

Paleofantasies and Original Affluence

Dana Simmons

University of California, Riverside

“One third to one half of humanity are said to go to bed hungry every night. In the Old Stone Age the fraction must have been much smaller. Now, in the time of the greatest technical power, is starvation an institution. Reverse another venerable formula: *the amount of hunger increases relatively and absolutely with the evolution of culture*. This paradox is my whole point.” - Marshall Sahlins¹

Here I tell the history of a scientific fact, as expressed in a recent book on *The Evolution of Obesity* (2009): “much of the increase in human obesity is due to a mismatch between adaptive biological characteristics of our species and the modern environment, which has changed dramatically from the one under which we evolved. Whether we like it or not we carry our species’ biological past with us, and this affects how we react to our environment.”² This theory is known as the “mismatch hypothesis:” Human bodies are shaped by a shared *species past*. Some of us are fatally unable to adjust to modern conditions. We are destined by our prehistory to gorge on carbohydrates and store as much fat as we can. In engaging with medical professionals about my research on the history of hunger, I frequently have read and heard variants of that fact asserted as background knowledge. I would like to think about the

¹ Marshall Sahlins, *Stone Age Economics* (Chicago: Aldine-Atherton, 1972), 36. Emphasis mine.

² Michael L. Power, and Jay Schulkin, *The Evolution of Obesity* (Baltimore: Johns Hopkins University Press, 2009), 5.

relationship of human bodies, hunger and history inherent in that statement. I consider how it is, that such a statement today may appear as self-evident. And who, in the quote above, are 'we'?

The mismatch hypothesis suggests that human behavior has evolved in ways that make people less fit than their early ancestors once were. The hypothesis supposes that human physiology is naturally adapted to a Paleolithic lifestyle. In the contemporary world, these adaptations lead to malfunctions. Humans were not made for an urban, "civilized" life. As anthropologists Eaton, Konner and Shostak put it, "we carry ...genes selected for [early humans'] way of life, not ours. ...In order to regain relative freedom from these illnesses [diabetes and obesity,] we need to take a step backward in time. ...This will entail reintroduction of essential elements from the lifestyle of our Paleolithic ancestors."³ In other words, human genetic makeup was fixed in an earlier age, which does not match our current world. Modern life is inappropriate to our physical makeup. To return to health, therefore, would mean to return to an imagined prehistoric way of life. This is the purpose and logic of trends like the Paleo Diet, which biologist Marlene Zuk calls "Paleofantasies."⁴

In this Paleofantasy, human bodies were forged by a prehistoric world of hunger and scarcity.

Hunger, in the evolutionist view, appeared at the very origins of life. Geneticists like to point out that trees, wolves, birds, and humans share the same genes for processing sugar, passed down by a common ancestor close to the beginning of life on earth.⁵ In this view, hunger is the foundation of all life and a precondition for evolution. As geneticist Richard Stöger wrote in 2008, "The struggle for food and existence is much older than humankind. Starvation and famine are probably two of the oldest and strongest forces driving natural selection. ...Encoding into genomes the trait of 'metabolic thrift'—the capacity to efficiently acquire, store and

³ S.Boyd Eaton, Melvin Konner, and Marjorie Shostak, "Stone Agers in the Fast Lane: Chronic Degenerative Diseases in Evolutionary Perspective," *The American Journal of Medicine* 84, no. 4 (1988), 747.

⁴ Marlene Zuk, *Paleofantasy: What Evolution Really Tells Us About Sex, Diet, and How We Live* (New York: W.W. Norton, 2013).

⁵ COSMOS

expend energy— almost certainly began at the root of the tree of life.”⁶

Geneticists, primatologists and anthropologists, in the three decades after the Second World War, imagined that *Homo sapiens* evolved in response to the need for subsistence. In this origin story, hunger led humans to adapt and evolve a new physical shape, upright and brainy. Above all, hunger led to new forms of behavior, culture and social organization, which shaped the evolution of human society today. Hunger propelled human history, populations, societies, economies and cultures. Human society, and human biology, emerged out of a synthesis of behavior, anatomy and ecology. Hunger and the pursuit of food brought about the modern human way of life. Hunger and subsistence were the catalysts, the material conditions for humans to emerge as a globally dominant species.

Hunger stories implicated three of the most influential disciplines in postwar human life sciences: genetics, ecology and physical anthropology. Liberal postwar scientists rejected racial and eugenic theories of evolution. They were interested in natural selection not via reproduction, or survival of the fittest, but via behavioral adaptation.⁷ Instead of fixed inheritances, they looked for behavior: how did early man live in his environment? Human behaviors appeared universal to all people living under similar environmental conditions. “Early man” appeared as a progenitor of all modern humans, regardless of race or genetic inheritance.

Some, mostly geneticists, thought that early humans had been tempered in a crucible of scarcity and survival. Early humans, they imagined, struggled with unpredictable cycles of starvation. This standpoint led to the “feast and famine” and “thrifty gene” models for human behavior and evolution. In this view, humans overeat today because our progenitors suffered from unpredictable scarcity.

Others, mostly anthropologists, imagined the opposite scenario: a prehistoric life full of security, sufficiency and relative ease. Anthropologists of hunter-gatherer societies told stories of abundance, scarcity and social cooperation, egalitarianism, even communism. In this view,

⁶ Reinhard Stöger, “The Thrifty Epigenotype: An Acquired and Heritable Predisposition for Obesity and Diabetes,” *Bioessays* 30, no. 2 (2008), 157. Emphasis mine.

⁷ Donna Haraway, “Remodelling the Human Way of Life: Sherwood Washburn and the New Physical Anthropology, 1950–1980,” in *Bones, bodies, behavior: essays on biological anthropology*, ed. George W. Stocking (Madison: University of Wisconsin Press, 1988), 208.

widespread hunger and starvation came about because of, not in spite of, modern economic life. Modern hunger appears in this view as a novelty, a regression from a life of “original affluence.”

These were fundamental debates about the status of modernity. Are modern humans better off than our predecessors, or worse? How do modern global economies and consumer societies stack up in the long-term historical record? Have advances in technology, production and consumption made us happier and healthier, or sick with overwork and the “diseases of civilization?”⁸

Many of the scientists at the center of this story turned to prehistoric or “primitive” peoples in search of a salve for the ills of modern life. In the 1960s, human scientists worked under the clouds of the atomic bomb, the Civil Rights struggle and the Vietnam War. Many scientists in this field held a dim view of contemporary society, as sick, bloated and self-destructive. They sought to recover the traces of a past human life in balance with nature. This was a regressive science, in contrast to the progressive, teleological cast of the founders of the anthropological discipline.

Early twentieth-century human scientists thought of human time like a ladder, with living Europeans at the top. Colonial officials, political economists and anthropologists built a linear, teleological timeline from primitive to modern. European observers thought that barbarians and indigenous peoples stood behind Europeans in time, as children are behind adults. Non-Europeans, like children, would climb up eventually. Within decades or centuries - of, course, with the paternal assistance of “civilized” occupiers - indigenous peoples would evolve into modernity.⁹

In an evolutionist view, modern inventions - agriculture, the centralized state - are ever better adaptations to escape from hunger. As they struggled to adapt to scarcity, hungry bands of nomad hunter-gatherers discovered that they could secure a better life through farming and

⁸ In many ways, the conflict between these two stories resembled a parallel argument raging in the 1960s and 1970s among economic historians, known as the Standards of Living debate. See Guy Ortolano. See also Dana Simmons, *Vital Minimum: Needs, Science and Politics in Modern France* (Chicago: University of Chicago Press, 2015), Conclusion.

⁹ Dipesh Chakrabarty, *Provincializing Europe: Postcolonial Thought and Historical Difference* (2000), 7.

trading. Once these nomads settled down into more “advanced” societies, they had a more secure, regular and abundant life. And so evolution goes, from huts to villages to towns to empires, each bringing new forms of production and trade, and a new measure of abundance to people. Only in the late twentieth century, did this ever-increasing abundance begin to go too far, bringing us illnesses of overconsumption.¹⁰

The anti-modernist view, on the other hand, says that modernity itself was a wrong turn for humans. Hunger spread as a result of modernization, not in spite of it. Anti-modernists compare the contemporary world to a prehistoric world, and find the moderns lacking. In the anti-modernist view, severe hunger was probably rare among prehistoric peoples. The truly most optimal form of human society, the one that lasted longest and is best for human beings, was prehistoric. Hunter-gatherers had it better than we do.

In contrast to the ills of modernity, the anti-modernists tried to recover a prehistoric state of nature. They sought a return to a natural, normative, primitive past. Primitivity was something that was at risk of being “lost,” and should be salvaged for the sake of future human survival. The primitive lifestyle appeared not as a stage from which indigenous peoples would escape, but as a norm for human existence. Indigenous peoples were the source of knowledge of the past, to the extent that they retained some of its characteristics. But indigenous peoples themselves were “losing” their primitive status as they become enveloped and sickened by modern food, sloth and pollution.

Beginning in the 1950s, anthropologists and some geneticists studied the foodways of surviving nomadic hunting and gathering peoples in Southern Africa and Latin America. They concluded that hunter-gatherers had better health, leisure and food security than contemporary city dwellers. Drawing on those observations, anthropologists like Marshall Sahlins began to question evolutionist narratives of human history. For tens of thousands of years since *homo sapiens* emerged some 300,000 to 500,000 years ago, humans mainly lived as hunter-gatherers. Mobile and adaptable, nomad bands drew from a diversity of food sources.

¹⁰ Biologist and Zero Population Growth advocate Paul Ehrlich offers that narrative in Paul Ehrlich, *The Population Bomb* (Rivercity: Rivercity Press, 1975), 14-15.

Perhaps farming and settlement were not so great for humans after all. Perhaps centralized agriculture and the early city state actually created more hunger and disease than prehistoric peoples had experienced before them. After all, settlement and agriculture are comparatively new and brief developments in human history, a dozen millennia old. Settlement brought humans animal-borne disease, monocropping and malnutrition, taxation and forced labor.

As James Scott claimed with characteristic pith: “It turns out that while it provides ideal conditions for state making, the late Neolithic multispecies resettlement camp [early city-state] involved a lot more drudgery than hunting and gathering and was not at all good for your health. Why anyone not impelled by hunger, danger, or coercion would willingly give up hunting and foraging or pastoralism for full-time agriculture is hard to fathom.”¹¹ Given that hunting and gathering made for a relatively good life, the only explanation for the rise of the modern city-state had to be force and expropriation. Rulers and their armies subjugated their subjects into settlement. Scott, like Sahlins, tied an anti-modernist anthropology to a Marxist theory of history.

Postwar geneticists and anthropologists performed science as salvage work (to use Joanna Radin’s phrase), capturing evidence of primitive man’s natural social environment and physical state as its traces disappear. What could be salvaged of this evolutionary past, of the original natural man? Tooth plaque containing organic residue from food. Human bones, with strontium levels that differ for meat and plant eaters, and bearing traces of nutritional deficiency diseases. Archaeological remains of stone tools for hunting, grinding grain and cooking. Animal bones, sometimes carrying burn marks or the cuts of stone tools. Fire pit charcoal, and the charred remains of a hearth. Grain residue on a stone grinder or fragments of a clay pot. Above all, living primates and hunter-gatherers, understood as contemporary survivors of an earlier era. Their blood samples and behavior promised clues to the nature and character of early man.

These origin stories are like pieces of backward science fiction, elaborating on scattered stone and bone remains of early hominid life. In their most creative iterations, stories like these

¹¹ James C. Scott, *Against the Grain: A Deep History of the Earliest States* (New Haven: Yale University Press, 2017), 18.

offered an opening for imagining what humanity might become - again or anew.

Indigenous peoples were the objects, not the subjects, of this return to the primitive, which postwar scientists sought. The real subject was the rational man [*sic*] of science, who had experienced the ills of modernity and rejected them. He had rediscovered the old ways and chose to “return” to them. As indigenous peoples “lost” their primitive status, scientists, anthropologists, barefoot runners and Paleo dieters reclaimed it. This was an anti-teleological folding back in time. But it was to the benefit of people who understood themselves as having known modernity and refused it, having seized the past and carried it into their own futures. Carrying the past into the future was often extractive, exploitative work.¹²

Thrifty Genes

Geneticist James V. Neel in 1962 coined the “thrifty gene hypothesis,” a version of the mismatch hypothesis which explained the growing prevalence of diabetes among modern humans. Humans evolved, thought Neel, in the “feast and famine” conditions of our deep prehistory. Early humans adapted to prevent themselves from starving when food is scarce. This adaptation is now a liability. Ancient hunger, still present in a world of modern abundance, makes many of us sick.

Neel defined “thrifty genes” as human adaptations to harsh prehistoric life. “During the first 99 per cent or more of man's life on earth, while he existed as a hunter and gatherer, it was often feast or famine. Periods of gorging alternated with periods of greatly reduced food intake.” Cravings for sugar and energy dense foods, high sensitivity to glucose, and the accumulation of stores of body fat, would have been adaptive advantages in this environment. The lifestyle of the hunter-gatherer, with alternate gorging and starving, shaped the human body. When food intake was irregular and rare, energy conservation and storage would have been an asset. Individuals whose pancreas kept excess glucose circulating in the body would benefit. During starvation times, “an extra pound of adipose reserve” could mean the

¹² See discussion below, Radin and M. Susan Lindee, “Voices of the Dead: James Neel’s Amerindian Studies,” in *Lost Paradises and the Ethics of Research and Publication*, ed. F Salzano, and M Hurtado (Oxford: Oxford University Press, 2003), 81.

difference between life and death.¹³

What was previously an advantage had become, in modern times, a source of chronic metabolic disease. “One may postulate,” Neel wrote, “a disturbance in the physiologic balance established in the course of human evolution.”¹⁴ In other words, we are too hungry for too much food today, because our hunter-gatherer ancestors adapted human bodies to a life of periodic scarcity.

But not every modern human suffers from metabolic disease. The mismatch hypothesis also sorts people. Some of us, it implies, are more adapted to modernity than others. Evolutionary geneticist Theodosius Dobzhansky, inspired by the thrifty gene hypothesis, wondered, “Could it not be that some genotypes are worse off under civilized conditions than they were in a state of rustic simplicity?”¹⁵ Some humans appear to be biologically anchored in the past. Indigenous peoples, in recent years, have been cast as living embodiments of mismatch. Higher recorded rates of obesity and diabetes among indigenous peoples are explained by their more recent and sudden contact with modern life ways. Indigenous bodies appear maladapted to modernity. Mismatch theory carries a racial-eugenic inheritance.

Neel travelled to Brazil and Venezuela in the 1960s in search of an original human biology. His voyage was temporal as much as spatial. By tracing backward to primitive peoples, he hoped to understand structures underlying the genetic composition of “civilized man:” “There can be little doubt that many - most - of the genetic attributes of civilized man have been determined by the selective pressures and breeding structures of these primitive communities.”¹⁶ Funded by the Atomic Energy Commission, which had its own reasons for seeking a premodern genetic baseline, Neel’s team of doctors and anthropologists extracted biological samples, behavioral observations and precise demographic histories from their subjects.¹⁷

¹³ James V. Neel, “Diabetes Mellitus: A “Thrifty” Genotype Rendered Detrimental By “Progress”,” *American journal of human genetics* 14, no. 4 (1962), 355.

¹⁴ Neel, “Diabetes Mellitus: A “Thrifty” Genotype Rendered Detrimental By “Progress”,” 355,357.

¹⁵ Theodosius Dobzhansky, “Evolutionary and Population Genetics,” *Science* 142, no. 3596 (1963), 1135.

¹⁶ James V Neel, *et al.*, “Studies on the Xavante Indians of the Brazilian Matto Grosso,” *American Journal of Human Genetics* 16, no. 1 (1964), 52.

¹⁷ Ricardo Ventura Santos, Susan Lindee, and Vanderlei Sebastião de Souza, “Varieties of the Primitive: Human

Neel sought to recover a disappearing ways of life and their associated biologies. The first objective of his Amazonian studies was to “identify those cultural elements with particularly biological implications....”¹⁸ Biological fitness, in this model, depended on culture and behavior as much as inheritance. The same genes may help people living in a sparse and undeveloped environment, and hurt others living in relative luxury. Neel found that “constitutional and degenerative diseases [such as obesity, diabetes, chronic heart disease]... probably play a very minor role” among Amazonian tribes. “The genotype which ultimately manifests itself under civilized conditions as diabetes may in a group such as [the Xavante tribe] actually have positive survival value for a high proportion of individuals.”¹⁹ This was Neel’s inspiration for his thrifty gene hypothesis.

Susan Lindee suggests that James Neel’s thrifty gene hypothesis was a turning point for postwar genetic medicine. It offered a theory of inheritance that did not rely explicitly on eugenics or on racial hierarchies. Fitness was a universal, evolutionary category, not an individual one. In this hypothesis, all of human society inherits the adaptations of our ancestors. The thrifty gene hypothesis allows scientists to speak about inheritance and disease from the standpoint of a universal humanity. Eugenic and racial ideas remained, however, in a different form.

Neel was a founding member of the American Society of Human Genetics and the only early member to have both genetic and medical training. He was present at the Cold Spring Harbor symposium of 1950, which marked a convergence of economics, ecology and the study of human evolution. Neel turned to diabetes after having completed a decade-long study, for the American army’s Atomic Bomb Casualty Commission, of genetic mutations among survivors of the Hiroshima atomic blast. He spent the rest of his career in pursuit of “primitive” man, gathering blood and data from isolated tribes of Amazonian hunter-gatherers. As Joanna Radin’s work reveals, Neel saw his research as a salvage operation, studying people

Biological Diversity Studies in Cold War Brazil (1962-1970),” *American Anthropologist* 116, no. 4 (2014).

¹⁸ Neel, “Studies on the Xavante Indians of the Brazilian Matto Grosso,” 53.

¹⁹ Neel, “Studies on the Xavante Indians of the Brazilian Matto Grosso,” 129.

uncorrupted by modern life before they all were “lost.”²⁰

Neel’s behavioral-cultural model of hunger and chronic disease fit particularly well with the history of diabetes. Diabetes was one of the early test cases for genetic medicine and for the mismatch hypothesis. In a 1952 issue of the journal *Human Heredity*, scientists at the Columbia University Institute for the Study of Human Variation suggested that diabetes was a useful ancient adaptation, which had become a contemporary liability. Diabetes genes may have offered some protection for early pre-agricultural humans, from a life of scarcity. Modern humans inherited genes that no longer protect them. They carry genes, the authors hypothesized, “adapted to an environment of want, not of abundance.”²¹

In a 1959 article entitled, “Rats, Men and the Welfare State,” physiologist Curt Richter compared domesticated rats unfavorably with their wild counterparts, who appeared stronger, more wily and defensive. Humans too, he thought, had been domesticated. He proposed that there might be a “causal relationship between... the development of the welfare state and the increased incidence of various noncurable diseases” like diabetes.²² Richter pointed to diabetes as evidence that modern humans had grown dependent on external sources of energy and work, and as a result we had become weak and chronically ill. He worried that welfare benefits and medical therapy, which prolonged the life of disease sufferers, would perpetuate high rates of chronic disease.

Diabetes has long been understood as an inherited condition, whose impact could be mitigated by behavior and self-control. Many early twentieth-century eugenicists distinguished diabetes from other inherited conditions, such as epilepsy or “feeble-mindedness,” because diabetics were perceived as uniquely cultured and elite. Diabetes was detected mostly in white, middle-class communities, which eugenicists otherwise privileged. Classic early twentieth-century medical texts inscribed diabetes into a field marked by race and class.²³ Arleen Marcia Tuchman notes that early twentieth-century eugenicists exempted diabetics from negative

²⁰ Radin, Joanna. *Life on Ice: A History of New Uses for Cold Blood*. Chicago: University of Chicago Press, 2017.

²¹ BM Aschner, and RH Post, “Modern Therapy and Hereditary Diseases,” *Human Heredity* 6, no. 3 (1956), 367.

²² Curt P. Richter, “Rats, Man, and the Welfare State.,” *American Psychologist* 14, no. 1 (1959), 19, 23.

²³ Emil Kleen, *Diabetes Mellitus and Glycosuria* (Philadelphia: P. Blackistons Son, 1900), 16.

eugenic reproductive controls (like sterilization) because of their perceived racial and class characteristics, especially self-control.²⁴

By the 1950s, racial profiling of diabetes patients in American medicine began to shift. Diabetes tracking began to focus on indigenous North Americans. Laurette McGuire finds that Indian health agencies in the mid-1950s began to record a proliferation of type-2 diabetes in Native communities. “From this point, researchers begin to talk about diabetes as an Indian disease.”²⁵ Doctors working on the Alabama-Coushatta reservation in the late 1950s found a rate of diabetes five times higher than that in the overall American population. The authors noted that diabetes appeared to be a recent affliction there, likely since the previous decade. They contrasted the contemporary Alabama-Coushatta subject’s energy-rich diet with earlier conditions of poverty and hunger recorded by nineteenth-century missionaries.²⁶

Some indigenous groups appeared to be more susceptible to diabetes than others. Michael Montoya writes that by the turn of the twenty-first century, “the belief that diabetes within minorities is a genetic condition and that a thrifty genotype is responsible is the dominant view among scientists and clinicians alike.”²⁷ Neel, for example, speculated that the “civilizing” lifestyle of Southwestern American Pima Indians explained their elevated rates of diabetes, compared to other groups.

²⁴ Arleen Marcia Tuchman, “Diabetes and “defective” Genes in the Twentieth-Century United States.,” *Journal of the History of Medicine and Allied Sciences* 70, no. 1 (2015), 28. In fact, many medical experts argued that diabetics were to be valued precisely because their survival required extreme control and self-monitoring. Diabetes care demanded “rigid training” of the mind and the body. Doctors Frederick Madison Allen and Elliott P. Joslin, influential American diabetes experts at the turn of the twentieth century, sought to lower blood sugar by a diet so strict that some of their patients died of starvation. Joslin “fixed responsibility on the patient for the control of his disease.” Patients struggled mightily to maintain the “starvation diet,” and doctors blamed patients themselves when their condition worsened, assuming that they had lost control and indulged their hunger. These stringent requirements for self-control expanded after 1921 to include regular administration of insulin. Whether diabetes wreaked damage on the body, depended on one’s behavior. See: Allan Mazur, “Why Were” Starvation Diets” Promoted for Diabetes in the Pre-Insulin Period?,” *Nutrition journal* 10, no. 1 (2011); Elliott P Joslin, “A Renaissance of the Control of Diabetes: Guest Editorial,” *Journal of the American Medical Association* 156, no. 17 (1954), 1584; Chris Feudtner, *Bittersweet: Diabetes, Insulin, and the Transformation of Illness* (Durham: University of North Carolina Press, 2004), 121-45.

²⁵ Laurette Ann McGuire, “Native Americans and Type 2 Diabetes: The Discourse of Predisposition and Its Politics,” diss., University of California, Riverside, 2012), 39.

²⁶ John E Johnson Jr, and C Wallace McNutt, “Diabetes Mellitus in an American Indian Population Isolate,” *Texas reports on biology and medicine* 22 (1964), 110, 122.

²⁷ Michael J. Montoya, *Making the Mexican Diabetic: Race, Science and the Genetics of Inequality* (Berkeley: University of California Press, 2011), 49.

Neel warned that diabetes should not be eradicated from the population. He feared that a future population explosion would recreate conditions of extreme scarcity and famine, in which diabetics would once again have an evolutionary advantage. “Eugenic Considerations,” Neel cautioned, meant that medicine should not attempt to eliminate the thrifty gene, given the likelihood of future famine.²⁸ In Neel’s eyes, as in the eyes of the Paleo enthusiasts, there could be no adaptation to modern civilized life. Modernity would almost certainly lead to destruction.

Neel’s thrifty gene hypothesis continues to evolve through the 2000s, even though after fifty years of searching researchers still have failed to identify any “thrifty genes.” New variations of Neel’s hypothesis continue to emerge. Epigeneticist Reinhold Ströger updated Neel’s thrifty gene hypothesis in 2008, to a “thrifty epigenome hypothesis.” Ströger suggests that obesity and Type 2 diabetes genes respond to environmental cues. Pima Indians and Nauruans come from a history of hunger and scarcity, and therefore would have inherited putative “thrifty” epigenetic cues which would make them more prone to obesity and diabetes. People raised in an environment of scarcity, and their descendants, are more likely to suffer maladies when they are exposed to modern high-energy foodways.²⁹

By implication, peoples historically accustomed to hunger are thought to have a higher prevalence of diabetes genotype. The thrifty gene hypothesis situates native peoples in a maladaptive modernity, for which their bodies are not ready. Montoya, Laurette McGuire, and Jennifer Poudrier tell us of the harms inflicted upon contemporary indigenous people, who are told that their ethnic genetic predisposition requires them to strictly control their behavior (eating healthy foods and exercise), if they are to escape the dangers of their genetic inheritance. Histories of dispossession and settler colonialism are displaced by a story of biological maladaptation to modern life.³⁰

The “thrifty phenotype” version of the hypothesis proposes that fetal environment

²⁸ Neel, “Diabetes Mellitus: A “Thrifty” Genotype Rendered Detrimental By “Progress,”” 359.

²⁹ Stöger, “The Thrifty Epigenotype: An Acquired and Heritable Predisposition for Obesity and Diabetes.”

³⁰ Jennifer Poudrier, “The Geneticization of Aboriginal Diabetes and Obesity: Adding Another Scene to the Story of the Thrifty Gene,” *Canadian Review of Sociology/Revue canadienne de sociologie* 44, no. 2 (2007), 18-20.

determines whether children develop diabetes or obesity as adults. Fetuses, it is thought, adapt to their nutritional environment: poorly nourished pregnant mothers have children who are more likely to develop metabolic disease.³¹ The background assumption, that human bodies are adapted to feast and famine, still has an astonishing influence on discussions of fat, obesity, diabetes, and overeating.

Metabolic diseases appeared, in medicine and genetics, as a remnant of a “primitive” life of starvation and scarcity, feast and fast. Though thrifty genes may have been a boon to early humans living under nutritional stress, they became a burden to modern individuals, with their more luxurious and sedentary lifestyle. Clinging to energetic foods was good for the primitive but lethal for the modern. If genetically predisposed people wished to survive, they had to strictly control their own consumption. Starvation diets extracted the body from the perilous luxury of civilization. In this way, the diabetic became a contemporary model for a “natural” premodern life of starvation.³² The mismatch theory required a return to the way of life for which early human bodies evolved.

Thrifty gene theories reason backwards from an imagined history of premodern life. They are not evidence-based observations, so much as imagined worlds that shape research questions and interpretations. The early human evolution theory has fallen out of favor among geneticists, even as it has continued its ascendancy among clinicians.³³ When one looks for evidential grounding for these claims about early human scarcity, one finds spotty footnotes referencing Darwin, colonial anecdotes, and fragments of archaeological evidence. Inherited from Darwin and Malthus, these are stories of scarcity, hunger and struggle. They are stories before science, a background scenery on which scientific research can be performed. The moral

³¹ Elizabeth A Genné-Bacon, “Thinking Evolutionarily About Obesity,” *The Yale journal of biology and medicine* 87, no. 2 (2014), 103. Natali Valdez brilliantly analyzes the ways in which epigenetic figure pregnant women as ‘environment’. See Natali Valdez, “The Redistribution of Reproductive Responsibility: On the Epigenetics of ‘environment’ in Prenatal Interventions,” *Medical Anthropology Quarterly* 32, no. 3 (2018). and Natali Valdez, *Weighing the Future: Race, Science, and Pregnancy Trials in the Postgenomic Era* (Berkeley: University of California Press, 2021).

³² Friedman and Stricker made this equivalence explicit: “In many respects, diabetes mellitus resembles starvation.” Mark I Friedman, and Edward M Stricker, “The Physiological Psychology of Hunger: A Physiological Perspective,” *Psychological review* 83, no. 6 (1976), 417.

³³ Genné-Bacon, “Thinking Evolutionarily About Obesity.” See also Bethany L Turner, and Amanda L Thompson, “Beyond the Paleolithic Prescription: Incorporating Diversity and Flexibility in the Study of Human Diet Evolution,” *Nutrition Reviews* 71, no. 8 (2013).

of those stories is: a thrifty gene requires people, especially indigenous people, to work hard and change lifestyle in order to better fit their bodies' inherited requirements. Some of us come from a history of scarcity and are biologically bound to it forever. This Paleofantasy is played out today in health care clinics and medical research on hunger and obesity.

Paleo Diet advocates tend to narrate the fall from prehistoric lifeways in frankly antifeminist terms. Dr. Walter Voegtlin, author of *The Stone Age Diet* (1975,) illustrates this point. Voegtlin imagined that Paleolithic man satisfied his hunger on the spot by “kill[ing] a rabbit or an elephant, eat[ing] his fill and ...go[ing] to sleep.” These self-sufficient strongmen eventually lost their vigor and health to the lure of women and their indigestible cooking. Women began to combine foods and herbs and “made the satisfying of hunger a tasty process.... Wives [sic] of the community strove to outdo each other for the adulation of husband and village.” This was not a positive development. Men “discovered that they had an appetite” and turned away from the solo hunting lifestyle. Voegtlin enjoined his readers to abstain from the temptations of wifely cooking and train their tastes back to a Stone Age diet.³⁴

Such narratives have long legs. *Guardian* journalist Jason Wilson recently surveyed popular Paleo literature hawking all-meat diets, barefoot running and extreme fasting, and found a “selective denial of modernity” and “anti-feminist attitudes.”³⁵ Paleofantasies still spin.

What would a society look like, without hunger?

In 1966 a conference on “Man the Hunter” brought some of the best-known names in anthropology, human biology, ecology, demography and archaeology to the University of Chicago. The organizers, Irvan DeVore and Richard Lee, had recently returned from fieldwork among Southern African baboons and !Kung Bushmen (Ju/'hoansi.) Physical anthropologist Sherwood Washburn, DeVore and Lee's mentor, framed the terms of the debate. Archeologist Glynn L. Isaac, a student of Louis Leaky's, offered a report on the latest finds from the

³⁴ Walter L Voegtlin, *The Stone Age Diet* (Vantage Press NY, 1975), 164.

³⁵ Wilson, Jason, “Paleo Isn't a Fad Diet, it's an Ideology That Selectively Denies the Modern World.” *The Guardian*, 2015.

Pleistocene. James V. Neel attended. Colin Turnbull compared two hunting societies. Claude Lévi-Strauss gave closing comments. Marshall Sahlins provided a closing commentary.

The Man the Hunter conference spawned a different kind of mismatch hypothesis than Neel's. Many of the anthropologists at the conference imagined early human society not as a world of hunger and scarcity, but quite the opposite. Premodern life appeared sufficient, almost easy. Modern social, political and technological innovations had only made life harsher and more demanding. Unlike the thrifty gene theory, this mismatch hypothesis did not gain traction among clinicians or medical researchers on metabolic diseases. Anthropologists' audience generally has been historical and political, rather than scientific.

"Life in the state of nature is not necessarily nasty, brutish and short," Richard Lee asserted.³⁶ Hunting and gathering was not "a precarious and arduous struggle for existence," despite common assumptions to the contrary.³⁷ Kalahari Bushmen, Lee observed, did not scrape and swallow just any edible food source in their grasp. They were selective, in both what, how and when, they obtained food. "If the Bushmen were living close to the 'starvation' level, then one would expect them to exploit every available source of nutrition." The fact that they are very selective in choosing their diet shows that "their life is well above this."³⁸

Lee believed that it was impossible to judge what subjects meant, when they said they were hungry. "Statements about food 'anxiety' have proven to be difficult to generalize across cultures," he claimed, and therefore should be taken skeptically by the anthropologist. Instead of asking his subjects how hungry they felt, Lee measured the food coming into the camp and being consumed, and found it more than adequate. Lee concluded that Bushmen led a "secure" life.³⁹ As Lee put it many years later, "If you go to a hunter-gatherer group and ask, 'how hard to you work?' they will invariably say: 'We work very hard! We suffer....' But then you actually see in the work diary: oh, they aren't working nearly as hard as they say they are, but that is

³⁶ Richard B. Lee, "What Hunters Do for a Living, or, How to Make Out on Scarce Resources," in *Man the Hunter*, ed. Irvén DeVore, and Richard B. Lee (New York: De Gruyter, 1968), 43.

³⁷ Lee, "What Hunters Do for a Living, or, How to Make Out on Scarce Resources," 30.

³⁸ Lee, "What Hunters Do for a Living, or, How to Make Out on Scarce Resources," 31.

³⁹ Lee, "What Hunters Do for a Living, or, How to Make Out on Scarce Resources," 43.

part of their discourse.”⁴⁰ Lee submitted that the view of “a precarious hunting subsistence base as characteristic of all cultures in the Pleistocene [including hunters both ancient and modern]...ought to be reconsidered.”⁴¹

Many of the scholars assembled at the 1966 conference viewed hunters and gatherers with a measure of wistful regret. These peoples seemed, to many of the young anthropologists in attendance, more free than the anthropologists felt themselves. Hunter-gatherers had something that modern society appeared to have lost. They had few possessions and were subject to no one’s authority. They moved when they felt like it. Hunter-gatherers had no apparent social hierarchy. They changed camp with the seasons and food patterns, never accumulating more than they could carry easily with them. They worked little, slept often, played, sang and gambled. Above all they seemed, to many of their observers, to lack any fear or desire for the future. “Happy-go-lucky” in nature, they struck anthropologists by their “listlessness, apathy, merry squandering of windfalls.”⁴² Hunter-gatherers appeared neither concerned nor motivated by scarcity.

This, in the eyes of many hunter-gatherer anthropologists, was their greatest discovery: that a society without hunger was a cultural accomplishment, not a material-technological innovation. Want and well-being were cultural products. Hunter-gatherers had enough because they did not want more than they had. They did not worry about the future, confident that they would always find something to eat.

Man the Hunter, as he emerged from the 1966 conference, was skilled, cooperative, tolerant of others, and delayed gratification in expectation of sharing his resources. He took only as much as he needed and did not hoard resources for himself or for the future. Hunters evolved this cooperative, egalitarian lifestyle because they lived in an environment of variable food supplies. Conference attendees defined their subject (*man*) with respect to subsistence strategies. Subsistence made the man. These studies sought the origins and development of

⁴⁰ Frédéric Benjamin Laugrand, “Richard B. Lee. Film 5. Going Back to the Kalahari and the Devore-Lee Collaboration 3/4,” *Les Possédés et leurs mondes* (2016), 12:28.

⁴¹ Lee, “What Hunters Do for a Living, or, How to Make Out on Scarce Resources,” 43.

⁴² Comment by James Woodburn in Irvén DeVore, and Richard B. Lee, *Man the Hunter* (New York: De Gruyter, 1968), 91.

human societies not in fixed biological characteristics, but in their social behavior.

At the University of Chicago in 1966, James Neel watched as conference speakers, one after another, challenged his claims of primitive “feast and famine.” Epidemiologist Frederick Dunn categorically rejected Neel’s assertion that primitive peoples “gorged and fasted.” “Patent, even borderline, malnutrition is rare... in stable, well-adapted hunter-gatherer populations, modern or prehistoric. Dietary resources, even in arid environments, are diverse.” Dunn cited Richard Lee’s studies of Kalahari Bushmen as evidence that Neel’s portrayal of wild swings in food supply “is probably somewhat exaggerated.” Among hunter-gatherers, “starvation occurs infrequently.”⁴³

Anthropologist James Woodburn took the feast-and-famine model head on. “There has been a widespread tendency to see [hunting and gathering] as a hard and demanding way of life in which the necessities of the food quest dominate people’s lives. With the Hadza this is clearly not the case.”⁴⁴ Like Dunn, Woodburn favorably contrasted the hunting-gathering lifestyle with that of agriculturalists. Sedentary farmers in the Tanzanian Rift valley were frequently stricken ill by drought, while nearby Hadza hunter-gatherers thrived. It might look like Hadza peoples suffered from scarcity; they left not a scrap of food in the camp uneaten, and often complained that they were hungry. But Woodburn found such surface observations deceptive: “The Hadza place such emphasis on meat as proper food... that they are apt to describe themselves as suffering from hunger when they have less meat than they would like. In fact, there is never any general shortage of food even in time of drought.”⁴⁵ Even when Hadza said they were hungry, Woodburn thought that they had enough.

Dunn, Woodburn and Lee were among several specialists, who challenged the feast-and-famine paradigm. DeVore and Lee later commented wryly that “it came as a surprise to some [at the conference] that even the “marginal” hunters studied by ethnographers actually work

⁴³ Frederick L. Dunn, “Epidemiological Factors: Health and Disease in Hunter-Gatherers,” in *Man the Hunter*, ed. Irvn DeVore, and Richard B. Lee (New York: De Gruyter, 1968), 223.

⁴⁴ James Woodburn, “An Introduction to Hadza Ecology,” in *Man the Hunter*, ed. Irvn DeVore, and Richard B. Lee (New York: De Gruyter, 1968), 55.

⁴⁵ Woodburn, “An Introduction to Hadza Ecology,” 52.

short hours and exploit abundant food sources.”⁴⁶ Hunting and gathering appeared better than ever before. In fact - this was a claim repeated over and over at the conference - “modern” agriculturalists were probably much more susceptible to famine, starvation and penury than hunter-gatherers were. Agriculture may have increased the risk of famine, by altering the natural vegetation and eliminating plant and animal diversity.

Later anthropologists developed parallel stories to *Man the Hunter*, which emphasized the centrality of female foraging and cultivation in early human society. By the mid 1970s, *Man the Hunter* was joined by *Woman the Gatherer*, and later, *Grandmother the Digger*.⁴⁷ Male bands of hunters receded to the background, as supplementary actors racking up prestige hierarchies while women ran the place. The grandmother hypothesis of the 1990s suggested that human evolutionary advantage was due to the long life of postmenopausal women, who could efficiently feed and care for many grandchildren.

This was a very different kind of mismatch theory than Neel’s. “Primitive” peoples seem to have gotten it right, and the moderns failed. Dunn concluded that hunter-gatherers demonstrated a level of adaptation to their natural environment, which had never been attained by any other society. “[Among hunter-gatherers] there is a degree of adaptive stability - of ecological conservation - which does not exist in a modern urban setting.”⁴⁸ Instead of progress, modern lifeways, agriculture, technology and government, had brought only scarcity and hunger.

At the 1966 *Man the Hunter* conference, research reports barely concealed their political subtext. Hunter-gatherer societies presented an alternative to modern ills. Richard Lee later recalled that he imagined his thesis about hunter-gatherer labor, in opposition to contemporary capitalist exploitation. “I said, if we go back in our history, we can find examples of living

⁴⁶ Irvén DeVore, and Richard B. Lee, “Problems in the Study of Hunters and Gatherers,” in *Man the Hunter*, ed. Irvén DeVore, and Richard B. Lee (New York: De Gruyter, 1968), 6.

⁴⁷ Kim Hawkes, *et al.*, “Grandmothering, Menopause, and the Evolution of Human Life Histories,” *Proceedings of the National Academy of Sciences* 95, no. 3 (1998).. Donna Haraway suggests that physical anthropologists emphasized gender difference at the foundation of human society, as a way to introduce a ‘universal’ human difference, which did not rely on race. Donna Haraway, “The Contest for Primate Nature: Daughters of Man-the-hunter in the Field 1960-80,” in *Simians Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991)

⁴⁸ Dunn, “Epidemiological Factors: Health and Disease in Hunter-Gatherers,” 228.

societies that worked far less than modern industrial people.”⁴⁹ Lee’s career and politics were shaped by anti-Vietnam War activism. He drew a connection between his politics and his interest early human societies: he was attracted to anthropology, especially of non-modern peoples, because of its resonance with an “anti-imperialist” and “anti-capitalist agenda.”⁵⁰ “Indigenous people are living in cultures that are profoundly non-capitalist, and their on-going existence bears witness that even in this hard-bitten age of real-politik and globalisation, other ways of being, other ways of living in the world are possible.”⁵¹ Lee saw his anthropological work as a critique of modern life.

Original Affluence

Cultural anthropologist Marshall Sahlins made this subtext explicit in his commentary at the 1966 Man the Hunter conference. With characteristic wit, he laid out a radical rewriting of modern economic history. Sahlins intuited that switching the storyline from primitive scarcity to primitive abundance, could challenge core assumptions of modern progress. Modern economic organization did not arise from the ashes of a failed alternative. In fact, he suggested, we moderns are far more worried by hunger and scarcity than our predecessors ever were.

In his commentary, Sahlins celebrated the demise of “feast and famine” narratives. Primitive life, it turned out, was neither brutish nor short. The image of primitive man, struggling to survive alone in a hostile wilderness, actually was a fiction invented by economists. Anthropological reports suggested, to the contrary, that hunter-gatherers shared and reciprocated, guaranteeing an adequate survival for all. Sahlins mobilized hunter-gatherer anthropologists’ findings to support the argument that early humans lived simply, in solidarity, and not in scarcity.

If “primitive” lifeways were neither solitary nor short, there appeared no reason to give

⁴⁹ Laugrand, “Lee Film 5,” 9:43.

⁵⁰ Frédéric Benjamin Laugrand, “Richard B. Lee. Film 9. Being an Anthropologist in the Xxth Century and Today,” *Les Possédés et leurs mondes* (2016), 20:02.

⁵¹ Richard B Lee, “Power and Property in Twenty-First Century Foragers: A Critical Examination,” Berg Publishing, 2004), 29.

them up. Why did early humans modernize? Early humans, like contemporary hunter-gatherers, could not have been compelled by nature or hunger to domesticate or stratify. Sahlins noted that some bands like the Hadza, seemed to make a collective choice not to settle down like their farming neighbors. No natural stimulus caused people to modernize, settle and trade. On the contrary, “primitive” humans looked a whole lot better off than many people living in the modern world today.

Hunters and gatherers, Sahlins imagined, were “the original affluent society.”⁵² Sahlins published an essay under that title in his 1972 book *Stone Age Economics*, which conveyed the Man the Hunter conference to the broader reading public.⁵³ The book foregrounded hunter-gatherer research, made it relevant to contemporary social theory and gave DeVore and Lee’s work “a big boost in credibility and support.”⁵⁴

As David Graeber puts it, the “original affluence” thesis achieved “something approaching a cult status” among nonacademic groups seeking a countercultural return to nature.⁵⁵ “The essay has been debated in reading groups in squats in Croatia and in alternative academies in Korea and Japan,” and inspired a lengthy response written from the prison cell of Unabomber Ted Kaczinski.⁵⁶ Kaczinski drew from his own experience with autarchic subsistence in the Eastern U.S. to critique Lee’s and Sahlins’s estimates of the labor required to prepare wild skins and foods.⁵⁷

Sahlins’s “original affluence” thesis recalled nineteenth-century Romantic anthropologist

⁵² Marshall Sahlins, “Notes on the Original Affluent Society,” in *Man the Hunter*, ed. Irven DeVore, and Richard B. Lee (New York: De Gruyter, 1968).

⁵³ Sahlins, *Stone Age Economics*. For commentary on Sahlins’s “original affluence” thesis see: Tim Ingold, *The Appropriation of Nature: Essays on Human Ecology and Social Relations* (Iowa City: University of Iowa Press, 1987), 230-40.; Nurit Bird-David, *et al.*, “Beyond” the Original Affluent Society”: A Culturalist Reformulation [and Comments and Reply],” *Current Anthropology* 33, no. 1 (1992).; David Kaplan, “The Darker Side of the ‘Original Affluent Society’,” *Journal of Anthropological Research* 56, no. 3 (2000).; Jacqueline Solway, “The Original Affluent Society’: Four Decades on,” in *The Politics of Egalitarianism: Theory and Practice* (New York: Berghahn Books, 2006).

⁵⁴ Laugrand, “Lee Film 5,” 10:19.

⁵⁵ Solway, “The Original Affluent Society’: Four Decades on,” 67.

⁵⁶ David Graeber, “Forward to the Routledge Classics Edition,” in *Stone Age Economics* (New York: Routledge, 2017), xii.

⁵⁷ Ted Kaczinski, “The Truth About Primitive Life: A Critique of Anarchoprimitivism.” (2008): <https://theanarchistlibrary.org/library/ted-kaczynski-the-truth-about-primitive-life-a-critique-of-anarchoprimitivism>.

Lewis Henry Morgan's description of Iroquois culture as "communism in living."⁵⁸ More to the point, Sahlins drew from Karl Polyani's *Great Transformation* and its challenge to modern economic doctrine. Polyani, imbued with the dark pessimism of the Second World War, argued that modern life was neither more prosperous, nor less onerous, nor more integrated than premodern life. To the contrary, premodern forms of social organization succeeded where the moderns failed.

No premodern individual, Polyani imagined, ever starved alone. Entire communities might experience scarcity, but they would maintain practices of redistribution and reciprocity, which guaranteed a minimum survival for all. Polyani read Bronislaw Malinowski's reports on Trobriand islanders and described premodern societies as communitarian, redistributive, and secure. Individual members of such societies would never be left hungry and isolated.⁵⁹ "It is the absence of the threat of individual starvation which makes primitive society, in a sense, more humane than market economy, and at the same time less economic."⁶⁰

Hunger and starvation were neither natural nor inevitable. Scarcity, starvation, isolation and economic precarity were all modern inventions, derived from modern economic organization. Scarcity arrived in sixteenth-century Europe and nineteenth-century colonies, Polyani claimed, as a tool of subjugation. "Ironically, *the white man's initial contribution to the black man's world mainly consisted in introducing him to the uses of the scourge of hunger.*"⁶¹ Far from a natural result of economic development, wage labor was a violent imposition.⁶² As Sahlins put it, "to exist in a market economy is to live out a double tragedy, beginning in inadequacy and ending in deprivation."⁶³

The fall from a Paleolithic Eden, in this version of the mismatch narrative, dates to human settlement and the rise of the city-state. Recently, anthropologist James C. Scott invoked this

⁵⁸ Sahlins called out Morgan in an earlier piece, Marshall Sahlins, "The Origin of Society," in *Physical Anthropology and Archaeology*, ed. Peter B. Hammond (New York: MacMillan, 1964), 65.

⁵⁹ Karl Polyani, *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 2001), 48-50.

⁶⁰ Polyani, *The Great Transformation: The Political and Economic Origins of Our Time*, 172. Emphasis mine.

⁶¹ Polyani, *The Great Transformation: The Political and Economic Origins of Our Time*, 172. Emphasis mine.

⁶² Polyani, *The Great Transformation: The Political and Economic Origins of Our Time*, 172.

⁶³ Sahlins, "Notes on the Original Affluent Society," 86.

narrative in his critical history of early state formation. Members of sedentary societies, he suggests, were subjected to capture for taxation and forced labor. Domesticated humans, like domesticated animals, were plagued by physical stress, overwork and disease. Their skeletal remains are finer and smaller than those of earlier humans. Sedentary remains show signs of nutritional deficiency and infection, presumably from cohabitation with animals. Their diets, and their lives, were less secure and less varied than those of their mobile counterparts.⁶⁴

Hunter-gatherer anthropology reinforced this point, by suggesting that early humans labored less, not more, than later farmers and wage workers. This general interpretation seems to have survived into the twenty-first century, with important revisions: perhaps unsurprisingly, the Man the Hunter cohort of anthropologists seems to have seriously undercounted the labor involved in food processing and preparation.⁶⁵

Sahlins, in his “original affluence” piece, did not deny that life could be hard at times in hunting-gathering societies. But his argument was primarily cultural, not material. Hunter-gatherer societies did not seem to care much about needs, desires and wants. “[Bushmen’s] wants are restricted: a few people are happy to consider few things their good fortune.”⁶⁶ In contrast to modern greed for accumulating stuff, hunter-gatherer culture accommodated itself to available supplies. (Sahlins did not engage with Woodburn and Lee’s dismissals of their subjects’ voluble complaints of hunger and hard labor.) This culture of sufficiency, Sahlins labelled the “Zen approach.” Bushmen did not experience scarcity, he suggested, in part because they did not worry about accumulating things to begin with.

If behavior and culture drove human evolution, then scarcity itself could be understood as a cultural product. Sahlins submitted that hunter-gatherers knew no scarcity, as such. Scarcity was not part of the hunter-gatherer culture. Human wants, Sahlins suggested, “are ‘easily satisfied’ either by producing much or desiring little, and there are accordingly two possible roads to affluence.”⁶⁷ Hunter gatherers illustrated the second of those two paths. They satisfied

⁶⁴ Scott, *Against the Grain*, 91.

⁶⁵ Solway, “The Original Affluent Society’: Four Decades on,” 68.

⁶⁶ Sahlins, “Notes on the Original Affluent Society,” 86.

⁶⁷ Sahlins, “Notes on the Original Affluent Society,” 85.

themselves with what they had and did not seek to accumulate more. “We are inclined to think of hunters and gatherers as poor because they don’t have anything,” wrote Sahlins; “perhaps better to think of them for that reason as free.”⁶⁸

What conclusions can be drawn from this story in the political history of hunger? The only easy bit to grasp is that the Paleo Diet is ridiculous, and not in a funny way. The recent discovery of 170,000 year-old cooked tubers in a South African cave ought to put that trend to rest, but I won’t hold my breath on it.⁶⁹ The thrifty, feast-fast model still prevails in the popular press and in clinical settings. Some people seem to need to believe that obesity is fixed by genetic prehistory, that some of us are better adapted to modernity than others. Paleofantasies are clearly tightly wound up with ideological stakes.

In between the lines of scientists’ mismatch theories, we can begin to form an image of hunger as they viewed it in the 1960s: Hunger was a psychosocial disposition. Want, need and desire were noxious feelings, and uniquely characteristic, in some way, of modern life. Hunger was driven by a quest for overabundance, excess, overstimulation, all inappropriate to the natural human condition. Modern hunger appeared almost as a kind of trickery: we could escape it if we understood that we were being unnaturally provoked, manipulated, exploited or stimulated.

In all of these theories hunger appeared historical. Proponents of evolutionary, mismatch hypotheses, understood that hunger was not the same feeling or fact for early humans and for contemporary people. Hunger in a city was different than hunger on a farm or in the bush, and not only because of their different ecologies. Hunger under a centralized state organization or a market economy was different than hunger in an egalitarian band.

A historical rift had been rent between premodern peoples and the postwar human experience. Across that rift, scientists warned that something - health, balance, autonomy, freedom - had been lost. Modern humans carried the inheritance of early human ancestors, but

⁶⁸ Sahlins, *Stone Age Economics*, 14.

⁶⁹ Lyn Wadley, *et al.*, “Cooked Starchy Rhizomes in Africa 170 Thousand Years Ago,” *Science* 367, no. 6473 (2020).

had lost their way. This was the mismatch. Reaching backwards into a deep past, across the divide of industrial capitalism, social anomy and extreme state-sponsored violence, scientists sought to recover other ways of living.