"Culture as a determinant of human behavior." I read this title as an injunction to prove that there exists a science of human behavior, which is the science of culture. Culture, in fact, is nothing but the organized behavior of man. Man differs from the animals in that he has to rely on an artificially fashioned environment: on implements, weapons, dwellings and man-made means of transport. To produce and to manage this body of artifacts and commodities, he requires knowledge and technique. He depends on the help of his fellow beings. This means that he has to live in organized, well-ordered communities. Of all the animals he alone merits the tripartite title of *homo faber, zoon politikon, homo sapiens*.

All this artificial equipment of man, material, spiritual and social, we call technically culture. It is a large-scale moulding matrix; a gigantic conditioning apparatus. In each generation it produces its type of individual. In each generation it is in turn reshaped by its carriers.

Is this big entity itself subject to laws of a scientific character? I for one have no hesitation in answering this question in the affirmative. Culture is a determinant of human behavior, and culture as a dynamic reality is also subject to determinism. There exist scientific laws of culture.

The possibility of a really scientific approach to humanism and anthropology is still contested. It is not superfluous, therefore, to reaffirm the existence of determinism in the study of human culture.

In my opinion the principal ailment of all humanism is the disjunction of empirical approach from theory, of methods of observation from speculative doctrine. It will be best, therefore, first to turn to the testimony of cultural fact itself. It is easiest to grasp the essence of a phenomenon in contemplating its manifestations through a wide range of variation. Let us then make a rapid flight over the globe and obtain bird’s-eye views of some highly divergent types of human culture.

Let us descend first on the arid and dusty steppes of Central East Africa, inhabited by the Masai, the famous, fierce warriors of the region. On approaching the native encampment we are met by a group of men, tall, dignified, armed with iron spears and daggers. Their women, svelte and elegant, startle the new-comer with the glitter and rattle of the wrought-iron ornaments encircling their necks, wrists and ankles. Both sexes still wear the native robes of soft goat- or sheepskin. Not a shred of calico, no European trinkets mars the archaic vision of men and women of Africa as they lead us into the ring of low, brown huts, made of thatch, plastered with cow dung and enclosed with a stout fence of prickly shrub.

Conservative in his material culture, the Masai still clings also to his old tribal ways. He still remains at heart a gentleman robber, herdsman, cattle-lifter and warrior. When, after years of drought, starvation threatens them among their pestilence-stricken herds, how can they help using force in which they have been trained through generations, against their fat and flabby neighbors grown weak in their wealth and security? Their whole social organization—age-
grades and military drill, mutilations and tests of endurance—are tuned up to the development of war-like virtues. The Masai warrior, that is, every man between puberty and marriage, lives in a special camp, devoting all his time to the aristocratic arts of doing nothing and preparing for war. He is governed by a democratic régime in which an elected captain administers law and leads the men into battle.

Agriculture they despise, vegetables being food fit only for women. As a Masai warrior put it to me in a convincing argument: "The Earth is our Mother. She gives us all the milk we need, and feeds our cattle. It is wrong to cut or scratch her body," a confirmation of the psycho-analysist’s conception of Mother Earth, by one who had not studied the works of Professor Freud yet!

As to sex morals, they leave entire freedom to immature girls, who consort with the warriors in their camp. At puberty every woman has to undergo a drastic operation, clitoridectomy, which constitutes their marriage rite.

The whole tribe owe allegiance to the Ol’loibon, the hereditary rain magician and prophet. He controls them through his gift of divination and his power of producing magical fertility of land and women.

How can we press this strange, exotic material, as rich and varied and elusive as life itself, into a scientific scheme? The temptation to stop at artistic impressionism is great. We might well feel that it would be best to paint the war-like Masai in exaggerated colors in order to bring out the martial, boisterous, licentious "genius" of this culture.

Indeed this type of procedure is the latest fashion in anthropology. Since, however, we are in search of a scientific, that is, deterministic approach, let us inquire into what are the main interests of the natives, the pivotal points of their tribal life. We see at once that their interests center around food, sex, defense and aggression. Divination and prophecy, and their political influence, are related to their military adventures and the vicissitudes of climate. The age-grades are an occupational organization correlated with their military life; they form an educational system in which tribal knowledge is imparted, discipline and endurance inculcated.

Thus culture, as we find it among the Masai, is an apparatus for the satisfaction of the elementary needs of the human organism. But under conditions of culture these needs are satisfied by round-about methods. The Masai can not turn to nature directly in order to nourish himself. In the long development of his tribal culture, the institution of pastoralism has come into being. The tending, breeding, exchange and ownership of cattle, incidentally also the need of its defense and protection, impose derived or secondary imperatives on the life of the Masai. The cattle kraal, military camps, seasonal migrations and fertility magic are the outcome and correlates of pastoralism.

The continuity of the race equally does not work by physiological determination alone. Sexual appetite and personal attraction, the urge to mate and the desire for children are reformulated culturally. Each phase of the biological process—maturation, puberty, courtship, marriage and parenthood—is correlated with the mode of life and the arrangements of domesticity and bachelors’ camp; and the whole is safeguarded by the military organization. The vast phenomenon of kinship, including the family, marriage, clanship and the laws of descent, is the cultural counterpart of the physiological process of reproduction.

Let us see what the conditions are in a neighboring tribe. Not far from the Masai steppes, on the slopes of the Kilimanjaro, the highest mountain in Africa,
live the Chagga, an agricultural, sedentary people. The Chagga, though he also keeps and appreciates cattle, is mainly a tiller of the soil. Yams and pumpkins, peas and millet thrive well on the fertile green fields of the Kilimanjaro. The staple food, however, is the banana. As the Masai culture has been labelled "cattle-complex," so the Chagga culture could certainly be defined as a banana obsession. The Chagga lives on bananas; he lives among bananas—every homestead must be surrounded by its banana grove—and when he is dead he is buried amid bananas.

In contrast to the nomadic Masai, the Chagga have a highly developed body of land laws. Their large-scale system of irrigation is a feat of engineering unparalleled anywhere in native Africa south of the Sahara. Again, unlike the democratic Masai, the Chagga have a well-developed chieftainship. In each district the chief is the supreme judge, the source of law, the military leader and the high priest of tribal ancestor-worship. The centralized power of the Chagga, however, is not based on aggressive militarism. They have a highly developed system of defense, with extensive, well-guarded earthworks along the frontiers and enormous subterranean chambers where men, women and cattle were able to take refuge during a Masai raid.

The Chagga differ from their neighbors, the Masai: they practice agriculture; live in fixed settlements; have a developed system of land tenure; and their religion consists mainly in ancestor-worship. They also resemble the Masai in that they practice female circumcision; they have developed age-grades, and they believe in magic by divination. What is the best way of establishing a common measure for the scientific comparison of differences and also of similarities?

Clearly, again, we must compare their institutions, that is, the organized systems of activities, each correlated with a fundamental need. In both tribes we find that to nutrition there corresponds the economic system; dominated among the Chagga by agriculture, among the Masai by cattle-breeding. In both cultures we should have to analyze the economic system by means of such universally valid concepts as the organization of production, the methods of distribution and the manner in which consumption integrates certain groups of people. Among both we would have to consider the physiological processes of reproduction as it is organized into the domestic institutions. The physiological growth of the individual is in both cases institutionalized into the system of age-grades. Political organization comes into being in the satisfaction of the need for safety, in the case of the Chagga; in the case of the Masai the military organization and the political system are the outcome of a periodic need for predatory economics. In both tribes there are, again, corresponding organizations for the maintenance of internal law and order. The political system, in its military and legal aspect alike, imposes its own discipline, morale, ideals and economic requirements.

The transmission of the cultural heritage from one generation to another brings into being the two educational systems of the Chagga and Masai. In both tribes the earlier stages of training are bound up with domestic life; while later on the initiations into age-grades carries on the education in tribal custom and morality.

From the comparison of the two cultures we reach one of our pivotal generalizations. Every culture must be analyzed into the following aspects: economics, politics, the mechanism of law and custom, education, magic and religion, recreation, traditional knowledge, technology and art. And all human cultures can be compared under the headings of this scheme.

Far from the chaotic, indeterministic
defeatism which overwhelms the amateur, and apparently even some professional anthropologists, this approach gives us a solid scientific foundation.

Incidentally, we also arrive at another conclusion. Anthropology, the science of culture, must study the same subjects as those which confront the student of contemporary civilization or of any other period in human history. It must approach primitive culture from the angle of politics and economies, theory of religion and jurisprudence. And here anthropology may claim a special position among the other sciences of human society and culture.

Its range is the widest; it relies entirely on direct observation, for its sources are in the student's own field. It is perhaps the only social science which can easily remain detached from political bias, nationalist prejudice, sentiment or doctrinaire zeal. If this social science fails to develop an entirely dispassionate study of its material, there is not much hope for the other branches of humanism. Hence, in vindicating the scientific character of anthropology we are working at the very foundations of social science. Anthropology has the privilege and the duty of acting as an organizing agency in the comparative study of cultures.

In order to appreciate the influence of environment upon culture, let us leave tropical Africa and move into the desert of snow, ice and rock inhabited by the Esquimaux. Their winter house, made of stone or of snow, has been described as a marvel of engineering, a perfect adaptation to climate and to the available material. It certainly is an example of thorough-going correlation between a material object and the necessities of life. Combining warmth, space and ventilation, it provides during the long winter night comfortable places in which to lie and listen to the long tales of folk-lore, or carry on technical activities. The technological excellence of these natives is also shown in the construction of their sledges and their weapons, of their canoes and of their traps.

In comparison with this, some aspects of their culture seem under-developed. The Esquimaux have been described as devoid of any political system or of legal institutions. They have been often accused of extreme pacifism in that they do not slaughter each other in organized fighting. Yet this is perhaps not quite correct. For though they have no political chiefdomship, they recognize the authority of the shaman. He also acts in a roundabout way as an important juridical agency. They have their code of law consisting of many taboos, the breach of which brings down evil not only on the wrong-doer but on the whole community. Tribal calamity can be averted only by public confession. After that the shaman can magically reestablish tribal prosperity. Thus, as the Masai have anticipated psychoanalysis, so the Esquimaux are the forerunners of the Oxford group movement.

On the other hand, towards sex they have the same attitude as the Masai. They have also a somewhat similar type of political system, always with the exception that the one is extremely warlike, and the other has never heard of fighting.

Our approach to a scientific study of culture, through the various aspects which correspond to the fundamental and derived needs of man, does not break down even here: when we apply it to such a one-sided, in many ways stunted, and in other ways hypertrophied, culture as that of the Esquimaux. For the Esquimaux eat and reproduce, maintain themselves secure against weather and animals, have developed means of movement in space, and they also regulate the bodily development of the individual. Their culture consists, like all others, of the
cardinal aspects—economics, education, law, politics, magic and religion, knowledge, crafts, art and also recreation. What about war? Some divisions of the Esquimaux have a minimum of military organization. Others are completely ignorant of fighting. Since the polar and central Esquimaux have no neighbors, nor yet any cause for internal quarrels and dissensions, they can not have military institutions. This fact confirms our conception of the instrumental nature of organized activities. Where, as in their westernmost offshoots, the Esquimaux are in contact with warlike Indian tribes, they have developed the organization, the virtues and the apparatus of war.

In the study of war, as of any other aspect of culture, the strict application of scientific determinism is necessary. This is achieved by clear definitions, empirical concepts and inductive generalization. All the wrangles as to the innate pacifism or aggressiveness of primitive man are based on the use of words without definition. To label all brawling, squabbling, dealing out of black eye or broken jaw, war, as is frequently done, leads simply to confusion. One author tells us then that primitive man is a natural pacifist. Another has recently described war as indispensable for the survival of the fittest. Yet another maintains that war is the main creative, beneficent and constructive factor in the history of mankind. But war can only be defined as the use of organized force between two politically independent units, in the pursuit of a tribal policy. War in this sense enters fairly late into the development of human societies.

Only with the formation of independent, political units, where military force is maintained as a means of tribal policy, does war contribute through the historical fact of conquest to the building up of cultures and the establishment of states. In my opinion, we have just left this stage of human history behind, and modern warfare has become nothing but an unmitigated disease of civilization.

I have made this brief digression on warfare because it illustrates one side of the scientific or functional method in cultural analysis. This method is often accused of over-emphasizing the perfect integration of all factors within the working whole of culture. This is a misapprehension. The functional method only insists on the fact that all the elements of culture are related to each other; they are not idle survivals or disconnected traits; they function, that is, they are at work. It does not pronounce any appreciation or moral comment as to whether this work is good or evil, well or badly adjusted. As in the case of some primitive types of warfare, and certainly of its most recent developments, the instrumental analysis of culture reveals more cogently than dissection into traits the occurrence of catastrophic maladjustments of human society.

To make clear the necessity of an organic and integral treatment of human life let us consider another example. Let us concentrate for a moment on an important object—the object of objects, in a way, the material embodiment of the premier institution of mankind, the family. We shall choose our example from yet another ethnographic area and contemplate a pile dwelling in Melanesia.

In sharp contrast to the arid steppes of Central Africa and the Arctic desert of snow, we are surrounded here by a wilderness of water, coral reef and swamp. The main symptom of man’s adaptation to his surroundings is a remarkable achievement of primitive architecture, the house on piles. It stands firmly on its foundations of stout tree trunks driven deep into the muddy bottom of the lagoon. Constructed of
strong material cunningly fitted and lashed together, it resists the combined attacks of wind, waves and weather.

To the lagoon dweller such a house is a fortress where he can take refuge and which he can defend. It is a watch-tower from which he can see the approach of suspicious strangers. It is also conveniently near to the coast, which he frequently has to visit in order to tend his gardens. The structure of the house is thus determined by the inter-tribal relations of the people, their economic pursuits, by climate and environment.

It can thus be studied only within its natural setting. But after man has invented, constructed and improved his dwelling, and made it into a fortress, an economic asset and a comfortable home, the house then dominates his whole mode of life. The outer shell of his domesticity influences the social structure of family and kinship.

Since in my opinion anthropology should begin at home, let me give you an anthropological impression of modern culture and recount a personal experience in which I very poignantly became aware of the power of things over man.

No experience in my exotic wanderings among the Trobrianders and the Chagga, among the Masai and the Pueblo, has ever matched the shock I received in my first contact with American civilization, on my first visit to New York, when I arrived there ten years ago on a fine spring evening and saw the city in its strangeness and exotic beauty. The enormous yet elegant monsters blinking at me through their thousand starry eyes, breathing white steam, giants which crowded in phantastic clusters over the smooth waters of the river, stood before me—the living, dominating realities of this new culture. During my first few days in New York, I could not shake off the feeling that the strange "genius" of this most modern civilization had become incarnate in the skyscraper, the subway and the ferry boat. Large insects in the shape of automobiles crept along the gutter called street or avenue, subordinate but important. Finally, as a fairly insignificant and secondary by-product of the enormous mechanical reality there appeared the microscopic bacteria, called man, sneaking in and out of subway, skyscraper or automobile, performing some useful service to their masters, but otherwise rather insignificant. Modern civilization is a gigantic hypertrophy of material objects, and contemporary man will still have to fight his battle in order to reassert his dominance over the thing.

But what interests us at present is to find the existence of a common measure between the residential part of the skyscraper and snow-house, pile-dwelling and cow-dung hut.

In the material used, in structure, in architecture, in all, that is, which we can call the form of the object, there is hardly one trait in common. But look at the dwelling as a part of an institution. It appears at once that the principles on which each dwelling is integrated into organized human life and becomes the shell of this life are the same throughout humanity. In the pent-house on top of the skyscraper, in the snow-house, in the hovel of cow-dung, in the hut of thatch, we find the same domestic unit, the family, consisting of father, mother and children.

Is the resemblance only superficial? No. Functionally it is not merely a resemblance, but an identity. The group are united by the same task, the essential business of reproducing the race. A universal type of legal charter gives juridical validity to the group. The act of marriage bestows legitimacy on the children; grants the consorts mutual privileges and duties; it defines the domestic work of husband and wife; above all it imposes on them the duty of looking conjointly after the children. Human parents, unlike animals, are not allowed merely to throw up fresh organ-
isms, but they have to introduce fully fledged citizens into the community.

We have found throughout our survey that the food quest and other economic activities leave a deep imprint on the whole culture. This truism, however, must be supplemented by a somewhat fuller appreciation of the place of economics in primitive culture. Let us once more concentrate on a concrete case, the system of agriculture of the Trobriand Islanders in Melanesia. Their whole tribal life is dominated by agriculture. During the season of hard work, men and women practically live in the gardens. Then, while the plants sprout and grow, the women still have to do weeding. The men, on the other hand, devote themselves to other things, fishing and trapping, industries, canoe-building and trading expeditions. One man only, the garden magician, still remains hard at work. He has been in fact from the beginning an organizer of work; directing the allotment of land, and, while ostensibly he was carrying on his rites, in reality he acted as tribal entrepreneur. Even when it comes to the harvest he still has to bless the crops and then perform over the stored produce a type of magic which, by reducing the appetite of the people, makes food last longer.

But agriculture as an economic activity does not end with the harvest. The distribution of the products is an important business which penetrates into all the aspects of tribal life. Tribute has to be given to the chief, and on this tribute his political power is largely based. A quota of food has to be put aside for tribal ceremonies and this finances largely their public and religious activities. Finally, the third stage of the economic process, consumption, presents many interesting aspects in this tribe, as everywhere else. For consumption means not merely eating, but also handling, display, ritual food offerings and, last but not least, sheer waste.

For in the Trobriands the passion for accumulated food is so great that people prefer to keep their yams till they rot in the storehouses rather than to see the latter empty.

We see then that agriculture must be studied within the context of the whole economic system. For the vegetables are exchanged for fish; they are used in the financing of enterprise and for feeding the craftsmen; for the capitalization of industries. This is especially interesting in the study of the large native jewelry, or more correctly tokens of wealth, which play a considerable part in the political system and which are also ceremonially exchanged in the course of large intertribal expeditions, which are practiced throughout this region. Could we apply the same detailed study to Masai or to Chagga economics, or those of the Esquimaux or Plains Indians, we would see that they also must be considered under the three headings of production, distribution and consumption.

The anthropologist is often asked by elderly ladies or young girls: “Is primitive man an individualist or communist? I want to know that, because I want to know whether human nature is communistic or not.” I could refer to one or two instances where a scholar of high repute has played into the hands of the lady questioner, old or young. As a matter of fact, the anthropologist can give an opinion, but only as to the workings of the institution of property and not as to that vague entity, human nature. Communism as public control of private property has always existed and must be present in every culture, simple and developed. Communism, as absence of individual property, does not exist under primitive conditions.

Take the prototype of all wealth, value and property; soil used for agriculture. Complete communism of land actually under cultivation is never found in any primitive society. Production is a process in which man invests labor and intelligent foresight, and at least as much of his wealth as is necessary for planting,
and for keeping himself alive while he works. No free human being will do it permanently without some legal guarantee, safeguarding for him the results of his efforts. The guarantee given to each free individual that the results of his efforts will be his to use or to give, is tantamount to individual ownership. Where there are slaves, pawns or serfs, there may be a class of people who work without any claims to the fruits of their labor. But such communism turns men into slaves, serfs or pawns. May this not be true of all forms of communism?

Take again profit. We are often told that with the abolition of private profit all evils, such as war, sexual jealousy, poverty and even drunkenness, will disappear. To me the Marxian doctrine of profit entails a complete misconception of the relationship between the economic factor and other motives and drives in human society. The pocket is not the only channel by which wealth can be mal-distributed and abuses canalized. Vanity, doctrinaire zeal, incompetence, personal ambition cause as much havoc as does greed. The men who control production—in Africa or Europe, in Melanesia or America—do not and cannot fill their pockets or bellies with gold. Where they can and do harm is in mishandling and misusing the production and distribution of wealth. In order to prevent that, public control by disinterested agencies is necessary. And here it is obviously better to have a system in which control of wealth, legislation and the executive use of power are not concentrated in the same hands, but vested in separate agencies. The totalitarian state and the African autocracy are not models of sound economic systems. The real advance lies in the gradual piecemeal reform, involving all the parts of the economic and political organism. An integral revolution destroys, but it does not create. The concentration of all controls in the same hands means the abolition of all control.

How can we link up religion, magic, sorcery and divination as cultural phenomena with our whole system of interpretation in which we conceive of culture as the vast apparatus for the satisfaction of human needs? We have seen that the fundamental needs of the human organism, those of food, reproduction, safety, freedom of movement, are satisfied under culture by ad hoc systems of organized activities. Culture thus establishes the quest for food and the industries, technical constructiveness, courtship and marriage, kinship schemes and military organizations.

We have seen how this cultural roundabout way of indirect satisfaction imposes secondary or derived needs. These are not innate drives of the organism but highly derived implications of man’s cultural response to innate urges. Thus economic desires, values, standards, legal inhibitions and the consciousness of one’s rights and privileges, social ambition and kinship sentiments, political prestige and submissiveness are essentially human characteristics. But they are imposed by the circumstances of human existence in organized communities and not by reflex or instinct or any factor of innate endowment.

But this is not the end. The vast machinery of culture is maintained, regulated and preserved by the body of traditional lore. This is made possible by language, which allows man to formulate general rules and condense them into concepts. Thus, to systems of action there correspond systems of thought. Action must be based on foresight and on the grip of the context. Man deals with nature and his fellow beings by constructive and imaginative handling of each situation. He has to lay down the results of past experience into systems, fixed, standardized, yet withal plastic. These he hands over from generation to generation.

Systems of human knowledge exist even among the lowest primitives. They must have existed from the very begin-
ning of humanity. The wide-spread misconceptions that primitive man has no rudiments of science, that he lives in a hazy, mystical or infantile world have to be rejected in the light of our fuller knowledge of primitive cultures.

But though knowledge is easily accounted for, what are the natural foundations of religion and magic? That which establishes man's final superiority over the animals, his power of symbolic and constructive thought, imposes on him also great burdens. It reveals to him the fundamental uncertainty and limitation of his own existence. In order to think clearly man has to look back and remember; he has to look forward and foresee; and that means he is subject to fear as well as to hope. Man, of all the animals, can not live in the present; he can not lead a hand-to-mouth existence from moment to moment. This must finally bring him to ponder on topics where emotions blend with cold reason and where the answer is dictated by emotions, though it is largely framed by reason.

What is the ultimate destiny of man and of mankind? What is the meaning of life and the relations between man and the universe? Whence have we come and whither are we bound, and what is the sense of all man's fears, sufferings and disappointments? Metaphysics and religious speculation are as old as knowledge and as old as language itself. At the beginning they are extremely simple and crude. Animism and beliefs in magical force, phantasies about sorcery, ghosts, vampires and totemism, that is, the belief in the spiritual affinity between man and nature, are the answers of primitive man to the fundamental riddles of life. Once we realize their real nature it is easy to perceive their great value. They are well adapted to the limited conditions in which primitives have to live, they contain the answer to the questions of whence and whither, and above all they supply man with ritual means of getting in touch with spiritual forces, of establishing communion with ancestral spirits, totemic beings or divinities, and they allow man to secure his immortality, and thus to give sense to his life.

Knowledge, magic and religion are the highest, the most derived imperatives of human culture. Indirectly and through several relays they also are the outcome of man's organic needs. The craving for religion and for magical power, as well as scientific curiosity, are not instinctive. They are the outcome and the correlate of that intelligent adjustment of man to his environment which makes him the master thereof. Magic and, to a much higher degree, religion are the indispensable moral forces in every human culture. Grown out as they are of the necessity to remove internal conflict in the individual and to organize the community, they become the essential factors of spiritual and social integration. They deal with problems which affect all members of the community alike. They lead to actions on which depends the welfare of one and all. Religion and, to a lesser extent, magic thus become the very foundations of culture.

By now, I trust we all realize that there exist laws of cultural process, and that their discovery is the main task of scientific anthropology.

Our plea for scientific anthropology, of course, is not tantamount to an indictment or exorcism of all the attractive and amusing speculations. Evolutionary aperçus, indeed, I regard as indispensable. Careful and sober diffusionist hypotheses seem to me quite profitable. To minimize or discard a really human interest in humanism would be a crime. To mix up or confuse the emotional or artistic approach with the scientific is a serious lack of judgment. The two approaches must be used simultaneously: They have to complement each other. But science must furnish the foundation.

The scientific theory of culture has also brought to light some really vital truths.
Is the recognition of the universal stability and permanence of the family and marriage of no interest in these days when domestic institutions seem to be threatened on every side? The anthropologist might almost add: "As it was in the beginning, is now and ever shall be." That Communism can not be a panacea for all our cultural troubles may also be an interesting appreciation. We have seen that Communism alone is never to be found in any culture, however primitive or complex. We have seen, also, why Communism as an economic system can not work except in conjunction with slavery. On the other hand, pure individualism does not exist anywhere either. So that some admixture of Communism, that is, public control, has always worked and worked well. But it can not work wonders or cure all evils. We have defined the rôle of the supernatural as an integrating and organizing force in society. One of the implications of our analysis was that the abuse of law and political power must always lead to cultural disaster. Science and virtue, efficiency and endurance, courage and chastity can never be dictated by edicts nor inflamed by oratory nor yet forced into existence by a system of police spies and police brutalities. To replace religion and morality by the secret service of a totalitarian state is a disease of culture.

For we have fully acknowledged the existence of cultural maladjustment and even of lethal ailments of civilization. The very concepts of adaptation and function imply degrees and qualifications, from excellence to decay.

Our present civilization is undoubtedly passing through a very severe, perhaps a critical, stage of maladjustment. The abuse of legal and administrative power; the inability to create lasting conditions of peace; the recrudescence of aggressive militarism and magical trickery; the torpor of true religion and the assumption of a religious garb by doctrines of racial or national superiority or the gospel of Marx—all this shows that, while we have become the masters of inanimate nature, we have connived at the complete enslavement of man by machine.

The greatest need of to-day is to establish a balance between the stupendous power of natural science and its applications and the self-inflicted backwardness of social science and the consequent impotence of social engineering. To repeat a truism just mentioned, we have allowed the machine to overpower man. One of the reasons of this is that we have learned to understand, hence to respect and to handle the mechanism. But we have failed to develop the really scientific spirit in humanism.

To-day the freedom to exercise purely scientific determinism is threatened in many countries. This freedom is even more essential for social than for natural science. It is, therefore, our duty on this occasion to insist on the necessity for this freedom. We are assembled here to celebrate the Tercentenary of one of the greatest workshops of science and reason ever established by man. The founding of Harvard was an act of human behavior not outside reason and determinism. It was determined by wise foresight, and its existence and work have been enduring factors in developing reason and determining rational behavior. Harvard has always fostered that spirit of science which means freedom in the search for truth, for the laws of nature and of human behavior. Let this spirit preside over the development of the comparative science of man and we may yet hope that the spirit of Harvard, that is, the spirit of science, will prevail in the conduct of human affairs.