

comes negative was that the pressure displaces the layer of acid or any other substance which may be responsible for the inner potential, and replaces this substance by the juice pressed out from some of the soft cells of the flesh of the apple, but without altering the permeability of the skin.

Under these conditions the fact that the active part of a tissue becomes negative to a part at rest finds its simple explanation on the assumption that in the active part of the tissue substances are formed which temporarily alter the potential at the inner surface in such a sense as to make the outside on that spot appear more negative. There is no necessity for assuming any increase in the permeability of the skin.

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WHAT IS HELLENISM?

It would usually be both foolish and ungrateful to criticize the choice of illustrations used by a lecturer in an attempt to make clearer a worthy proposition. When, however, the illustration is in very common use, though more often in another manner, when it is sure to remain in common use, and when moreover it has great and positive value, its misuse is dangerous enough to merit attention. The address of Professor Harrison, published in *SCIENCE* of October 23, 1914, urges us to make science of practical value. We may all well do what we can to share and spread the motive and accomplish its aim. In this address, Professor Harrison contrasts Hellenism and Hebraism, apparently in the sense that Hellenism typifies clear thought, and Hebraism vigor in practise. We are all familiar with the contrast of Greek and Hebrew culture, in which the former represents reason, and the latter faith, as the guiding principle of conduct. Professor Harrison's contrast strikes me as both novel and unsound.

The Hellenic culture which has influenced subsequent civilization was essentially the culture of Athens. The usual idea of Athenian

culture is that it was characterized by marvellous activity. As to the culture typical of Athens, we can go back to the greatest Greek historian, and as to Greek ideals, to the greatest Greek philosopher, both of them men whose works are still commonly regarded as pre-eminent in their fields. The opinion of Thucydides with regard to the Athenians is expressed over and over. In Chapter III. of Book I., he puts his views into the mouth of the envoy of Corinth, who is addressing an assembly in Sparta:

The Athenians are addicted to innovation, and their designs are characterized by swiftness alike in conception and execution; you have a genius for keeping what you have got, accompanied by a total want of invention, and when forced to act you never go far enough. Again, they are adventurous beyond their judgment, and in danger they are sanguine; your wont is to attempt less than is justified by your power, to mistrust even what is sanctioned by your judgment, and to fancy that from danger there is no release. Further, there is promptitude on their side against procrastination on yours; they are never at home, you are never from it: for they hope by their absence to extend their acquisitions, you fear by your advance to endanger what you have left behind. They are swift to follow up a success, and slow to recoil from a reverse. Their bodies they spend ungrudgingly in their country's cause; their intellect they jealously husband to be employed in her service. A scheme unexecuted is with them a positive loss, a successful enterprise a comparative failure. The deficiency created by the miscarriage of an undertaking is soon filled up by fresh hopes; for they alone are enabled to call a thing hoped for a thing got, by the speed with which they act upon their resolutions. Thus they toil on in trouble and danger all the days of their life, with little opportunity for enjoying, being ever engaged in getting: their only idea of a holiday is to do what the occasion demands, and to them laborious occupation is less of a misfortune than the peace of a quiet life. To describe their character in word, one might truly say that they were born into the world to take no rest themselves and to give none to others.

The ethics of Aristotle represents happiness as the goal of human effort, and work as absolutely indispensable to happiness. No single quotation would give an adequate idea of the

insistency with which the importance of activity is emphasized. Even where amusement is recognized as sometimes worth while, and rest as sometimes necessary they are countenanced only because constant work is, in experience, impossible.

Rest, therefore, is not an end, because it is adopted with a view to working afterwards.

Happiness itself is repeatedly defined as "a working in the way of excellence." When Aristotle finds the highest happiness in intellectual contemplation, he explicitly justifies himself on the ground that intellectual contemplation is itself the exercise of the highest of human faculties, of that of the mind. Aristotle hardly pauses upon this point, before he goes forward to point out that the thoroughly wise man must proceed, if he would achieve all the happiness within his reach by making his wisdom effective, to do exactly what Professor Harrison is urging, to interest himself in public affairs, and thus find for his wisdom the greatest possible usefulness. The politics and ethics of Aristotle are tied together by this dependence of the highest happiness of the truly wise man upon public activity.

With the Greek historian and the Greek moulder of the world's thought on record as they are, it would be superfluous to quote, as might be done, from many other Greeks; and Greek history is too generally familiar to make it worth while to refer to the wealth of Greek achievement. As the histories of the two people are usually read, Hebrew culture and history were, in comparison with the Greek, nothing but an almost unbroken oriental slumber. The single great Hebrew achievement was the enunciation of faith.

Greek ideals are constantly urged, and Greek examples constantly held before us. If we were to let ourselves imagine that the acceptance of these ideals and these examples involve any kind of inactivity, it would be a calamity. The trend of human views and human ideals has for a long time been away from the Hebrew, and toward the Hellenic. It is not Hebraism which is just now "exuberant." There is rather too little willingness in the world to-day to trust any light, if its source

lies beyond our reach. But it is a most imperfect form of Hellenism which is "exuberant." Greek activity was intellectual enough to keep its aims, even the most ultimate, fairly well in view. A very large part of modern activity is so blind to any aims, except the most immediate, that it has no means of testing the validity and worthiness of even such aims as are within its vision. Greek thought kept happiness in view as the goal of effort, and examined this goal with such care that Greek opinion concerning it is very generally held to-day by those who are familiar with Greek opinion. Modern thought has added amazingly little to Greek views.

Knowledge has been making amazing strides. But aside from medicine, modern knowledge contributes infinitely less than it should to the attainment of the ultimate goal. I do not know that the world was happier at any past time than it is now, but am very sure that there is very far from being the happiness now that there ought to be. The advance in knowledge during the past half century has not been accompanied by any corresponding development of happiness. Indeed, we do need to exert ourselves to make our knowledge worth while. We should study to understand what happiness is, and how we can make our activities effective in achieving it. When we do this, each in such measure as he can, we shall act according to the best Hellenic ideals, ideals not merely held by the Greeks, but expressed by them more perfectly, I believe, than has ever been done since.

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UNIVERSITIES AND UNPREPAREDNESS

THE majority of persons are so absorbed in the events of the European war that little attention is paid to the consideration of methods by which this nation could coordinate and use its intellectual resources to the best advantage in making some positive contribution towards the rehabilitation of civilization. We should expect the universities to be keenly alive to the necessity for supplying the leaders of