lower Pleistocene Hominids," Journal of Human Evolution 44 (2003), pp 203-224.
61. Shanta Barley, "Earliest Evidence of Humans Thriving on the Savannah," New Scientist 18:07 (October 21, 2009).
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63. Ibid., p. 47.
64. Loren Eiseley, The Invisible Pyramid (New York: Scribner, 1970), p. 58.
65. Paul Jordan, Neanderthal (Thrupp, UK: Sutton, 1999), p. 152.
66. Henry de Lumley, "The Emergence of Symbolic Thought," in Renfrew and Morley, op.cit., p. 10.
67. Francesco d'Enrico and Marian Vanhaeren, "Evolution or Revolution? New Evidence for

2005), p. 50.
28. Huang et al, "Early Homo and Associated Artifacts from Asia," Nature 378 (1995), pp 275-278. Also, Ian Tattersall and Jeffrey H. Schwartz, Extinct Humans (New York: Westview Press, 2000), p. 160.
29. Robert G. Bednarik, "Replicating the First Known Sea Travel by Humans: the Lower Pleistocene Crossing of the Lombok Strait," Journal of Human Evolution 16:3 (2001), p. 229.
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31. John Noble Wilford, "Excavation Sites Show Distinct Living Areas Early in Stone Age," Science 18 (December 2009).
32. Thieme Hartmut, "Lower Paleolithic Hunting Spears from Germany," Nature 385 (1999), p. 810.
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34. Richard Leakey and Roger Lewin, Origins Reconsidered: In Search of What Makes us Human (New York: Doubleday, 1992), p. 55.
35. Ibid., p. 67.
36. Alan Walker and Pat Shipman, The Wisdom of the Bones (New York: Alfred A. Knopf, 1996), pp 165-166.
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38. Donald C. Johanson and Kate Wong, Lucy's Legacy (New York: Harmony Books, 2009), pp 206-207.
39. George Frankl, The Social History of the Unconscious (London: Open Gate Press, 2003), p. 76.
40. Sarah Blaffer Hrdy, Mothers and Others (Cambridge, MA: Belknap Press, 2009), pp 12, 290.
41. Noel T. Boaz and Russell L. Ciochon, Dragon Bone Hill: An Ice-Age Saga of Homo erectus (New York: Oxford University Press, 2004), p. 104.
42. Peter S. Ungar, ed., Evolution of the Human Diet (New York: Oxford University Press, 2007), pp 60, 352.
43. Jonathan Kingdon, Lowly Origin (Princeton: Princeton University Press, 2003), p. 273.
44. Ibid.
45. Belfer-Cohen and Goren-Inbar, op.cit., p. 146.
46. Kate Robson Brown, "An Alternative Approach to Cognition in the Lower Paleolithic: The Modular View," Cambridge Archaeological Journal 3:2 (1993), p. 231.
47. Phillip V. Tobias, "The Craniocerebral Interface in Early Hominids," in Robert S. Corruccini and Russell L. Ciochon, eds., Integrative Paths to the Past (Englewood Cliffs, NJ: Prentice Hall, 1994), p. 193, for example.

by making indigestible material edible."[43] He also argues that fire was a likely success factor in excursions within and outside Africa, which speaks to "the possibility that it began to be used before 2 mya."[44] In addition to warmth and the means to thaw, cook and smoke food, fire also deterred predators and almost certainly promoted social life as a site of food sharing and familial-type relationships, including care of the young.

These feats show a depth of intelligence "noticeably higher than those usually ascribed" to those who lived so long ago.[45] The emerging record indicates that Homo erectus exhibited analogical reasoning, though Kate Robson Brown argues that minds in the Lower Paleolithic possessed a "cognitive capacity for which no current analogue exists."[46]

We know that brain size surged as Homo habilis gave way to erectus around 2 mya.[47] Some fairly recent theorizing posits cooked food as the chief factor in the increase.[48] But in any case the brain's shape may be as important as its size. Cerebral asymmetry also dates from this general period, as preferential handedness shows up.

"The largest Homo erectus brains were about 1250 ml…and modern brains average about 1200–1500 ml. in volume,"[49] thus matching our own in cranial volume. Neanderthal brain size, 150,000 years ago, by the way, was greater than ours on average; that is, there has been an overall decline in brain volume during the past 150,000 years.[50] There are also large variations at any given period; e.g. the noted author and playwright Ivan Turgenev's brain size was 2012 ml., while the perhaps equally gifted novelist and dramatist Anatole France's was only 1040 ml. in size.[51]

In the evolution of intelligence, apparently not all parts of the brain evolved equally, nor are all parts equally important.[52] As the erectus brain grew apace, there was little change in technics; whereas today, as brain size has actually been shrinking, technological change is immense and accelerating. It is often said that we only use about 10 percent of our brains; perhaps we use ever less overall, as our estrangement from the world and each other deepens.

Intelligence means the ability to handle knowledge as a whole; this is what humans excelled at in prehistory. It is we who are cognitively undeveloped.

And what can be grasped by examining stone tools, those most enduring of artifacts? Stones can indeed speak and reveal much, directly and indirectly, about those who fashioned them into solutions on this earth.

Of course, non-human animals also use tools. Crows, for example, use

elevation as a tool, dropping nuts from suitable heights to crack them open; chimpanzees use sticks to force termites out of a log, etc. But they don't make tools; according to Cameron and Groves, "there is no convincing evidence to date that species other than Homo were involved in the manufacture of stone tools.[53]

The discovery of stone tool use from 3.4 million years ago is a huge finding.[54]

A very early lithic technology mode is called Oldowan, from the Olduvai Gorge area of east Africa. This mode is associated with Homo habilis, the earliest human species. Oldowan toolmakers used some tools to produce others, which no non-human primate has done. Archaeologists report ever-earlier dates for evidence of human capacities in this realm. Semaw et al found that "The sophisticated control and raw material selection…strongly suggests that stone tool use may have begun prior to 2.6 mya but not earlier than 2.9 mya."[55] Barham and Mitchell point to research pushing the time of earliest tool manufacture even a bit further back.[56] They also conclude that such human practice at 2.6 mya shows "an already well-develop-ed understanding of the mechanics of flaking" or knapping.[57] As Ignacio de la Torre noted, "The early tool makers are [now] seen as having recognized the principles of conchoidal fracture and having had the knowledge and technical skills required…"[58] Concerning this same time frame, Sheila Mishra concluded, "The surprising thing about the Oldowan stone tool industry is its sophistication."[59] deHeinzelin et al referred to the "surprisingly advanced character of…earliest Oldowan technology."[60] On evidence, Homo habilis was an intelligent, experienced, and technically accomplished tool maker.

Oldowan tools give way to the Acheulean styles as Home erectus appears, with cranial development very much like ours. What immediately comes to mind, with the new double-edge or biface Acheulean style is the iconic hand axe: a generally teardrop-shaped tool with congruent symmetry in three dimensions. Among many other devices including picks and cleavers, the hand axe stands out for what developed into its stunning craftsmanship and beauty, and a blade that often surpasses the sharpness of surgical steel. The very sight of such a creation erases any doubt as to its maker's aptitude.

Associated Acheulean practices strengthen this impression. Two million years ago, ancient humans in what is now Kanjeera, Kenya carried selected stone raw materials more than 13 kilometers to the site where they were worked.[61] A bit later, in the early Acheulean, this distance increased to 20

8. C. Nadia Seremetakis, The Senses Still (Boulder: Westview Press, 1994), p. 724.
9. Giorgio Agamben, The Open: Man and Animal (Stanford: Stanford University Press, 2004), p. 77.
10. Donald Merlin, Origins of the Modern Mind (Cambridge, MA: Harvard University Press, 1991), p. 112.
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12. Both quotes: Niles Eldridge, Dominion (New York: Henry Holt, 1995), p. 75.
13. Paul S.C. Taçon, "Identifying Ancient Religious Thought and Iconography," in Colin Renfrew and Iain Morley, eds., Becoming Human (New York: Cambridge University Press, 2009), p. 70.
14. Heinzelin et al, "Environment and Behavior of 2.5 Million-Year-Old Bouri Hominids," Science 284 (23 April 1999, p. 625.
15. Manuel Dominguez-Rodrigo, "Hunting and Scavenging by Early Humans: The State of the Debate," Journal of World Prehistory 16:1 (March 2002), for example.
16. Anna Balfer-Cohen and Naana Goren-Inbar, "Cognition and Communication in the Levantine Lower Paleolithic," World Archaeology 26:2 (1994), p. 153. Also, "Homo erectus seems to represent a kind of turning point for information donation among hominids," Barbara J. King, The Information Continuum (Santa Fe, SAR Press, 1994), p. 109.
17. Chip Walter, Thumbs, Toes and Tears (New York: Walker and Company, 2006), p. 121.
18. Leslie White, The Evolution of Culture (New York: Grove Press, 1959), p. 107.
19. R.W. Wrangham et al, "The Raw and the Stolen: Cooking and the Ecology of Human Origins," Current Anthropology 40:3 (December 1999), p. 574.
20. Carl C. Swisher III, Garniss H. Curtis, Roger Lewin, Java Man (New York: Scribner, 2000), p. 132. Also J.F. O'Connell et al, "Grandmothering and the Evolution of Homo erectus," in Jack M. Broughton and Michael D. Cannon, Evolutionary Ecology and Archaeology (Salt Lake City: University of Utah Press, 2010).
21. Rick Potts, Humanity's Descent (New York: William Morrow, 1996), p. 125. Homo erectus, it should be added, is also commonly referred to as Homo ergaster in African contexts.
22. M.L.A. Hammer and R.A. Foler, "Longevity and Life History in Hominid Evolution," Journal of Human Evolution 11:1 (1996), p. 64.
23. Swisher et al, op.cit., p. 159.
24. H. Helmut, "The Maximum Lifespan Potential of Hominidae—A Re-evaluation," HOMO 50/3 (1999), p. 64.
25. Dean Falk, Braindance (Gainesville: University of Florida Press, 2004), p. 172.
26. Peter Carruthers and Andrew Chamberlain, Evolution and the Human Mind (New York: Cambridge University Press, 2000), p. 253.
27. D.W. Phillipson, African Archaeology (Cambridge, U.K.: Cambridge University Press,

fact, reversed the dominant notion many decades ago, noting, "I venture to think that Paleolithic man has more meaning than the Greeks."[79] That timeless, history-less past and what followed might be seen in this light: "History exists only in a persisting society which needs history to persist."[80]

With very early Homo we may be encountering a human animal "without any modern parallels."[81] However that may be—and we will never know with full clarity—that make-up, that orientation to our mother earth exerts a definite pull. Darwin writes of the Fuegian Jemmy Burton, who spent many years in England only to rapidly return to native ways upon a return voyage to South America.[82] What dismayed Darwin should encourage us. The tie was not broken and the lure of non-regimentation remained, as it was also felt by European colonists who "went native," attracted by indigenous life-ways.

Glenn C. Conroy opens his *Reconstructing Human Origins* with this: "To all creatures wild and free I dedicate this book. The success of human evolution has not been kind to you."[83]

We are among those creatures. We have forgotten how we once lived, how we were meant to live. With the connection to the living world all but gone in this techno-world. Our species wars against itself; what touches our hearts now is sadness and disquiet. And yet the abundance that was persists, a beacon to guide us back toward a vivid, healed, being-present state.

NOTES

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3. Cited in Robert A. Wenke, Patterns in Prehistory (New York: Oxford University Press, 1999), p. 165.
4. Sibel Baruti Kusimba, African Foragers (Walnut Creek, CA: AltaMira Press, 2003), p. 117, for example.
5. "The Oldest Homo Sapiens: Fossils Push Human Emergence Back to 195,000 Years Ago," Science Daily, February 28, 2005.
6. W. Henry Gilbert in Gilbert and Bershane Asfa, eds., Homo erectus: Pleistocene Evidence from the Middle Awash, Ethiopia (Berkeley: University of California Press, 2008), p. 424.
7. Colin Tudge with Josh Young, The Link: Uncovering our Earliest Ancestors (New York: Little, Brown, 2009), pp 198, 199.

kilometers.[62] But it is also clear that while they ranged over greater distances in their decision-making, activities "occurred in close spatial proximity and as responses to immediate needs."[63] This speaks to a direct, context-specific immediacy, perhaps the original example of James Woodburn's immediate return/delayed return contrast, in which the former social orientation is non-estranged, compared to the latter.

Although there is so much less surviving evidence, a great range of other non-stone life-world materials existed. Microscopic fibers detected on hand axes testify to likely woodworking. Bone tools have come down to us, and both early human species could well have made implements from shell, bamboo, etc., and leather bags, carrying skins, snares, and so many other perishable things.

Acheulean style or level remained the norm for well over a million and a half years, all the way down to the next—and last—Paleolithic tradition, called Levallois, corresponding roughly to the appearance of Neanderthal humans about 250,000 years ago. The unchanging Acheulean has baffled the fields of archaeology and anthropology, especially because it's clear that limited intellectual capacity is *not* the explanation for this tremendously long period of stasis. A basic approach, demanding but elegant, neither died out or was changed during thousands of generations. Why cast this as a conundrum, why frame it in terms of our own cultural mania for ceaseless innovation? Evidently there simply was no felt need in all that time to craft anything more complex. If Homo erectus humans were disinclined toward complex society, why would they express themselves through complex technics, inasmuch as the two are inseparable? Their whole mode of being remained non-specialized, skilled as a whole. They crafted their tools and they crafted their face-to-face band society, the one obviously reflecting the other. As Loren Eiseley summed it up, they were "using the sum total of [their] environment almost as a single tool,"[64]—and in enduring balance with that environment.

The ability to reason preceded symbolic culture by millions of years. Society was evidently not dependent on symbolic systems of thought, for as Paul Jordan observes, "symbolism of every sort is conspicuously lacking in the archaeological record until the arrival of the modern form of humanity."[65] It is unclear when language originated, but every other such aspect (e.g. cave art) is very recent.

A symbol is that which stands for something else, represents something else; it re-presents reality. Nonetheless, the term is used very loosely, which

tends to obscure the significance of life outside the symbolic dimension. Henry de Lumley, for example, in discussing prehistory, refers to symbolic thought as an essential facet of human cognition, as a necessity for the emergence of consciousness, as synonymous with meaning or understanding.[66] Each of these assertions is baseless.

Upper Paleolithic beads are a relatively recent case in point regarding the misuse of the term symbolic. In fine ahistoric fashion, d'Enrico assures us that "beads have many different functions in human society, all eminently symbolic,"[67] referring specifically to some that are 75,000 years old. Robert Bednarik makes a similarly sweeping assessment of prehistoric beads: "Their symbolic significance appears generically self-evident."[68] Klein and Edgar have in mind beads found in Europe ca 30,000 years ago; they "required extraordinary time and effort, which underscores the likelihood that they had symbolic meaning.[69] But there are countless activities done for their own sake, for satisfactions directly derived, and that do not represent something else. The fact of beads in no way necessarily establishes a symbolic component.

The use of ochre by Homo neanderthalensis in the Upper Paleolithic is an even more commonly cited practice that purportedly indicates a symbolic dimension. Here we are approaching the actual arrival of symbolic culture, relatively recently, but the much-touted presence of ochre, especially in burial practices, is less than wholly persuasive. As evidence of symbolic or ritualistic ideas, its red color suggests blood or death, and thus has been found on human remains. But it is also known that ochre has anti-odor qualities, so its use may simply indicate "an hygienic disposal of corpses so as not to attract scavenging carnivores."[70] Burial itself, by the way, connotes respect for the dead and does not automatically include a symbolic connection. Evidence of ochre in settings other than graves has even less to do with symbolism or representation. Its anti-hemorrhage, antiseptic qualities are known to indigenous people today and probably to our forebears, along with its hide-curing properties and as a component in tool-hafting adhesives.[71]

Thomas Wynn could not detect the symbolic in the crafting of hand axes, with their grace and beauty. They "did not require grammar-like rules and did not require symbolic instruction."[72] Observation and practice, not symbols, account for proficiency. Darwin argued both in *The Descent of Man* and *The Expression of the Emotions* that it was quite possible to form concepts without words. "The earliest unequivocal evidence for the use of symbols occurs very late," according to Shipman and Walker.[73]

"The word prohibits the senses…The speaking tongue kills the tasting tongue," warns Michel Serres.[74] But symbols began to structure social life. The more complex the representational systems became, the more distancing from reality was involved, and the more complex and stratified society slowly became.

Ultimately we arrived at our present state of radical insufficiency, so removed from the essentials of existence. The feeling of being part of everything, including the cycle of birth and death, has been overcome by a preoccupation with control or mastery over everything.

Death is denied by the lonely modern individual engaged in a life without connection, without meaning. The loss of a sense of a full life makes life unbearable and death shameful, something to be hidden. Adorno referred to "the expropriation even of his dying, [which] destroys even the appearance of life's meaning as a coherent whole, that seals the loss of humane, autonomous subjectivity."[75]

Philippe Ariès wrote of the invisibility of modern death, as indicative of the loss of communal solidarity and the increasing control of experts over social and personal life.[76] Once managed openly as a part of vivid, direct life, death becomes invisible and silenced. As we live less completely, death becomes more of a terror. In his old age, contemplating an aged crow, Loren Eiseley gave us a healthy counter-perspective: "Neither of us had much further to go, and the harsh simplicity of it was somehow appropriate and gratifying."[77]

For thousands of centuries human life was virtually unchanged, in the vast time before overpopulation, drudge work, wars, the objectification of women, political authority. But of course there are those who lament this extended "failure" to innovate and progress. George Dimock looks at *The Odyssey* to decry the absence of forward movement. He focuses on the self-satisfied, non-domesticated Cyclops, who "put hand to no planting or plowing." Dimock argues that this paradisical state is actually a negative condition, in that it "deprived them of the stimulus to develop human institutions." Pain is needed for self-development, according to Dimock. Technology in particular "assists the birth of the individual…by separating him from the natural world."[78] Domestication/civilization in a nutshell, in its repressive essence.

We see the falsity of such a formulation much more clearly now, as the toll of "development" mounts in every sphere of life. Grahame Clark, in