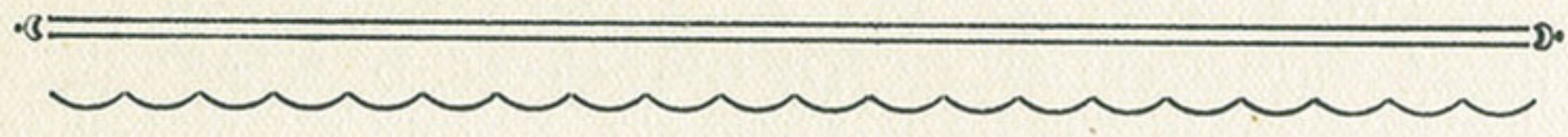


CIVILIZATION
JAMES HARVEY ROBINSON



George Washington



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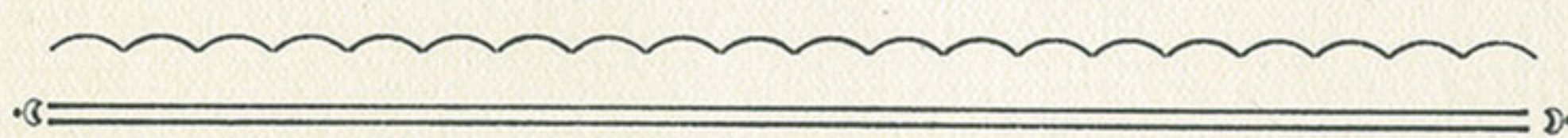
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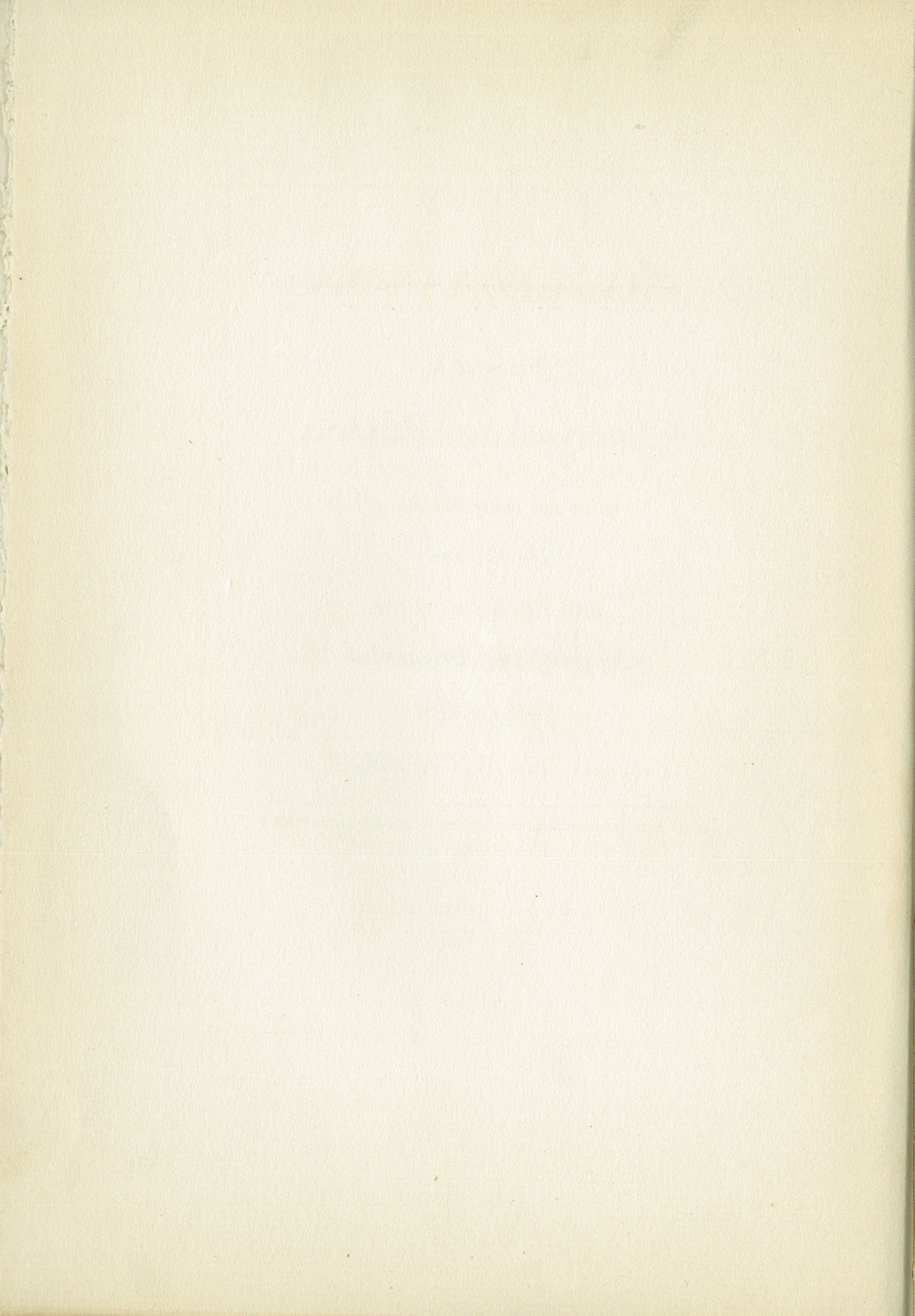
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CIVILIZATION

By

JAMES HARVEY ROBINSON

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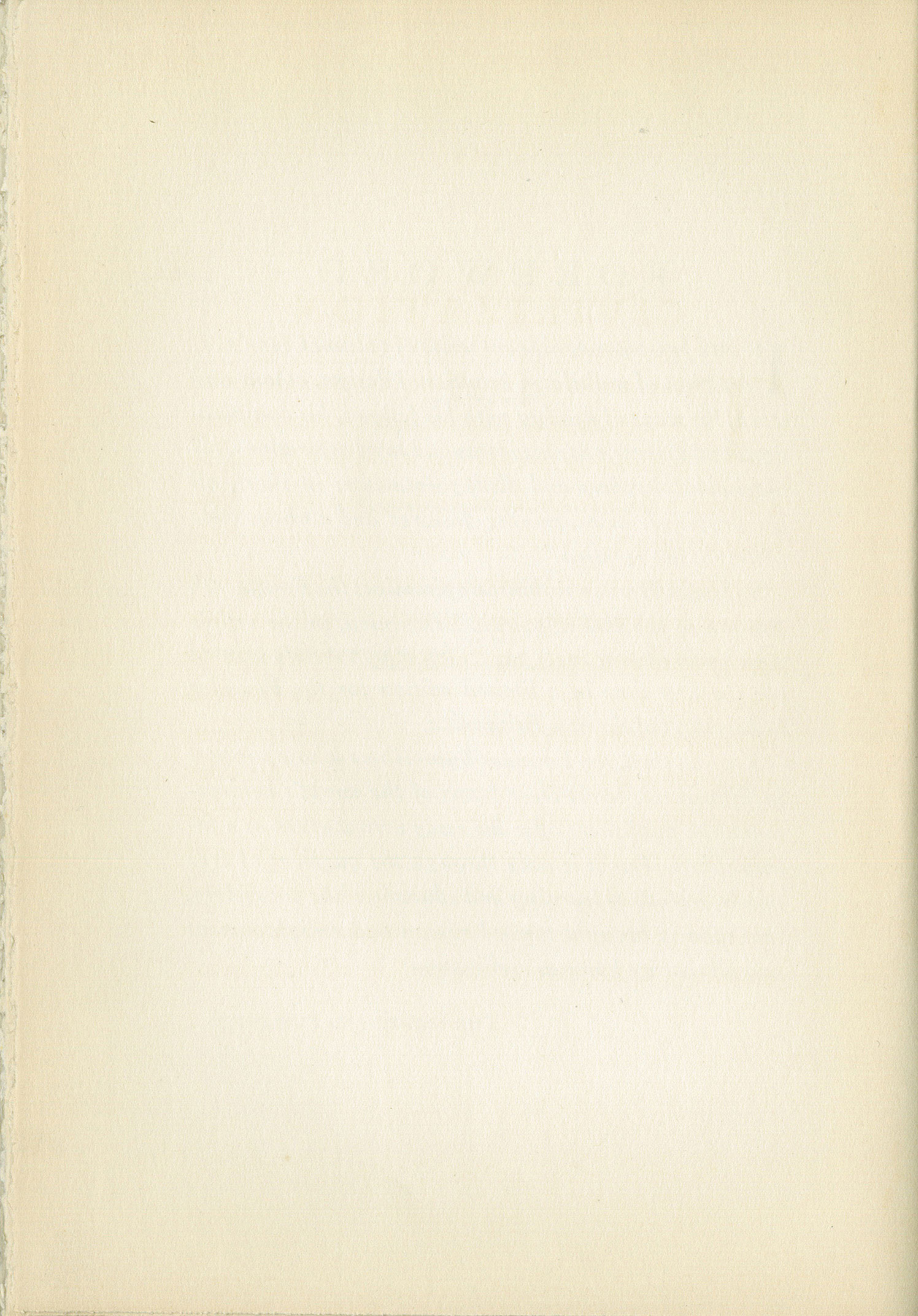
F O R E W O R D

“**I**N THE present magnificent series of volumes, man’s . . . creation of multiform beauties of design, colour and word, his ways of dealing with his fellows, his co-operations and dissensions; his ideals and lofty aspirations, his inevitable blunders and disappointments; in short, all his gropings, disheartening failures and unbelievable triumphs are recalled.”

So James Harvey Robinson epitomizes the Fourteenth Edition of the *Encyclopædia Britannica*, in the article which will appear in its pages; but which is here printed for the first time in a limited edition for the Founder Subscribers of the new *Britannica*.

To you, then, the Founder Subscribers whose support facilitated this latest clear focus of the world’s achievement, the publishers offer his essay CIVILIZATION as a fitting token. For it is only through the auspices of free minds, friends of learning and education like yourselves, that man is brought toward reason and enlightenment and all that we know as civilization.

THE EDITORS AND PUBLISHERS



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THE ENCYCLOPÆDIA BRITANNICA is in itself a description of civilization, for it contains the story of human achievement in all its bewildering developments. It shows what men during hundreds of thousands of years have been learning about themselves, their world and the creatures which share it with them. They have reached out into remote space and studied nebulae whose light reaches them after a million years; they have, on the other hand, dissected atoms and manipulated electrons as they might handle pebbles. In the present magnificent series of volumes man's inventions are reviewed from the rudest chipped flint to the most delicately adjusted microscope; his creation of multiform beauties of design, colour and word, his ways of dealing with his fellows, his co-operations and dissensions; his ideals and lofty aspirations, his inevitable blunders and disappointments; in short, all his gropings,

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disheartening failures and unbelievable triumphs are recalled.

Several thousand contributors have been brought together to do each his special part in writing some thirty-five million words on what mankind has hitherto done and said. It might therefore seem at first sight superfluous, and indeed impossible, to treat civilization itself as a separate topic in a few pages. But there is danger that owing to the overwhelming mass of information given in these volumes certain important underlying considerations may be lost sight of. There are highly significant questions concerning the nature and course of human development, the obstacles which have lain in the way of advance; the sources of success and frustration, which could hardly be brought together in dealing with any of the special aspects of human culture. Accordingly an attempt will be made under this caption to scan civilization as a single, unique and astonishing achievement of the human species.

To begin with, it is a startling fact that civilization, which sets off man in so astounding a manner from all other

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animals, should only lately have begun to be understood. We are immersed in it from infancy; we take it for granted, and are too near it to see it, except in this detail and that. Even to-day, with all our recently acquired knowledge, those who strive most valiantly in imagination to get outside civilization so that they may look upon it dispassionately and appraise it as a whole, are bewildered by its mysteries. As for the great mass of intelligent people, they still harbour many ancient illusions and misapprehensions from which they can only be weaned with great reluctance.

The object of the present article is to describe the newer ways of viewing civilization, its general nature, origin, progress, transmission and chief developments, in the light of information which has been accumulating during the past fifty or sixty years. The study of man himself has been revealing quite as many revolutionary facts and hypotheses during the past half century as the scientific investigation of the world in which he lives. The history of human achievement has been traced back, at least in vague outline, hundreds of thousands of years; man's original uncivilized

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nature and equipment have been studied and compared with the behaviour of his nearer relatives; new conjectures have emerged in regard to the functioning of speech and the nature and origin of human reasoning; careful investigations of primitive civilizations have cast great light on more complicated ones; the tremendous importance of childhood and its various implications in the development of civilization have been elaborated.

These and many other discoveries conspire to recast our conception of civilization, its past progress and its future possibilities.

It is instructive to note that the word civilization is by no means an old one. Boswell reports that he urged Dr. Johnson to insert the term in his dictionary in 1772, but Johnson refused. He preferred the older word "civility." This, like "urbanity," reflects the contempt of the townsman for the rustic or barbarian; it is an invidious term, although in a way justified by the fact that only where cities have grown up have men developed intricate civilizations. The arduous and dispersed tasks of the hunter, shepherd and peasant

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folk do not afford the leisure, or at least the varied human contacts, essential to the generation of new ideas and discoveries.

But modern anthropologists have pointed out that peoples without cities, such as the tribes of Polynesia and the North American Indians, are really highly "civilized," in the sense that upon sympathetic examination, they are found to have subtle languages, ingenious arts, admirably suited to their conditions, developed institutions, social and political; religious practices and confident myths, no better and no worse substantiated than many that prevail to-day among the nations of Europe. All these betoken and presuppose a vastly long development. Among English speaking people the first to point this out clearly was E. B. Tylor, who published his famous *Primitive Society*, in 1871, the same year in which Darwin's *Descent of Man* appeared. These two books would alone have served, by different approaches, to give the word civilization a far more profound meaning than it had ever had before.

There could be no real understanding of the fundamental

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characteristics of civilization until the fact was well established and digested that could we trace back man's lineage far enough we should find it merging into that of wild animals, without artificial shelters, clothes or speech; dependent for sustenance on the precarious daily search for food. It requires a considerable effort of the imagination to picture the human race without these seeming necessities of even primitive civilization.

Without fire and tools men must have existed as did a wild girl discovered near Châlons, France, in 1731. She possessed a monkey-like agility which enabled her to catch birds and rabbits; these she skinned with her nails and gobbled raw, as would a dog. She delighted to suck the blood from living pigeons, and had no speech except hideous screams and howls.

NEW CONCEPTION OF CIVILIZATION

This conception of man's former animal existence is gradually supplanting the older one, based upon ancient Hebrew tradition, that the first man and first woman were special creations with fully developed minds, speech and

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reason, which enabled them forthwith to dress the garden in which they found themselves, to name its animal denizens, and to talk with one another, and with God himself in the cool of the evening. This view is still passively accepted by an overwhelming majority of Americans and Europeans and is at present hotly defended by a powerful group in the United States.

The former assumption was that man was *by nature* endowed with a *mind* and with *reason*. These distinguished him sharply from the animals, which did wondrous things it is true, but not as a result of reason. Their behaviour was guided, it was argued, by instinct. Darwin says that "the very essence of an instinct is that it is followed independently of reason." But if we agree, as manifold evidence seems to force us to do, that long, long ago men behaved and lived like wild animals, are we not forced to ask if they did not live wholly according to what Darwin calls "instincts"? And if once upon a time our ancestors lived solely by their animal equipment, did they as yet have a mind and reason? May not the human mind be something that has very grad-

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ually developed as a result of man's peculiar animal make-up and capacities? May not his reason be but another name for his slowly accumulated knowledge and beliefs and his ways of dealing with them and building upon them? In any case the discovery that our ancestors once lived like wild animals raises entirely new and difficult questions as to the nature, origin and interpretation of those powers of his known as mind and reason, which have enabled him to seek out those inventions and come upon beliefs and practices which have produced in the aggregate civilization.

In short, it seems to be more and more apparent that mind and reason were not part of man's original equipment, as are his arms and legs, his brain and tongue, but have been slowly acquired and painfully built up. They are themselves *inventions*—things he has come upon. Like other inventions *they are part and parcel of civilization*—not innate in man but dependent for their perpetuation on education in the widest sense of that term. This is so novel an idea that many readers may find it difficult to grasp, but when grasped it alters one's whole estimate of human progress.

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We ordinarily think of civilization as made up of mechanical devices, books and pictures, enlightened religious ideas, handsome buildings, polite conduct, scientific and philosophical knowledge, social and political institutions, ingenious methods of transportation and the rest. We think that all these things are due to man's possession of a mind, which no animal has, and as a result of the exercise of reason. In a way this is true enough, only we must reconceive mind and reason and regard them just as truly a part of the gradual elaboration of civilization as a House of Commons or a motor car, and quite as subject to improvement. At the risk of making a seemingly irrelevant philosophical digression, which is really most essential to a modern understanding of civilization, something may be said of the newer conception of mind and its variant, reason.

The word mind was originally a verb, not a noun; it meant action, not a thing or agent. It was remembering and purposing, and taking note of—as for instance “I minded”—that is, remembered, or paid attention to, or was concerned by. But as time went on philosophers made a noun of

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the good old verb. It was conceived as that incorporeal substance which was the seat of a person's consciousness, thoughts, feelings, and especially of his reasoning. The body was set over against the mind whose orders it was supposed to execute. The Scottish philosopher of common sense, Reid, says explicitly that "we do not give the name of mind to thought, reason or desire; but to that power which both perceives and wills." Even John Stuart Mill says in his *Logic* that "mind is the mysterious something which feels and thinks."

Recently there has been a tendency to reduce the noun mind once more to a series of verbs—desiring, remembering, feeling, thinking, distinguishing, inferring, planning—and to regard the assumption of "a mysterious something" as unfounded, unnecessary and a serious embarrassment. Relieved of this embarrassment it is possible to begin to bridge the gulf between the original behaviour of the human race and that of mankind to-day. Descartes and all the older philosophers believed that man had always had a mind as good as theirs. They sought to tell him how to employ it in

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the pursuit of truth. Mind was to them a sort of divine instrument, conferred solely upon man, that could be sharpened and efficiently used by following the laws of logic; but they could not think of it as something accumulated, so to speak, through the many thousands of years since man made his first contributions to the upbuilding of civilization.

The way is now cleared for a new view of civilization which would not have been possible 50 or 60 years ago. Civilization is no longer contrasted with "rusticity," "barbarity" or "savagery," but with man's purely animal heritage. Modern men are still animals, they have to eat and sleep, protect themselves from the inclemencies of the weather, and defend themselves from attacks of their fellow creatures and other animals, and to rear a new generation, if the species is to be perpetuated. They closely resemble kindred animals in much of their physical structure, in their important organs, breathing, digestion and the circulation of their blood. All these peculiarities are hereditarily transmitted no matter how much or how little men may be civilized. On the other hand, civilization—language, religion,

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beliefs, morals, arts, and manifestations of the human mind and reason—none of these can be shown to be handed down as biological traits. They can only be transmitted to a new generation by imitation or instruction.

All mankind to-day has a double heritage. The one comes to us without any effort on our part, as do the spider's peculiar characteristics or those of birds, or of any of our fellow mammals, come to them. It is secure and tends to remain the same for thousands of years. Civilization, on the other hand, is precarious; it must be assimilated anew by each one of us for himself in such a degree as circumstances permit. It can increase indefinitely but it may also fall off tremendously, as the history of man amply testifies. It is a legacy that can be lost as well as kept and increased.

To illustrate: it may be that before human beings had acquired any of this loseable thing, civilization, they would pick up a stick to strike an assailant or hurl a stone at him. They might have found themselves riding astride floating tree trunks to cross a stream. Certain persons would occur, let us say, in each generation who would do all these things

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without ever having seen them done. These acts would be classed in man's animal heritage. But should we find traces of men who chipped a flint nodule into a hatchet head, and hollowed out their log with such a hatchet, or with fire, we should have to class these acts among the arts of civilization since they presuppose so much accumulated experience and ingenuity that they could not be inborn. The art of making a rude boat might consequently be wholly lost, as surely many inventions must have lapsed, if a single generation passed without constructing one. It seems now an imperative fact that all civilization—the total social and traditional heritage, would fall away immediately and completely should a thoroughgoing forgetfulness, an overwhelming amnesia and profound oblivion overtake humanity. Only their natural equipment would be left. As Graham Wallas suggests, those least civilized would have a possible chance of surviving. It is only uncivilized man that might go on indefinitely. We are all by nature wild animals *plus*; and our taming weakens us for the ancient struggle in the forest, naked and barehanded.

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PECULIAR ITEMS OF MAN'S BODILY FORM

At this juncture the question arises, what was there peculiar in man's physical make-up that enabled him to initiate civilization and build up a mind which he could use to increase his resources so far beyond that of any other animal? Before proceeding we should recollect that the ways of all living creatures are manifold and astonishing. Even a single-celled organism can marvellously adjust itself to altered conditions. It seems to learn by experience, it appears to have a sort of memory, it is modified by happenings which interrupt its comfortable routine. It is ingenious in defending itself, in seeking food and reproducing. It is, in short, purposive in its conduct. The tiger and the frog are able to adjust themselves to very different modes of life, and so are the orioles and cacti. Before man began to accumulate civilization we are forced to assume that he too made terms with the daily need of adjustment which faced him, otherwise we should not be here to write the tale. These are the salient essentials of *Life*, and man is a part of what Julian Huxley calls "the stream of life." All these possibili-

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ties lay behind the development of man's intelligence. They are the hinterland from which civilization emerged and to which it ever tends to retreat.

In order to begin and carry on the accumulation of civilization, man had of necessity to be so constructed physically that he could *perceive* more clearly than his predecessors, make more accurate distinctions and so remember and imagine better; for all these are essential to talking and thinking. The awareness of animals is of a low, vague type, and so must pristine man's have been. The one-celled animals behave in a purposive way, but they have no eyes or ears or noses. They must live in silence and darkness like a human blind, deaf mute. They will nevertheless take in certain food, and reject other things. They perceive and act without, so far as we can see, being conscious of their actions. They make the necessary decisions without deciding in a human sense. They have no nervous system, but, as has lately been discovered, the promise of one. The creatures most like ourselves have eyes, ears and noses, and evidently see, hear and smell; and they have an elaborate nervous system. Of these

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resources they make constant use. But compared with man they are ill-qualified to make careful distinctions and discriminations and remember clearly. They take note of far fewer factors in their situation. They must act somewhat as our digestive system does. It is a sort of animal within us which performs wondrous feats when given food. It works purposively, as does our heart and blood circulation. We can become *conscious* of these unconscious achievements when we choke, because the switch is not thrown promptly enough to prevent a morsel from going down our windpipe instead of taking the route to the stomach. Palpitation of the heart is a conscious suggestion of the faithful pump, which rarely reminds us of its constant attention to business. Let it neglect two or three beats and we are dead.

The essentials of man's physical equipment for initiating and piling up civilization have been dwelt upon by many writers. He has sensitive hands, and (after he got securely on his hind legs) he could use them far more freely than if he had to employ them as auxiliary feet. His thumb can be readily placed against any one of his fingers. There is no

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such expert feeler and handler as he to be found among his kindred. He could learn much of shape and form, of softness and hardness, of weight, texture, heat and cold, toughness, rigidity and flexibility, which could be but vaguely sensed with hoof or paw. Had he had ears that he could turn about like a jack-rabbit, and a prehensile tail, he might have been able to learn faster. And all these things were the beginning of knowledge. He could not only strike but hurl. His eyes were so placed that he was always looking through a stereoscope, so to speak, and seeing things in the round. His vocal organs promised a great range of delicate discrimination in the sounds he made. Then he was a helpless dependent for many years on his elders so that their acquired ways could become his.

Lastly there is man's brain with its complex cerebral cortex and its association paths, which develop astonishingly as a child grows up. The cortex is the prime correlator of impressions, and is modified through individual experience in a higher degree than any other part of the nervous system. Its functioning is still very mysterious, but no one doubts its

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essential rôle in the process of human learning and the increase of intelligence. Its operations are not, however, autonomous but closely associated with the experiences of the whole human organism and dependent on those singular capacities of mankind already mentioned.

So it becomes apparent that after hundreds of millions of years during which nature's experiments have been going on in physical structure and function, which have enabled creatures of the most diverse types to meet the absolute requisites of life—growing up and reproducing their species—a kind of animal finally appeared on the earth so constructed that he could become civilized. Man's biological make-up represents a unique combination of physical characteristics. Most of these, as we have seen, occur in other mammals. Even those which seem peculiar to him would not serve, however, as a foundation for the development of civilization except in a highly complex union. Cows might have a human cerebral cortex, foxes appposable thumbs, birds stereoscopic eyes, dogs vocal organs similar to ours, and yet civilization would be far beyond their reach. Man can teach

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all of them tricks. They themselves can learn something as their life goes on. Chimpanzees may under favourable circumstances, as Köhler has shown, make very simple, human-like inferences; but none of them could initiate and perpetuate the arts and sciences as a heritage of their species.

PROGRESS AND CONSERVATISM

Such then was man's original equipment for getting civilized. He had, obviously, no means of foreseeing the enterprise in which he was engaged. His evolution as a civilized being was no more premeditated than his rise from earlier simian ancestors. There seems to be sufficient evidence that for hundreds of thousands of years changes in his mode of life were so gradual and rare as to pass unperceived. Each generation accepted the conditions in which it was reared without thought of betterment. Our modern hope of "progress"—an indefinite increase of human knowledge and its application to the improvement of man's estate—was practically unknown even to the Greeks and Romans. From the 13th century onward a few writers dwelt

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upon the promise of the future, but they were out-clamoured by those convinced that human woes were attributable to a departure from ancient standards. The Humanists strove to re-establish the wisdom of the classical writers, and the Protestants sought to revive the beliefs and practices of the early Christians. Only three centuries ago did Bacon unroll a programme of aggressive search for the hitherto unknown, which had any very wide influence. In the 18th century the conception of reform and progress found illustrious spokesmen, and their anticipations of coming changes in the economy of human life were destined, as it proved, to be far outrun by the events of the 19th and early 20th centuries.

We can, however, still note on all hands illustrations of man's confidence in routine sanctified by ancient authorities; his suspicion of innovation in wide realms of belief and practice. This dogged obstinacy in clinging to his habits; his general suspicion of the unfamiliar, are exactly what might have been anticipated when we consider his animal origin. This trait has served to slow down the proc-

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ess of change, but at the same time has greatly increased the security and permanence of each achievement. Here we find a possible explanation of the great rôle that the veil of sacredness has played in man's development. He has cast it over beliefs and practices and so hid them from pert scrutiny and criticism. The number of those who can tolerate somewhat critical thinking here and there has, nevertheless, greatly increased of late, but they are still few indeed. What we call to-day a conservative or reactionary mood must have been characteristic of mankind from the beginning. It corresponds to animal inclinations.

Among animal proclivities there is, however, from the one-celled organisms upward, a life-saving tendency to make random movements, extensions and contractions, to hasten hither and thither, in the pursuit of food and mates. This restlessness and groping are among man's legacies also. They offset his routine and static habits, and lie behind and back of the inventions and discoveries he has made. There is, too, especially obvious among the higher animals, something auguring what in man becomes curi-

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osity. The danger of attack made preliminary scouting a valuable asset in survival. So men were by nature wont to pry and try and fumble, long before they scientifically analyzed and experimented.

There can be no doubt that hundreds of thousands of years were required for man to reach even the lowest degree of culture to be found among the simplest tribes to-day. The discovery of fossil skulls, teeth and bones at different geological levels shows that more or less ape-like men have been on earth for from half a million to a million years. Several species, such as the Java man, the Heidelberg man and the much later Neanderthal race are now extinct. The only vestiges of their handiwork consist in chipped flint tools, becoming better made and more varied as time went on. There is no way of telling what other arts, beliefs and practices were associated with a particular assortment of flint utensils. Sollas, in his *Ancient Hunters*, has sought to draw ingenious analogies between these prehistoric weapons and the civilizations of the Tasmanians, Australians, Eskimos, etc.

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The so-called Cro-Magnon race had finely developed skulls quite as good as those of to-day. To them are ascribed the remarkable paintings and drawings found in caves of southern France and northern Spain. They are believed to be from 25 to 30 thousand years old. Halving this period we come upon traces of ground and polished stone tools, coincident with the relinquishment of hunting as man's exclusive pursuit and a settling down to sow and reap, spin and weave. Halving it again, we get news of the use of copper, the precursor of the metals on which our civilization largely rests. This can but be a rough chronology subject to much revision as time goes on and the earth is more thoroughly searched for evidences of man's past.

To get the matter clearly before one, let us imagine, as the writer has suggested elsewhere, that 500,000 years of developing culture were compressed into 50 years. On this scale mankind would have required 49 years to learn enough to desert here and there his inveterate hunting habits and settle down in villages. Half through the fiftieth year writing was discovered and practised within a very limited area,

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thus supplying one of the chief means for perpetuating and spreading culture. The achievements of the Greeks would be but three months back, the prevailing of Christianity, two; the printing press would be a fortnight old and man would have been using steam for hardly a week. The peculiar conditions under which we live did not come about until Dec. 31 of the fiftieth year.

There is a school of anthropologists, the diffusionists, who would derive all the higher types of civilization—writing, metallurgy, the construction of imposing stone buildings—from a single region, Egypt. They have collected much evidence to show that through the commerce of the Phoenicians, Egyptian inventions spread eastward into India, China and Japan, then across the Pacific to form the basis of Maya culture in Central America. The merits of the “diffusionist” arguments cannot be considered here. G. Elliot Smith, one of the best known advocates of this theory, dwells on the common lack of inventiveness and the reluctance of mankind to adopt new ideas, his tenacious hold on old ones and “his thick armour of obstinacy.” “To obtain

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recognition of even the most trivial of innovations it is the common experience of almost every pioneer in art, science or invention to have to fight against a solid wall of cultivated prejudice and inherent stupidity.”

All anthropologists are well aware of this hostility to change, which we may regard, as shown above, as a natural trait of mankind. They also admit the wide dissemination of inventions through commerce and conquest. Nevertheless many maintain that the same or similar discovery has been made independently in different parts of the earth, as the result of similar needs and conditions. When we have examined the exigencies of successful inventions in the following section we shall see that however commonplace they are now, with the accumulation of the past to build upon and modern facilities to work with, they were beyond measure difficult at the start when mankind still led the life of an animal. When once made and adopted by some tribe it is far easier to think of them as being introduced to other peoples than to assume that their presence represents an independent discovery.

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Civilization depends upon the discoveries and inventions man has been able to make, together with the incalculable effects these have had upon his daily conduct, thoughts and feelings.

As knowledge and ingenuity increased he departed further and further from his original wild animal life. The manner in which he began to learn is a matter of conjecture, since the manufacture of tools and weapons, the invention of language and artificial ways of producing fire, far antedate any written accounts of advances in man's education. The same may be said of the much more recent spinning, weaving and farming. As we have seen, it required hundreds of thousands of years to reach the degree of civilization represented by these achievements. Their importance, however, cannot be overestimated, since they formed the absolutely essential basis of all later developments. We may feel a certain pride in contemporary inventions, but let us remember that we owe to savage hunters and illiterate neolithic farmers the accumulation of knowledge and skill without which none of our modern experimentation would be possible.

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Where would we be without fire, speech, clothes and bread?

Since invention, discovery and the increase of knowledge are the stuff of which civilization is made, it is pertinent to our theme to consider how they occur. There is plenty of evidence available in the reports which discoverers now make of the manner in which they reach their conclusions. There is also evidence of how their results are received and acted upon by others. All explorers must be exceptionally curious and at the same time patient gropers. The curiosity observable in most children tends to die away, but survives in one form or another in rare instances through life. These exceptional persons possess a drive alien to their fellows. They may be the handyman of a village or a member of a highly endowed research staff. They avail themselves of what has already been found out; the village mechanical genius does not have to invent a monkey-wrench or bit of insulating tape, nor does the biologist need to know much about the optical principles of his lenses, much less invent or manufacture them. The geologist before he makes any discoveries is familiar with hundreds of treatises on his subject.

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It would be generally conceded by investigators that their discoveries are seemingly accidental. They do not know what they are going to find, and quite commonly find what they were not looking for, even as Saul, chasing lost asses, came upon a kingdom. All this applies to every kind of increase of knowledge, whether it have to do with the operations of so-called Nature or with novel suggestions in the realms of philosophy or art. All are the result of curiosity, patient examination and thought. At best they are no more than footnotes and glosses added to existing human knowledge. This is now so varied and voluminous that no single person can compass it except in this detail and that. Should he attempt to do so, all chance of adding to it would be excluded.

But an invention or discovery or the rectification of an ancient error, does not become a part of civilization until it has been accepted by the tribe and been added to its habits of action and thought. Plenty of shocking tales could be recalled of professional and popular opposition to innovations on grounds which now seem grotesque. We owe discov-

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eries to individual men and women, but new information and skill can only be propagated and disseminated in a favourable culture medium. Many instances could be cited of promising knowledge which has so far failed to get a footing in civilization.

The influence of particular discoveries and mechanical devices is by no means confined to their more immediate and obvious applications. It is impossible to foresee what wide-ranging effects they may ultimately exert on human life. Fire will cook a meal, harden an earthen bowl, keep a group of naked savages warm, frighten off prowling animals, soften or melt metals; it may also consume sacrifices to the gods, or form the central interest of a stately temple and be replenished by an order of vestal virgins. It may play its part in the symbolism of the theologian and the poet. The Indians of the North American plains were deeply affected by the introduction of the horse, and African tribes by firearms and whisky. The motor car and telephone altered social relations. The perfecting of the steam engine revolutionized the transport of men and their wares; it promoted

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city life; further, it caused Marx to write a big book which became the gospel of a momentous social upheaval, which threatened the peace of mind of all nations.

The invention of clothes—quite material things, whether of linen, wool, silk or cotton—not only created great industries but enabled men by changing their hide artificially to establish social distinctions akin to biological genera and species. Through clothes entered in prudery and the pious horror of bare bodies which has wrought consternation and disaster among the dark-skinned folk. After the World War women's skirts were gradually shortened. The warmth of houses and vehicles permitted this. One of the conventional distinctions between girls and women was thus obliterated. The unveiling of women's faces in Mohammedan countries, the breaking down of *purdah* in India—all these material changes imply modifications of woman's life and of the attitude of the sexes to one another. They forecast further important changes in traditional civilization.

In view of these facts, and indefinitely more that each one can easily add for himself, it would seem that what are

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esteemed the "nobler" aspirations and creations of mankind, whether in art and literature or the pursuit of truth, are all not only dependent upon "material" inventions but so strangely interwoven with them and their effects that it is no easy thing to separate the higher and the lower, except in imagination. What is sometimes called "the higher life of man" arises from his more humble and practical knowledge and skill; accordingly the old distinction between the material and spiritual seems to be greatly attenuated as they are both seen to merge into the newer conception of civilization as a whole. This will become even more apparent when we come to deal with words.

RÔLE OF CHILDHOOD

One of the essential conditions for the perpetuation of civilization is the long period of dependence through which the human child must pass before it gains sufficient bodily strength and intelligence to achieve merely animal self-sufficiency and make its own way. Without the constant and prolonged succour of adults it would speedily perish.

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This means that the extended period of helpless susceptibility to his surroundings makes it possible vastly to modify a child's original disposition. A mouse is sexually mature in six weeks and fully grown in three months. Calves and colts walk about shortly after birth. The gorilla, on the other hand, has a prolonged childhood, requires ten or twelve years before it is able to breed, and goes on growing, like man, for a few years after. He lacks, however, in spite of his prolonged childhood, the other essential traits which have enabled mankind to initiate, increase and transmit civilization.

We are all born uncivilized and would remain so through life were we not immersed in civilization. There is a long time in which we may, according to the place where we are born, be moulded into a well authenticated Papuan, Chinaman, or Parisian. We cannot choose whether we shall find ourselves talking like a Hottentot, a Russian or a German. And we learn to do in all things as those do among whom we are brought up. We cannot but accept their respective customs, scruples, and ideas, for all these are imposed upon us

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before we have any choice or discretion. We must perforce follow the ways of our elders, who themselves were once children and gained their civilization before any discrimination or comparison with other than the prevailing habits was possible. This is the inexorable rule, and it accounts for many of the striking characteristics of civilization.

If the assimilation of culture is closely associated with the dependence and adaptability of childhood there need be no great surprise that accumulating evidence seems to indicate that when bodily maturity is once reached, the increase of knowledge and intelligence slackens or even almost ceases in many cases. By 13 or 14 the child has acquired an overwhelming part of the knowledge, impressions, cautions and general estimates of his fellow creatures and the world in which he lives, which he continues to harbour with slight modifications during his lifetime. When as a result of the participation of the United States in the World War it became necessary to test the competence of a great number of young men an unforeseen contribution was made to our insight into civilization. Of the 1,700,000 examined, 45% did

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not show themselves (to quote an eminent authority, Dr. Henry H. Goddard) "much above the 12-year-old limit." Those tested, it must be remembered, did not include idiots or "morons," but the average run of youths accepted by their fellows as normal. While tests may be as yet inadequate they but confirm the observable fact that the inculcation of culture is associated with bodily growth and especially with the strange changes in the cells of the forebrain and their intercommunications. These developments are tremendous from infancy to maturity in so-called normal cases.

Only in exceptional instances does mind-building continue steadily after childhood and adolescence. We have had time before 13 to take over the standardized sentiments of our elders, to learn all that they know, to accept their views of religion, politics, manners, general proprieties and respectabilities. The common run of mankind can, however, be taught tricks as time goes on and acquire special expertness. But a great part of our childish conceptions retain a permanent hold on us. There is usually little encouragement to alter them. We leave most of them unrevised,

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though we have to make adjustments as the years elapse. Human beings seem on the whole easily subdued to routine and the routine is established, as it would seem, by the time we are grown up. That the *ability* to learn, however, falls off very slowly after adulthood has been recently shown by E. L. Thorndike.

The experts in advertising, the publishers of "tabloid" newspapers and the contrivers of moving picture films seem to conform to the supposition that what appeals to a 12- or 13-year-old child is admirably adapted to the intelligence and tastes of the multitude. This means that the overwhelming majority of men and women assimilate in childhood the common and familiar forms of civilization or culture in the midst of which they find themselves, but hardly outrun them as life goes on. Perhaps one in a hundred may allow his opinions to be altered by assiduous reading, or take pains to cultivate his insight into art and literature and scientific discoveries. But all these and other contributions to one's personal civilization are outside the range of the human animal in general. Indeed the mere up-

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keep of our present complicated culture must depend upon a very trifling percentage of the population. Were a few thousand carefully selected infants in the various progressive countries of the world to be strangled at birth not only would advances in industry, arts and letters cease but a decline would set in owing to the lack of those to make the essential readjustments in our industries and their financing; to keep up laboratories and books at their present standards. Accordingly the great majority of human beings can barely maintain at best the civilization in which they were reared. Even the innovators considered above are unable to escape from the toils in which they were so easily enmeshed and which they regard not as entanglements and restraints but as comforts and assurances. It would be faithless and disloyal to regard them otherwise. Only peculiar temperaments under highly favourable conditions question what they have been taught. They can do this only on a most modest scale as a result of continued curiosity and study. A physicist may reach a new theory of the constitution of atoms and yet cling stolidly to the notions of religion he had

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acquired at ten years of age; he may even engage in subtle philosophical speculation and remain a hot defender of the *mores* of the most commonplace persons 50 years ago.

If these points be well taken the whole contrast between Society and the individual which has been played up in various rather futile ways takes on a new aspect. From the standpoint of civilization each individual owes his entire equipment as a civilized being to others. Biologically even, he is vastly modified by his domestication, in habits, impulses and moods. The so-called "instinct of the herd," which Trotter has made famous, tends to become an unnecessary hypothesis. For every child is made by others in their own image. How gregarious mankind was before the onset of civilization it is impossible to say; but the prolonged infantile weakness implied multiform dependence upon others. Of course there is really no such thing as Society in the sense of some powerful and precious personality for whose welfare the so-called individual is invited to make appropriate sacrifices of personal preferences. What we have to do is to make terms with the notions of