

Elements of Refusal

John Zerzan

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LANGUAGE: ORIGIN AND MEANING

Fairly recent anthropology (e.g. Sahlins, R.B. Lee) has virtually obliterated the long-dominant conception which defined prehistoric humanity in terms of scarcity and brutalization. As if the implications of this are already becoming widely understood, there seems to be a growing sense of that vast epoch as one of wholeness and grace. Our time on earth, characterized by the very opposite of those qualities, is in deepest need of a reversal of the dialectic that stripped the wholeness from our life as a species.

Being alive in nature, before our abstraction from it, must have involved a perception and contact that we can scarcely comprehend from our levels of anguish and alienation. The communication with all of existence must have been an exquisite play of all the senses, reflecting the numberless, nameless varieties of pleasure and emotion once accessible within us.

To Levy-Bruhl, Durkheim and others, the cardinal and qualitative difference between the "primitive mind" and ours is the primitive's lack of detachment in the moment of experience; "the savage mind totalizes,"¹ as Lévi-Strauss put it. Of course we have long been instructed that this original unity was destined to crumble, that alienation is the province of being human: consciousness depends on it.

In much the same sense as objectified time has been held to be essential to consciousness—Hegel called it "the necessary alienation"—so has language, and equally falsely. Language may be properly considered the fundamental ideology, perhaps as deep a separation from the natural world as self-existent time. And if timelessness resolves the split between spontaneity and consciousness, languagelessness may be equally necessary.

Adorno, in *Minima Moralia*, wrote: "To happiness the same applies as to truth: one does not have it, but is in it."² This could stand as an excellent description of humankind as we existed before the emergence of time and language, before the division and distancing that exhausted authenticity.

Language is the subject of this exploration, understood in its virulent sense. A fragment from Nietzsche introduces its central perspective: "words dilute and brutalize; words depersonalize; words make the uncommon common."³

Although language can still be described by scholars in such phrases as "the most significant and colossal work that the human spirit has evolved,"⁴ this characterization occurs now in a context of extremity in which we are forced to call the aggregate of the work of the "human spirit" into question. Similarly, if in Coward and Ellis' estimation, the "most significant feature of twentieth-century intellectual development" has been the light shed by linguistics upon social reality,⁵ this focus hints at how fundamental our scrutiny must yet become in order to comprehend maimed modern life. It may sound positivist to assert that language must somehow embody all the "advances" of society, but in civilization it seems that all meaning is ultimately linguistic; the question of the meaning of language, considered in its totality, has become the unavoidable next step.

Earlier writers could define consciousness in a facile way as that which can be verbalized, or even argue that wordless thought is impossible (despite counter-examples such as chess-playing, composing music, or using tools). But in our present straits, we have to consider anew the meaning of the birth and character of language rather than assume it to be merely a neutral, if not benign, inevitable presence. The philosophers are now forced to recognize the question with intensified interest; Gadamer, for example: "Admittedly, the nature of language is one of the most mysterious questions that exists for man to ponder on."⁶

Because language is the symbolization of thought, and symbols are the basic units of culture, speech is a cultural phenomenon fundamental to what civilization is. And because at the level of symbols and structure there are neither primitive nor developed languages, it may be justifiable to begin by locating the basic qualities of language, specifically to consider the congruence of language and ideology, in a basic sense.

Ideology, alienation's armored way of seeing, is a domination embedded in a systematic false consciousness. It is easier still to begin to locate language in these terms if one takes up another definition common to both ideology and language: namely, that each is a system of distorted communication between two poles and predicated upon symbolization.

Like ideology, language creates false separations and objectifications through its symbolizing power. This falsification is made possible by concealing, and ultimately vitiating, the participation of the subject in the physical world. Modern languages, for example, employ the word "mind"

to describe a thing dwelling independently in our bodies, compared with the Sanskrit word, which means "working within," involving an active embrace of sensation, perception, and cognition. The logic of ideology, from active to passive, from unity to separation, is similarly reflected in the decay of the verb form in general. It is noteworthy that the much freer and sensuous hunter-gatherer cultures gave way to the Neolithic imposition of civilization, work and property at the same time that verbs declined to approximately half of all words of a language; in modern English, verbs account for less than ten percent of words.⁷

Though language, in its definitive features, seems to be complete from its inception, its progress is marked by a steadily debasing process. The carving up of nature, its reduction into concepts and equivalencies, occurs along lines laid down by the patterns of language.⁸ And the more the machinery of language, again paralleling ideology, subjects existence to itself, the more blind its role in reproducing a society of subjugation.

Navajo has been termed an "excessively literal" language, from the characteristic bias of our time for the more general and abstract. In a much earlier time, we are reminded, the direct and concrete held sway; there existed a "plethora of terms for the touched and seen."⁹ Toynbee noted the "amazing wealth of inflexions" in early languages and the later tendency toward simplification of language through the abandonment of inflexions.¹⁰ Cassirer saw the "astounding variety of terms for a particular action" among American Indian tribes and understood that such terms bear to each other a relation of juxtaposition rather than of subordination.¹¹ But it is worth repeating once more that while very early on a sumptuous prodigality of symbols obtained, it was a closure of symbols, of abstract conventions, even at that stage, which might be thought of as adolescent ideology.

Considered as the paradigm of ideology, language must also be recognized as the determinant organizer of cognition. As the pioneer linguist Sapir noted, humans are very much at the mercy of language concerning what constitutes "social reality." Another seminal anthropological linguist, Whorf, took this further to propose that language determines one's entire way of life, including one's thinking and all other forms of mental activity. To use language is to limit oneself to the modes of perception already inherent in that language. The fact that language is only form and yet molds everything goes to the core of what ideology is.¹²

It is reality revealed only ideologically, as a stratum separate from us. In this way language creates, and debases the world. "Human speech conceals far more than it confides; it blurs much more than it defines; it

distances more than it connects,"¹³ was George Steiner's conclusion.

More concretely, the essence of learning a language is learning a system, a model, that shapes and controls speaking. It is easier still to see ideology on this level, where due to the essential arbitrariness of the phonological, syntactic, and semantic rules of each, every human language must be learned. The unnatural is imposed, as a necessary moment of reproducing an unnatural world.

Even in the most primitive languages, words rarely bear a recognizable similarity to what they denote; they are purely conventional.¹⁴ Of course this is part of the tendency to see reality symbolically, which Cioran referred to as the "sticky symbolic net" of language, an infinite regression which cuts us off from the world.¹⁵ The arbitrary, self-contained nature of language's symbolic organization creates growing areas of false certainty where wonder, multiplicity and non-equivalence should prevail. Barthes' depiction of language as "absolutely terrorist" is much to the point here; he saw that its systematic nature "in order to be complete needs only to be valid, and not to be true."¹⁶ Language effects the original split between wisdom and method.

Along these lines, in terms of structure, it is evident that "freedom of speech" does not exist; grammar is the invisible "thought control" of our invisible prison. With language we have already accommodated ourselves to a world of unfreedom.

Reification, the tendency to take the conceptual as the perceived and to treat concepts as tangible, is as basic to language as it is to ideology. Language represents the mind's reification of its experience, that is, an analysis into parts which, as concepts, can be manipulated as if they were objects. Horkheimer pointed out that ideology consists more in what people are like—their mental constrictedness, their complete dependence on associations provided for them—than in what they believe. In a statement that seems as pertinent to language as to ideology, he added that people experience everything only within the conventional framework of concepts.¹⁷

It has been asserted that reification is necessary to mental functioning, that the formation of concepts which can themselves be mistaken for living properties and relationships does away with the otherwise almost intolerable burden of relating one experience to another.

Cassirer said of this distancing from experience, "Physical reality seems to reduce in proportion as man's symbolic activity advances."¹⁸ Representation and uniformity begin with language, reminding us of Heidegger's insistence that something extraordinarily important has been forgotten by civilization.

Civilization is often thought of not as a forgetting but as a remembering, wherein language enables accumulated knowledge to be transmitted forward, allowing us to profit from others' experiences as though they were our own. Perhaps what is forgotten is simply that others' experiences are *not* our own, that the civilizing process is thus a vicarious and inauthentic one. When language, for good reason, is held to be virtually coterminous with life, we are dealing with another way of saying that life has moved progressively farther from directly lived experience.

Language, like ideology, mediates the here and now, attacking direct, spontaneous connections. A descriptive example was provided by a mother objecting to the pressure to learn to read: "Once a child is literate, there is no turning back. Walk through an art museum. Watch the literate adults read the title cards before viewing the paintings to be sure that they know what to see. Or watch them read the cards and ignore the paintings entirely...As the primers point out, reading opens doors. But once those doors are open it is very difficult to see the world without looking through them."¹⁹

The process of transforming all direct experience into the supreme symbolic expression, language, monopolizes life. Like ideology, language conceals and justifies, compelling us to suspend our doubts about its claim to validity. It is at the root of civilization, the dynamic code of civilization's alienated nature. As the paradigm of ideology, language stands behind all of the massive legitimation necessary to hold civilization together. It remains for us to clarify what forms of nascent domination engendered this justification, made language necessary as a basic means of repression.

It should be clear, first of all, that the arbitrary and decisive association of a particular sound with a particular thing is hardly inevitable or accidental. Language is an invention for the reason that cognitive processes must precede their expression in language. To assert that humanity is only human because of language generally neglects the corollary that being human is the precondition of inventing language.²⁰

The question is how did words first come to be accepted as signs at all? How did the first symbol originate? Contemporary linguists seem to find this "such a serious problem that one may despair of finding a way out of its difficulties."²¹ Among the more than ten thousand works on the origin of language, even the most recent admit that the theoretical discrepancies are staggering. The question of when language began has also brought forth extremely diverse opinions.²² There is no cultural phenomenon that is more momentous, but no other development offers fewer facts as to its beginnings. Not surprisingly, Bernard Campbell is far

from alone in his judgment that "We simply do not know, and never will, how or when language began."²³

Many of the theories that have been put forth as to the origin of language are trivial; they explain nothing about the qualitative, intentional changes introduced by language. The "ding-dong" theory maintains that there is somehow an innate connection between sound and meaning; the "pooh-pooh" theory holds that language at first consisted of ejaculations of surprise, fear, pleasure, pain, etc.; the "ta-ta" theory posits the imitation of bodily movements as the genesis of language, and so on among "explanations" that only beg the question. The hypothesis that the requirements of hunting made language necessary, on the other hand, is easily refuted; animals hunt together without language, and it is generally necessary for humans to remain silent in order to hunt.

Somewhat closer to the mark, I believe, is the approach of contemporary linguist E.H. Sturtevant: since all intentions and emotions are involuntarily expressed by gesture, look, or sound, voluntary communication, such as language, must have been invented for the purpose of lying or deceiving.²⁴ In a more circumspect vein, the philosopher Caws insisted that "truth...is a comparative latecomer on the linguistic scene, and it is certainly a mistake to suppose that language was invented for the purpose of telling it."²⁵

But it is in the specific social context of our exploration, the terms and choices of concrete activities and relationships, that more understanding of the genesis of language must be sought. Olivia Vlahos judged that the "power of words" must have appeared very early; "Surely...not long after man had begun to fashion tools shaped to a special pattern."²⁶ The flaking or chipping of stone tools, during the million or two years of Paleolithic life, however, seems much more apt to have been shared by direct, intimate demonstration than by spoken directions.

Nevertheless, the proposition that language arose with the beginnings of technology—that is, in the sense of division of labor and its concomitants, as a standardizing of things and events and the effective power of specialists over others—is at the heart of the matter, in my view. It would seem very difficult to disengage the division of labor—"the source of civilization,"²⁷ in Durkheim's phrase—from language at any stage, perhaps least of all the beginning. Division of labor necessitates a relatively complex control of group action; in effect it demands that the whole community be organized and directed. This happens through the breakdown of functions previously performed by everybody, into a progressively greater differentiation of tasks, and hence of roles and distinctions.

Whereas Vlahos felt that speech arose quite early, in relation to simple stone tools and their reproduction, Julian Jaynes has raised perhaps a more interesting question which is assumed in his contrary opinion that language showed up much later. He asks, how it is, if humanity had speech for a couple of million years, that there was virtually no development of technology?²⁸ Jaynes's question implies a utilitarian value inhering in language, a supposed release of latent potentialities of a positive nature.²⁹ But given the destructive dynamic of the division of labor, referred to above, it may be that while language and technology are indeed linked, they were in fact both successfully resisted for thousands of generations.

At its origins language had to meet the requirements of a problem that existed outside language. In light of the congruence of language and ideology, it is also evident that as soon as a human spoke, he or she was separated. This rupture is the moment of dissolution of the original unity between humanity and nature; it coincides with the initiation of division of labor. Marx recognized that the rise of ideological consciousness was established by the division of labor; language was for him the primary paradigm of "productive labor." Every step in the advancement of civilization has meant added labor, however, and the fundamentally alien reality of productive labor/work is realized and advanced via language. Ideology receives its substance from division of labor, and, inseparably, its form from language.

Engels, valorizing labor even more explicitly than Marx, explained the origin of language from and with labor, the "mastery of nature." He expressed the essential connection by the phrase, "first labor, after it and then with it speech."³⁰ To put it more critically, the artificial communication which is language was and is the voice of the artificial separation which is (division of) labor.³¹ (In the usual, repressive parlance, this is phrased positively, of course, in terms of the invaluable nature of language in organizing "individual responsibilities.")

Language was elaborated for the suppression of feelings; as the code of civilization it expresses the sublimation of Eros, the repression of instinct, which is the core of civilization. Freud, in the one paragraph he devoted to the origin of language, connected original speech to sexual bonding as the instrumentality by which work was made acceptable as "an equivalence and substitute for sexual activity."³² This transference from a free sexuality to work is original sublimation, and Freud saw language constituted in the establishing of the link between mating calls and work processes.

The neo-Freudian Lacan carries this analysis further, asserting that the

unconscious is formed by the primary repression of acquisition of language. For Lacan the unconscious is thus "structured like a language" and functions linguistically, not instinctively or symbolically in the traditional Freudian sense.³³

To look at the problem of origin on a figurative plane, it is interesting to consider the myth of the Tower of Babel. The story of the confounding of language, like that other story in Genesis, the Fall from the grace of the Garden, is an attempt to come to terms with the origin of evil. The splintering of an "original language" into mutually unintelligible tongues may best be understood as the emergence of symbolic language, the eclipse of an earlier state of more total and authentic communication. In numerous traditions of paradise, for example, animals can talk and humans can understand them.³⁴

I have argued elsewhere³⁵ that the Fall can be understood as a fall into time. Likewise, the failure of the Tower of Babel suggests, as Russell Fraser put it, "the isolation of man in historical time."³⁶ But the Fall also has a meaning in terms of the origin of language. Benjamin found in it the mediation which is language and the "origin of abstraction, too, as a faculty of language-mind."³⁷ "The fall is into language," according to Norman O. Brown.³⁸

Another part of Genesis provides Biblical commentary on an essential of language, names,³⁹ and on the notion that naming is an act of domination. I refer to the creation myth, which includes "and whatsoever Adam called every living creature, that was the name thereof." This bears directly on the necessary linguistic component of the domination of nature: man became master of things only because he first named them, in the formulation of Dufrenne.⁴⁰ As Spengler had it, "To name anything by a name is to win power over it."⁴¹

The beginning of humankind's separation from and conquest of the world is thus located in the naming of the world. *Logos* itself as god is involved in the first naming, which represents the domination of the deity. The well-known passage is contained in the Gospel of John: "In the beginning was the Word, and the Word was with God, and the Word was God."

Returning to the question of the origin of language in real terms, we also come back to the notion that the problem of language is the problem of civilization. The anthropologist Lizot noted that the hunter-gatherer mode exhibited that lack of technology and division of labor that Jaynes felt must have bespoken an absence of language: "[Primitive people's] contempt for work and their disinterest in technological progress per se are beyond question."⁴² Furthermore, "the bulk of recent

studies," in Lee's words of 1981, shows the hunter-gatherers to have been "well nourished and to have [had] abundant leisure time."⁴³

Early humanity was not deterred from language by the pressures of constant worries about survival; the time for reflection and linguistic development was available, but this path was apparently refused for many thousands of years. Nor did the conclusive victory of agriculture, civilization's cornerstone, take place (in the form of the Neolithic revolution) because of food shortage or population pressures. In fact, as Lewis Binford has concluded, "The question to be asked is not why agriculture and food-storage techniques were not developed everywhere, but why they were developed at all."⁴⁴

The dominance of agriculture, including property ownership, law, cities, mathematics, surplus, permanent hierarchy and specialization, and writing, to mention a few of its elements, was no inevitable step in human "progress"; neither was language itself. The reality of pre-Neolithic life demonstrates the degradation or defeat involved in what has been generally seen as an enormous step forward, an admirable transcending of nature, etc. In this light, many of the insights of Horkheimer and Adorno in the *Dialectic of Enlightenment* (such as the linking of progress in instrumental control with regression in affective experience) are made equivocal by their false conclusion that "Men have always had to choose between their subjugation to nature or the subjugation of nature to the Self."⁴⁵

"Nowhere is civilization so perfectly mirrored as in speech,"⁴⁶ as Pei commented, and in some very significant ways language has not only reflected but determined shifts in human life. The deep, powerful break that was announced by the birth of language prefigured and overshadowed the arrival of civilization and history, a mere 10,000 years ago. In the reach of language, "the whole of History stands unified and complete in the manner of a Natural Order,"⁴⁷ says Barthes.

Mythology, which, as Cassirer noted, "is from its very beginning potential religion,"⁴⁸ can be understood as a function of language, subject to its requirements like any ideological product. The nineteenth-century linguist Müller described mythology as a "disease of language" in just this sense; language deforms thought by its inability to describe things directly. "Mythology is inevitable, it is natural, it is an inherent necessity of language...[It is] the dark shadow which language throws upon thought, and which can never disappear till language becomes entirely commensurate with thought, which it never will."⁴⁹

It is little wonder, then, that the old dream of a *lingua Adamica*, a "real" language consisting not of conventional signs but expressing the

direct, unmediated meaning of things, has been an integral part of humanity's longing for a lost primeval state. As remarked upon above, the Tower of Babel is one of the enduring significations of this yearning to truly commune with each other and with nature.

In that earlier (but long enduring) condition nature and society formed a coherent whole, interconnected by the closest bonds. The step from participation in the totality of nature to religion involved a detaching of forces and beings into outward, inverted existences. This separation took the form of deities, and the religious practitioner, the shaman, was the first specialist.

The decisive mediations of mythology and religion are not, however, the only profound cultural developments underlying our modern estrangement. Also in the Upper Paleolithic era, as the species Neanderthal gave way to Cro-Magnon (and the brain actually shrank in size), art was born. In the celebrated cave paintings of roughly 30,000 years ago is found a wide assortment of abstract signs; the symbolism of late Paleolithic art slowly stiffens into the much more stylized forms of the Neolithic agriculturalists. During this period, which is likely either synonymous with the beginnings of language or registers its first real dominance, a mounting unrest surfaced. John Pfeiffer described this in terms of the erosion of the egalitarian hunter-gatherer traditions, as Cro-Magnon established its hegemony.⁵⁰ Whereas there was "no trace of rank" until the Upper Paleolithic, the emerging division of labor and its immediate social consequences demanded a disciplining of those resisting the gradual approach of civilization. As a formalizing, indoctrinating device, the dramatic power of art fulfilled this need for cultural coherence and the continuity of authority. Language, myth, religion and art thus advanced as deeply "political" conditions of social life, by which the artificial media of symbolic forms replaced the directly-lived quality of life before division of labor. From this point on, humanity could no longer see reality face to face; the logic of domination drew a veil over play, freedom, affluence.

At the close of the Paleolithic Age, as a decreased proportion of verbs in the language reflected the decline of unique and freely chosen acts in consequence of division of labor, language still possessed no tenses.⁵¹ Although the creation of a symbolic world was the condition for the existence of time, no fixed differentiations had developed before hunter-gatherer life was displaced by Neolithic farming. But when every verb form shows a tense, language is "demanding lip service to time even when time is furthest from our thoughts."⁵² From this point one can ask whether time exists apart from grammar. Once the structure of speech

incorporates time and is thereby animated by it at every expression, division of labor has conclusively destroyed an earlier reality. With Derrida, one can accurately refer to "language as the origin of history."⁵³ Language itself is a repression, and along its progress repression gathers—as ideology, as work—so as to generate historical time. Without language all of history would disappear.

Pre-history is pre-writing; writing of some sort is the signal that civilization has definitively arrived. "One gets the impression," Freud wrote in *The Future of an Illusion*, "that civilization is something that was imposed on a resisting majority by a minority which understood how to obtain possession of the means of power and coercion."⁵⁴ If the matter of time and language can seem problematic, writing as a stage of language makes its appearance contributing to subjugation in rather naked fashion. Freud could have legitimately pointed to written language as the lever by which civilization was imposed and consolidated.

By about 10,000 B.C. extensive division of labor had produced the kind of social control reflected by cities and temples. The earliest writings are records of taxes, laws, terms of labor servitude. This objectified domination thus originated from the practical needs of political economy. An increased use of letters and tablets soon enabled those in charge to reach new heights of power and conquest, as exemplified in the new form of government commanded by Hammurabi of Babylon. As Lévi-Strauss put it, writing "seems to favor rather the exploitation than the enlightenment of mankind...Writing, on this its first appearance in our midst, had allied itself with falsehood."⁵⁵

Language at this juncture becomes the representation of representation, in hieroglyphic and ideographic writing and then in phonetic alphabetic writing. The progress of symbolization, from the symbolizing of words, to that of syllables, and finally to letters in an alphabet, imposed an increasingly irresistible sense of order and control. And in the reification that writing permits, language is no longer tied to a speaking subject or community of discourse, but creates an autonomous field from which every subject can be absent.⁵⁶

In the contemporary world, the avant-garde of art has, most noticeably, performed at least the gestures of refusal of the prison of language. Since Mallarmé, a good deal of modernist poetry and prose has moved against the taken-for-grantedness of normal speech. To the question "Who is speaking?" Mallarmé answered, "Language is speaking."⁵⁷ After this reply, and especially since the explosive period around World War I when Joyce, Stein and others attempted a new syntax as well as a new vocabulary, the restraints and distortions of language have been assaulted

wholesale in literature. Russian futurists, Dada (e.g. Hugo Ball's effort in the 1920s to create "poetry without words"), Artaud, the Surrealists and lettristes were among the more exotic elements of a general resistance to language.⁵⁸

The Symbolist poets, and many who could be called their descendants, held that defiance of society also includes defiance of its language. But inadequacy in the former arena precluded success in the latter, bringing one to ask whether avant-garde strivings can be anything more than abstract, hermetic gestures. Language, which at any given moment embodies the ideology of a particular culture, must be ended in order to abolish both categories of estrangement; a project of some considerable social dimensions, let us say. That literary texts (e.g. *Finnegan's Wake*, the poetry of e.e. cummings) break the rules of language seems mainly to have the paradoxical effect of evoking the rules themselves. By permitting the free play of ideas about language, society treats these ideas as mere play.

The massive amount of lies—official, commercial and otherwise—is perhaps in itself sufficient to explain why Johnny Can't Read or Write, why illiteracy is increasing in the metropole. In any case, it is not only that "the pressure on language has gotten very great,"⁵⁹ according to Canetti, but that "unlearning" has come "to be a force in almost every field of thought,"⁶⁰ in Robert Harbison's estimation.

Today "incredible" and "awesome" are applied to the most commonly trivial and boring, and it is no accident that powerful or shocking words barely exist anymore. The deterioration of language mirrors a more general estrangement; it has become almost totally external to us. From Kafka to Pinter silence itself is a fitting voice of our times. "Few books are forgivable. Black on the canvas, silence on the screen, an empty white sheet of paper, are perhaps feasible,"⁶¹ as R.D. Laing put it so well. Meanwhile, the structuralists and post-structuralists—Lévi-Strauss, Barthes, Foucault, Lacan, Derrida—have been almost entirely occupied with the duplicity of language in their endless exegetical burrowings into it. They have virtually renounced the project of extracting meaning from language.

I am writing (obviously) enclosed in language, aware that language reifies the resistance to reification. As T.S. Eliot's Sweeney explains, "I've gotta use words when I talk to you." One can imagine replacing the imprisonment of time with a brilliant present—only by imagining a world without division of labor, without that divorce from nature from which all ideology and authority accrue. We couldn't live in this world without language and that is just how profoundly we must transform this world.

Words bespeak a sadness; they are used to soak up the emptiness of unbridled time. We have all had the desire to go further, deeper than words, the feeling of wanting only to be done with all talk, knowing that being allowed to live coherently erases the need to formulate coherence.

There is a profound truth to the notion that "lovers need no words." The point is that we must have a world of lovers, a world of the face-to-face, in which even names can be forgotten, a world which knows that enchantment is the opposite of ignorance. Only a politics that undoes language and time and is thus visionary to the point of voluptuousness has any meaning.

AGRICULTURE

Agriculture, the indispensable basis of civilization, was originally encountered as time, language, number and art won out. As the materialization of alienation, agriculture is the triumph of estrangement and the definite divide between culture and nature and humans from each other.

Agriculture is the birth of production, complete with its essential features and deformation of life and consciousness. The land itself becomes an instrument of production and the planet's species its objects. Wild or tame, weeds or crops speak of that duality that cripples the soul of our being, ushering in, relatively quickly, the despotism, war and impoverishment of high civilization over the great length of that earlier oneness with nature. The forced march of civilization, which Adorno recognized in the "assumption of an irrational catastrophe at the beginning of history," which Freud felt as "something imposed on a resisting majority," of which Stanley Diamond found only "conscripts, not volunteers," was dictated by agriculture. And Mircea Eliade was correct to assess its coming as having "provoked upheavals and spiritual breakdowns" whose magnitude the modern mind cannot imagine.

"To level off, to standardize the human landscape, to efface its irregularities and banish its surprises," these words of E.M. Cioran apply perfectly to the logic of agriculture, the end of life as mainly sensuous activity, the embodiment and generator of separated life. Artificiality and work have steadily increased since its inception and are known as culture: in domesticating animals and plants man necessarily domesticated himself.

Historical time, like agriculture, is not inherent in social reality but an imposition on it. The dimension of time or history is a function of repression, whose foundation is production or agriculture. Hunter-gatherer life was anti-time in its simultaneous and spontaneous openness; farming life generates a sense of time by its successive-task narrowness, its directed routine. As the non-closure and variety of Paleolithic living gave way to the literal enclosure of agriculture, time assumed power and came to take on the character of an enclosed space. Formalized temporal reference points—ceremonies with fixed dates, the naming of days, etc.—

are crucial to the ordering of the world of production; as a schedule of production, the calendar is integral to civilization. Conversely, not only would industrial society be impossible without time schedules, the end of agriculture (basis of all production) would be the end of historical time.

Representation begins with language, a means of reining in desire. By displacing autonomous images with verbal symbols, life is reduced and brought under strict control; all direct, unmediated experience is subsumed by that supreme mode of symbolic expression, language. Language cuts up and organizes reality, as Benjamin Whorf put it, and this segmentation of nature, an aspect of grammar, sets the stage for agriculture. Julian Jaynes, in fact, concluded that the new linguistic mentality led very directly to agriculture. Unquestionably, the crystallization of language into writing, called forth mainly by the need for record-keeping of agricultural transactions, is the signal that civilization has begun.

In the non-commodified, egalitarian hunter-gatherer ethos, the basis of which (as has so often been remarked) was sharing, number was not wanted. There was no ground for the urge to quantify, no reason to divide what was whole. Not until the domestication of animals and plants did this cultural concept fully emerge. Two of number's seminal figures testify clearly to its alliance with separateness and property: Pythagoras, center of a highly influential religious cult of number, and Euclid, father of mathematics and science, whose geometry originated to measure fields for reasons of ownership, taxation and slave labor. One of civilization's early forms, chieftainship, entails a linear rank order in which each member is assigned an exact numerical place. Soon, following the anti-natural linearity of plow culture, the inflexible 90-degree gridiron plan of even earliest cities appeared. Their insistent regularity constitutes in itself a repressive ideology. Culture, now numberized, becomes more firmly bounded and lifeless.

Art, too, in its relationship to agriculture, highlights both institutions. It begins as a means to interpret and subdue reality, to rationalize nature, and conforms to the great turning point which is agriculture in its basic features. The pre-Neolithic cave paintings, for example, are vivid and bold, a dynamic exaltation of animal grace and freedom. The neolithic art of farmers and pastoralists, however, stiffens into stylized forms; Franz Borkenau typified its pottery as a "narrow, timid botching of materials and forms." With agriculture, art lost its variety and became standardized into geometric designs that tended to degenerate into dull, repetitive patterns, a perfect reflection of standardized, confined, rule-patterned life. And where there had been no representation in Paleolithic

art of men killing men, an obsession with depicting confrontation between people advanced with the Neolithic period, scenes of battles becoming common.

Time, language, number, art and all the rest of culture, which predates and leads to agriculture, rests on symbolization. Just as autonomy preceded domestication and self-domestication, the rational and the social precede the symbolic.

Food production, it is eternally and gratefully acknowledged, "permitted the cultural potentiality of the human species to develop." But what is this tendency toward the symbolic, toward the elaboration and imposition of arbitrary forms? It is a growing capacity for objectification, by which what is living becomes reified, thing-like. Symbols are more than the basic units of culture; they are screening devices to distance us from our experiences. They classify and reduce, "to do away with," in Leakey and Lewin's remarkable phrase, "the otherwise almost intolerable burden of relating one experience to another."

Thus culture is governed by the imperative of reforming and subordinating nature. The artificial environment which is agriculture accomplished this pivotal mediation, with the symbolism of objects manipulated in the construction of relations of dominance. For it is not only external nature that is subjugated: the face-to-face quality of pre-agricultural life in itself severely limited domination, while culture extends and legitimizes it.

It is likely that already during the Paleolithic era certain forms or names were attached to objects or ideas, in a symbolizing manner but in a shifting, impermanent, perhaps playful sense. The will to sameness and security found in agriculture means that the symbols became as static and constant as farming life. Regularization, rule patterning, and technological differentiation, under the sign of division of labor, interact to ground and advance symbolization. Agriculture completes the symbolic shift and the virus of alienation has overcome authentic, free life. It is the victory of cultural control; as anthropologist Marshall Sahlins puts it, "The amount of work per capita increases with the evolution of culture and the amount of leisure per capita decreases."

Today, the few surviving hunter-gatherers occupy the least "economically interesting" areas of the world where agriculture has not penetrated, such as the snows of the Inuit or desert of the Australian aborigines. And yet the refusal of farming drudgery, even in adverse settings, bears its own rewards. The Hazda of Tanzania, Filipino Tasaday, !Kung of Botswana, or the Kalahari Desert !Kung San—who were seen by Richard Lee as easily surviving a serious, several years' drought while neighboring

farmers starved—also testify to Hole and Flannery's summary that "No group on earth has more leisure time than hunters and gatherers, who spend it primarily on games, conversation and relaxing." Service rightly attributed this condition to "the very simplicity of the technology and lack of control over the environment" of such groups. And yet simple Paleolithic methods were, in their own way, "advanced." Consider a basic cooking technique like steaming foods by heating stones in a covered pit; this is immemorially older than any pottery, kettles or baskets (in fact, is anti-container in its non-surplus, non-exchange orientation) and is the most nutritionally sound way to cook, far healthier than boiling food in water, for example. Or consider the fashioning of such stone tools as the long and exceptionally thin "laurel leaf" knives, delicately chipped but strong, which modern industrial techniques cannot duplicate.

The hunting and gathering lifestyle represents the most successful and enduring adaptation ever achieved by humankind. In occasional pre-agriculture phenomena like the intensive collection of food or the systematic hunting of a single species can be seen signs of impending breakdown of a pleasurable mode that remained so static for so long precisely because it was pleasurable. The "penury and day-long grind" of agriculture, in Clark's words, is the vehicle of culture, "rational" only in its perpetual disequilibrium and its logical progression toward ever-greater destruction, as will be outlined below.

Although the term hunter-gatherer should be reversed (and has been by not a few current anthropologists) because it is recognized that gathering constitutes by far the larger survival component, the nature of hunting provides salient contrast to domestication. The relationship of the hunter to the hunted animal, which is sovereign, free and even considered equal, is obviously qualitatively different from that of the farmer or herdsman to the enslaved chattels over which he rules absolutely.

Evidence of the urge to impose order or subjugate is found in the coercive rites and uncleanness taboos of incipient religion. The eventual subduing of the world that is agriculture has at least some of its basis where ambiguous behavior is ruled out, purity and defilement defined and enforced.

Lévi-Strauss defined religion as the anthropomorphism of nature; earlier spirituality was participatory with nature, not imposing cultural values or traits upon it. The sacred means that which is separated, and ritual and formalization, increasingly removed from the ongoing activities of daily life and in the control of such specialists as shamans and priests, are closely linked with hierarchy and institutionalized power. Religion

emerges to ground and legitimize culture, by means of a "higher" order of reality; it is especially required, in this function of maintaining the solidarity of society, by the unnatural demands of agriculture.

In the Neolithic village of Catal Hüyük in Turkish Anatolia, one of every three rooms was used for ritual purposes. Plowing and sowing can be seen as ritual renunciations, according to Burkert, a form of systematic repression accompanied by a sacrificial element. Speaking of sacrifice, which is the killing of domesticated animals (or even humans) for ritual purposes, it is pervasive in agricultural societies and found only there.

Some of the major Neolithic religions often attempted a symbolic healing of the agricultural rupture with nature through the mythology of the earth mother, which needless to say does nothing to restore the lost unity. Fertility myths are also central; the Egyptian Osiris, the Greek Persephone, Baal of the Canaanites, and the New Testament Jesus, gods whose death and resurrection testify to the perseverance of the soil, not to mention the human soul. The first temples signified the rise of cosmologies based on a model of the universe as an arena of domestication or barnyard, which in turn serves to justify the suppression of human autonomy. Whereas precivilized society was, as Redfield put it, "held together by largely undeclared but continually realized ethical conceptions," religion developed as a way of creating citizens, placing the moral order under public management.

Domestication involved the initiation of production, vastly increased divisions of labor, and the completed foundations of social stratification. This amounted to an epochal mutation both in the character of human existence and its development, clouding the latter with ever more violence and work. Contrary to the myth of hunter-gatherers as violent and aggressive, by the way, recent evidence shows that existing non-farmers, such as the Mbuti ("pygmies") studied by Turnbull, apparently do what killing they do without any aggressive spirit, even with a sort of regret. Warfare and the formation of every civilization or state, on the other hand, are inseparably linked.

Primal peoples did not fight over areas in which separate groups might converge in their gathering and hunting. At least "territorial" struggles are not part of the ethnographic literature and they would seem even less likely to have occurred in pre-history when resources were greater and contact with civilization non-existent.

Indeed, these peoples had no conception of private property, and Rousseau's figurative judgment, that divided society was founded by the man who first sowed a piece of ground, saying "This land is mine," and found others to believe him, is essentially valid. "Mine and thine, the

seeds of all mischief, have no place with them," reads Pietro's 1511 account of the natives encountered on Columbus' second voyage. Centuries later, surviving Native Americans asked, "Sell the Earth? Why not sell the air, the clouds, the great sea?" Agriculture creates and elevates possessions; consider the *longing* root of *belongings*, as if they ever make up for the loss.

Work, as a distinct category of life, likewise did not exist until agriculture. The human capacity of being shackled to crops and herds devolved rather quickly. Food production overcame the common absence or paucity of ritual and hierarchy in society and introduced civilized activities like the forced labor of temple-building. Here is the real "Cartesian split" between inner and outer reality, the separation whereby nature became merely something to be "worked." On this capacity for a sedentary and servile existence rests the entire superstructure of civilization with its increasing weight of repression.

Male violence toward women originated with agriculture, which transmuted women into beasts of burden and breeders of children. Before farming, the egalitarianism of foraging life "applied as fully to women as to men," judged Eleanor Leacock, owing to the autonomy of tasks and the fact that decisions were made by those who carried them out. In the absence of production and with no drudge work suitable for child labor such as weeding, women were not consigned to onerous chores or the constant supply of babies.

Along with the curse of perpetual work, via agriculture, in the expulsion from Eden, God told woman, "I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children; and that desire shall be to thy husband, and he shall rule over thee." Similarly, the first known codified laws, those of the Sumerian king Ur-Namu, prescribed death to any woman satisfying desires outside of marriage. Thus Whyte referred to the ground women "lost relative to men when humans first abandoned a simple hunting and gathering way of life," and Simone de Beauvoir saw in the cultural equation of plow and phallus a fitting symbol of the oppression of women.

As wild animals are converted into sluggish meat-making machines, the concept of becoming "cultivated" is a virtue enforced on people, meaning the weeding out of freedom from one's nature, in the service of domestication and exploitation. As Rice points out, in Sumer, the first civilization, the earliest cities had factories with their characteristic high organization and refraction of skills. Civilization from this point exacts human labor and the mass production of food, buildings, war and authority.

To the Greeks, work was a curse and nothing else. Their name for it—*ponos*—has the same root as the Latin *poena*, sorrow. The famous Old Testament curse on agriculture as the expulsion from Paradise (Genesis 3:17-18) reminds us of the origin of work. As Mumford put it, "Conformity, repetition, patience were the keys to this [Neolithic] culture...the patient capacity for work." In this monotony and passivity of tending and waiting is born, according to Paul Shepard, the peasant's "deep, latent resentments, crude mixtures of rectitude and heaviness, and absence of humor." One might also add a stoic insensitivity and lack of imagination inseparable from religious faith, sullenness, and suspicion among traits widely attributed to the domesticated life of farming.

Although food production by its nature includes a latent readiness for political domination and although civilizing culture was from the beginning its own propaganda machine, the changeover involved a monumental struggle. Fredy Perlman's *Against Leviathan! Against His-Story!* is unrivaled on this, vastly enriching Toynbee's attention to the "internal" and "external proletariats," discontents within and without civilization. Nonetheless, along the axis from digging stick farming to plow agriculture to fully differentiated irrigation systems, an almost total genocide of gatherers and hunters was necessarily effected.

The formation and storage of surpluses are part of the domesticating will to control and make static, an aspect of the tendency to symbolize. A bulwark against the flow of nature, surplus takes the forms of herd animals and granaries. Stored grain was the earliest medium of equivalence, the oldest form of capital. Only with the appearance of wealth in the shape of storable grains do the gradations of labor and social classes proceed. While there were certainly wild grains before all this (and wild wheat, by the way, is 24 percent protein compared to 12 percent for domesticated wheat), the bias of culture makes every difference. Civilization and its cities rested as much on granaries as on symbolization.

The mystery of agriculture's origin seems even more impenetrable in light of the recent reversal of long-standing notions that the previous era was one of hostility to nature and an absence of leisure. "One could no longer assume," wrote Arme, "that early man domesticated plants and animals to escape drudgery and starvation. If anything, the contrary appeared true, and the advent of farming saw the end of innocence." For a long time, the question was "Why wasn't agriculture adopted much earlier in human evolution?" More recently, we know that agriculture, in Cohen's words, "is not easier than hunting and gathering and does not provide a higher quality, more palatable, or more secure food base." Thus the consensus question now is, "Why was it adopted at all?"

Many theories have been advanced, none convincingly. Childe and others argue that population increase pushed human societies into more intimate contact with other species, leading to domestication and the need to produce in order to feed the additional people. But it has been shown rather conclusively that population increase did not precede agriculture but was caused by it. "I don't see any evidence anywhere in the world," concluded Flannery, "that suggests that population pressure was responsible for the beginning of agriculture." Another theory has it that major climatic changes occurred at the end of the Pleistocene, about 11,000 years ago, that upset the old hunter-gatherer life-world and led directly to the cultivation of certain surviving staples. Recent dating methods have helped demolish this approach; no such climatic shift happened that could have forced the new mode into existence. Besides, there are scores of examples of agriculture being adopted—or refused—in every type of climate. Another major hypothesis is that agriculture was introduced via a chance discovery or invention as if it had never occurred to the species before a certain moment that, for example, food grows from sprouted seeds. It seems certain that Paleolithic humanity had a virtually inexhaustible knowledge of flora and fauna for many tens of thousands of years before the cultivation of plants began, which renders this theory especially weak.

Agreement with Carl Sauer's summation that, "Agriculture did not originate from a growing or chronic shortage of food" is sufficient, in fact, to dismiss virtually all originary theories that have been advanced. A remaining idea, presented by Hahn, Isaac and others, holds that food production began at base as a religious activity. This hypothesis comes closest to plausibility.

Sheep and goats, the first animals to be domesticated, are known to have been widely used in religious ceremonies, and to have been raised in enclosed meadows for sacrificial purposes. Before they were domesticated, moreover, sheep had no wool suitable for textile purposes. The main use of the hen in southeastern Asia and the eastern Mediterranean—the earliest centers of civilization—"seems to have been," according to Darby, "sacrificial or divinatory rather than alimentary." Sauer adds that the "egg laying and meat producing qualities" of tamed fowl "are relatively late consequences of their domestication." Wild cattle were fierce and dangerous; neither the docility of oxen nor the modified meat texture of such castrates could have been foreseen. Cattle were not milked until centuries after their initial captivity, and representations indicate that their first known harnessing was to wagons in religious processions.

Plants, next to be controlled, exhibit similar backgrounds so far as is known. Consider the New World examples of squash and pumpkin, used originally as ceremonial rattles. Johannessen discussed the religious and mystical motives connected with the domestication of maize, Mexico's most important crop and center of its native Neolithic religion. Likewise, Anderson investigated the selection and development of distinctive types of various cultivated plants because of their magical significance. The shamans, I should add, were well-placed in positions of power to introduce agriculture via the taming and planting involved in ritual and religion, sketchily referred to above.

Though the religious explanation of the origins of agriculture has been somewhat overlooked, it brings us, in my opinion, to the very doorstep of the real explanation of the birth of production: that non-rational, cultural force of alienation which spread, in the forms of time, language, number and art, to ultimately colonize material and psychic life in agriculture. "Religion" is too narrow a conceptualization of this infection and its growth. Domination is too weighty, too all-encompassing to have been solely conveyed by the pathology that is religion.

But the cultural values of control and uniformity that are part of religion are certainly part of agriculture, and from the beginning. Noting that strains of corn cross-pollinate very easily, Anderson studied the very primitive agriculturalists of Assam, the Naga tribe, and their variety of corn that exhibited no differences from plant to plant. True to culture, showing that it is complete from the beginning of production, the Naga kept their varieties so pure "only by a fanatical adherence to an ideal type." This exemplifies the marriage of culture and production in domestication, and its inevitable progeny, repression and work.

The scrupulous tending of strains of plants finds its parallel in the domesticating of animals, which also defies natural selection and re-establishes the controllable organic world at a debased, artificial level. Like plants, animals are mere things to be manipulated; a dairy cow, for instance, is seen as a kind of machine for converting grass to milk. Transmuted from a state of freedom to that of helpless parasites, these animals become completely dependent on man for survival. In domestic mammals, as a rule, the size of the brain becomes relatively smaller as specimens are produced that devote more energy to growth and less to activity. Placid, infantilized, typified perhaps by the sheep, most domesticated of herd animals; the remarkable intelligence of wild sheep is completely lost in their tamed counterparts. The social relationships among domestic animals are reduced to the crudest essentials. Non-reproductive parts of the life cycle are minimized, courtship is curtailed,

and the animal's very capacity to recognize its own species is impaired.

Farming also created the potential for rapid environmental destruction and the domination over nature soon began to turn the green mantle that covered the birthplaces of civilization into barren and lifeless areas. "Vast regions have changed their aspect completely," estimates Zeuner, "always to quasi-drier condition, since the beginnings of the Neolithic." Deserts now occupy most of the areas where the high civilizations once flourished, and there is much historical evidence that these early formations inevitably ruined their environments.

Throughout the Mediterranean Basin and in the adjoining Near East and Asia, agriculture turned lush and hospitable lands into depleted, dry, and rocky terrain. In *Critias*, Plato described Attica as "a skeleton wasted by disease," referring to the deforestation of Greece and contrasting it to its earlier richness. Grazing by goats and sheep, the first domesticated ruminants, was a major factor in the denuding of Greece, Lebanon, and North Africa, and the desertification of the Roman and Mesopotamian empires.

Another, more immediate impact of agriculture, brought to light increasingly in recent years, involved the physical well-being of its subjects. Lee and Devore's researches show that "the diet of gathering peoples was far better than that of cultivators, that starvation is rare, that their health status was generally superior, and that there is a lower incidence of chronic disease." Conversely, Farb summarized, "Production provides an inferior diet based on a limited number of foods, is much less reliable because of blights and the vagaries of weather, and is much more costly in terms of human labor expended."

The new field of paleopathology has reached even more emphatic conclusions, stressing, as does Angel, the "sharp decline in growth and nutrition caused by the changeover from food gathering to food production." Earlier conclusions about life span have also been revised. Although eyewitness Spanish accounts of the sixteenth century tell of Florida Indian fathers seeing their fifth generation before passing away, it was long believed that primitive people died in their 30s and 40s. Robson, Boyden and others have dispelled the confusion of longevity with life expectancy and discovered that current hunter-gatherers, barring injury and severe infection, often outlive their civilized contemporaries. During the industrial age only fairly recently did life span lengthen for the species, and it is now widely recognized that in Paleolithic times humans were long-lived animals, once certain risks were passed. DeVries is correct in his judgment that duration of life dropped sharply upon contact with civilization.

"Tuberculosis and diarrheal disease had to await the rise of farming, measles and bubonic plague the appearance of large cities," wrote Jared Diamond. Malaria, probably the single greatest killer of humanity, and nearly all other infectious diseases are the heritage of agriculture. Nutritional and degenerative diseases in general appear with the reign of domestication and culture. Cancer, coronary thrombosis, anemia, dental caries, and mental disorders are but a few of the hallmarks of agriculture; previously women gave birth with no difficulty and little or no pain.

People were far more alive in all their senses. !Kung San, reported R.H. Post, have heard a single-engine plane while it was still 70 miles away, and many of them can see four moons of Jupiter with the naked eye. The summary judgment of Harris and Ross, as to "an overall decline in the quality—and probably in the length—of human life among farmers as compared with earlier hunter-gatherer groups," is understated.

One of the most persistent and universal ideas is that there was once a Golden Age of innocence before history began. Hesiod, for instance, referred to the "life-sustaining soil, which yielded its copious fruits unbribed by toil." Eden was clearly the home of the hunter-gatherers and the yearning expressed by the historical images of paradise must have been that of disillusioned tillers of the soil for a lost life of freedom and relative ease.

The history of civilization shows the increasing displacement of nature from human experience, characterized in part by a narrowing of food choices. According to Rooney, prehistoric peoples found sustenance in over 1500 species of wild plants, whereas "All civilizations," Wenke reminds us, "have been based on the cultivation of one or more of just six plant species: wheat, barley, millet, rice, maize, and potatoes."

It is a striking truth that over the centuries "the number of different edible foods which are actually eaten," Pyke points out, "has steadily dwindled." The world's population now depends for most of its subsistence on only about 20 genera of plants while their natural strains are replaced by artificial hybrids and the genetic pool of these plants becomes far less varied.

The diversity of food tends to disappear or flatten out as the proportion of manufactured foods increases. Today the very same articles of diet are distributed worldwide, so that an Inuit Eskimo and an African may soon be eating powdered milk manufactured in Wisconsin or frozen fish sticks from a single factory in Sweden. A few big multinationals such as Unilever, the world's biggest food production company, preside over a highly integrated service system in which the object is not to nourish or even to feed, but to force an ever-increasing consumption of fabricat-

ed, processed products upon the world.

When Descartes enunciated the principle that the fullest exploitation of matter to *any* use is the whole duty of man, our separation from nature was virtually complete and the stage was set for the Industrial Revolution. Three hundred and fifty years later this spirit lingered in the person of Jean Vorst, Curator of France's Museum of Natural History, who pronounced that our species, "because of intellect," can no longer re-cross a certain threshold of civilization and once again become part of a natural habitat. He further stated, expressing perfectly the original and persevering imperialism of agriculture, "As the earth in its primitive state is not adapted to our expansion, man must shackle it to fulfill human destiny."

The early factories literally mimicked the agricultural model, indicating again that at base all mass production is farming. The natural world is to be broken and forced to work. One thinks of the mid-American prairies where settlers had to yoke six oxen to plows in order to cut through the soil for the first time. Or a scene from the 1870s in *The Octopus* by Frank Norris, in which gang-plows were driven like "a great column of field artillery" across the San Joaquin Valley, cutting 175 furrows at once.

Today the organic, what is left of it, is fully mechanized under the aegis of a few petrochemical corporations. Their artificial fertilizers, pesticides, herbicides and near-monopoly of the world's seed stock define a total environment that integrates food production from planting to consumption. Although Lévi-Strauss is right that "Civilization manufactures monoculture like sugar beets," only since World War II has a completely synthetic orientation begun to dominate.

Agriculture takes more organic matter out of the soil than it puts back, and soil erosion is basic to the monoculture of annuals. Regarding the latter, some are promoted with devastating results to the land; along with cotton and soybeans, corn, which in its present domesticated state is totally dependent on agriculture for its existence, is especially bad. J. Russell Smith called it "the killer of continents...and one of the worst enemies of the human future." The erosion cost of one bushel of Iowa corn is two bushels of topsoil, highlighting the more general large-scale industrial destruction of farmland. The continuous tillage of huge monocultures, with massive use of chemicals and no application of manure or humus, obviously raises soil deterioration and soil loss to much higher levels.

The dominant agricultural mode has it that soil needs massive infusions of chemicals, supervised by technicians whose overriding goal is to maximize production. Artificial fertilizers and all the rest from this

outlook eliminate the need for the complex life of the soil and indeed convert it into a mere instrument of production. The promise of technology is total control, a completely contrived environment that simply supersedes the natural balance of the biosphere.

But more and more energy is expended to purchase great monocultural yields that are beginning to decline, never mind the toxic contamination of the soil, ground water and food. The U.S. Department of Agriculture says that cropland erosion is occurring in this country at a rate of two billion tons of soil a year. The National Academy of Sciences estimates that over one third of topsoil is already gone forever. The ecological imbalance caused by monocropping and synthetic fertilizers causes enormous increases in pests and crop diseases; since World War II, crop loss due to insects has actually doubled. Technology responds, of course, with spiraling applications of more synthetic fertilizers, and "weed" and "pest" killers, accelerating the crime against nature.

Another post-war phenomenon was the Green Revolution, billed as the salvation of the impoverished Third World by American capital and technology. But rather than feeding the hungry, the Green Revolution drove millions of poor people from farmlands in Asia, Latin America and Africa as victims of the program that fosters large corporate farms. It amounted to an enormous technological colonization creating dependency on capital-intensive agribusiness, destroying older agrarian communalism, requiring massive fossil fuel consumption and assaulting nature on an unprecedented scale.

Desertification, or loss of soil due to agriculture, has been steadily increasing. Each year, a total area equivalent to more than two Belgiums is being converted to desert worldwide. The fate of the world's tropical rainforests is a factor in the acceleration of this desiccation: half of them have been erased in the past thirty years. In Botswana, the last wilderness region of Africa has disappeared like much of the Amazon jungle and almost half of the rainforests of Central America, primarily to raise cattle for the hamburger markets in the U.S. and Europe. The few areas safe from deforestation are where agriculture doesn't want to go. The destruction of the land is proceeding in the U.S. over a greater land area than was encompassed by the original thirteen colonies, just as it was at the heart of the severe African famine of the mid-1980s, and the extinction of one species of wild animal and plant after another.

Returning to animals, one is reminded of the words of Genesis in which God said to Noah, "And the fear of you and the dread of you shall be upon every fowl of the air, upon all that moveth upon the earth, and upon all the fishes of the sea; into your hands are they delivered." When

newly discovered territory was first visited by the advance guard of production, as a wide descriptive literature shows, the wild mammals and birds showed no fear whatsoever of the explorers. The agriculturalized mentality, however, so aptly foretold in the biblical passage, projects an exaggerated belief in the fierceness of wild creatures, which follows from progressive estrangement and loss of contact with the animal world, plus the need to maintain dominance over it.

The fate of domestic animals is defined by the fact that agricultural technologists continually look to factories as models of how to refine their own production systems. Nature is banished from these systems as, increasingly, farm animals are kept largely immobile throughout their deformed lives, maintained in high-density, wholly artificial environments. Billions of chickens, pigs, and veal calves, for example, no longer even see the light of day much less roam the fields, fields growing more silent as more and more pastures are plowed up to grow feed for these hideously confined beings.

The high-tech chickens, whose beak ends have been clipped off to reduce death from stress-induced fighting, often exist four or even five to a 12" by 18" cage and are periodically deprived of food and water for up to ten days to regulate their egg-laying cycles. Pigs live on concrete floors with no bedding; foot-rot, tail-biting and cannibalism are endemic because of physical conditions and stress. Sows nurse their piglets separated by metal grates, mother and offspring barred from natural contact. Veal calves are often raised in darkness, chained to stalls so narrow as to disallow turning around or other normal posture adjustment. These animals are generally under regimens of constant medication due to the tortures involved and their heightened susceptibility to diseases; automated animal production relies upon hormones and antibiotics. Such systematic cruelty, not to mention the kind of food that results, brings to mind the fact that captivity itself and every form of enslavement has agriculture as its progenitor or model.

Food has been one of our most direct contacts with the natural environment, but we are rendered increasingly dependent on a technological production system in which finally even our senses have become redundant; taste, once vital for judging a food's value or safety, is no longer experienced, but rather certified by a label. Overall, the healthfulness of what we consume declines and land once cultivated for food now produces coffee, tobacco, grains for alcohol, marijuana, and other drugs, creating the context for famine. Even the non-processed foods like fruits and vegetables are now grown to be tasteless and uniform because the demands of handling, transport and storage, not nutrition or pleasure,

are the highest considerations.

Total war borrowed from agriculture to defoliate millions of acres in Southeast Asia during the Vietnam War, but the plundering of the biosphere proceeds even more lethally in its daily, global forms. Food as a function of production has also failed miserably on the most obvious level: half of the world, as everyone knows, suffers from malnourishment ranging to starvation itself.

Meanwhile, the "diseases of civilization," as discussed by Eaton and Konner in the January 31, 1985 *New England Journal of Medicine* and contrasted with the healthful pre-farming diets, underline the joyless, sickly world of chronic maladjustment we inhabit as prey of the manufacturers of medicine, cosmetics, and fabricated food. Domestication reaches new heights of the pathological in genetic food engineering, with new types of animals in the offing as well as contrived microorganisms and plants. Logically, humanity itself will also become a domesticated of this order as the world of production processes us as much as it degrades and deforms every other natural system.

The project of subduing nature, begun and carried through by agriculture, has assumed gigantic proportions. The "success" of civilization's progress, a success earlier humanity never wanted, tastes more and more like ashes. James Serpell summed it up this way: "In short we appear to have reached the end of the line. We cannot expand; we seem unable to intensify production without wreaking further havoc, and the planet is fast becoming a wasteland."

Physiologist Jared Diamond termed the initiation of agriculture "a catastrophe from which we have never recovered." Agriculture has been and remains a "catastrophe" at all levels, the one which underpins the entire material and spiritual culture of alienation now destroying us. Liberation is impossible without its dissolution.