

something more congenial to his interests, real or fictitious, out of raw material which nature offers him? Invention is the gist of civilization. Each successive step in the long history has resulted from man's making over something, transforming that which he but finds, into a form in which it does not exist by nature, but only by art or artifice. Every step then is marked by the introduction of something new, which is the outcome of the transforming agency of human activity, and which would never have come into being if man had been content to accept and possess that which he merely finds. Consider briefly the two regions which exhibit such reconstructive activity, the physical things in outer nature, and the elements, instinctive and what not, which man finds in human nature. The making of fire, of the bow and arrow, of pottery, the taming of animals, the smelting of iron—these are the epoch-making inventions which raise man through the successive steps of savagery and barbarism. Each is the discovery of a new art. But the discovery of a new art is no mere appropriation or holding fast to some bit of nature; it is reconstruction of that which nature offers. And in one momentous invention or art, namely that of speech, and still more, in the use of graphic signs, it is the construction and the creation of something which nature of itself does not contain. That is, systems of ideas, embodied in language, make possible by speech and made permanent by writing, depend in some sense upon human activity. Instinctive sounds and meaningless marks are woven together, with the result that something new emerges. Significant ideas and a permanent language are the outcome of working raw material—sounds and marks—into a "finished product". And this process spells activity. It has become an all but universal habit of thought among us to define the progress of civilization in terms of technology and in the increase of man's control over nature. These successive steps by which early man invented something, made over some bit of nature's storehouse of raw material, are no doubt utterly sporadic, accidental, unconscious, compared with the persistent and deliberate adoption of the inventor's mental attitude in modern culture. We expect to make over and to control our world. "The key to modernity is control", says Shotwell. The democratic impulse to self-government, the view of the world as plastic and in flux, waiting to be made over into something which we desire, this attitude is all but lacking in primitive life, in the ancient world, in all cultures permeated by religion. There were practically no inventions in the ancient world; one wonders that an art so simple and elementary in principle as that of printing should not have been discovered by the Greeks. Apart from the absence of any necessity for the widespread diffusion of ideas, the reason lies in the fact that the Greeks did not look upon the objects in their world as raw material for human constructive