BIOPOLITICAL SCIENCE

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In the 1920's a group of scientists at the University of Chicago, under Professor Charles Merriam, started a new scholarly and scientific movement. It was to become known as the Behaviourist Movement. Merriam and his associates wanted to find a common denominator in the three basic social sciences; psychology, sociology and political science, and to unite their conclusions. These pioneers tried to adopt new elements, new methods, new ideas and new theoretical targets. Since the end of the last war, the work of Charles Merriam has been continued by Harold Lasswell, of Yale University, B.F. Skinner, and others.

But if psychology, sociology and political science are connected with human behaviour so is biology. A definite proof of that is the life, work and experiments of Ivan Pavlov. We all know about his experiment with the dog. His basic theory was that two elements are needed for the existence of life. The living organism and its environment. We know how, in the mind of the dog, the meat was identified with the ringing of the bell. The bell has become the symbol which "symbolised" the meet, thus the organism got to "know" the environment in two ways; with immediate stimuli or through messages sent by the environment. Therefore, by sending proper messages we can get the desired reactions. This bio-feed-back is extremely important, for biology and for biopolitics. Because, as we can get the proper response from the dog, we can do the same with men and with the masses. Instead of the bell we can use ideas and symbols. By sending the proper stimuli, in this case political slogans and messages (propaganda), we can get from the collective living organisms (the masses) the reaction we want. Many experiments have taken place with man's nervous system and his psychology, and the results confirmed their great value in biopolitics and biopolitical psychology.

The following experiment was performed on several individuals. Acetylcholine (which is used to lower the blood pressure), was injected into them. This was combined with a certain stimulus (the ringing of a bell or a strong light). Every day, at the same time of the injection, the bell would ring or the light would go on. After several days the human guinea pigs were injected with adrenaline (which is used to raise the blood pressure) instead of acetylcholine. The results were amazing. With the ringing of the bell or the light going on, the blood pressure continued to go down. These men had been conditioned to respond in the way it was expected of them.

Bio-feed-back between the organism and the environment had proved very useful, also, in business and advertising. In this case, the messages were not sent through political symbols (the swastika, the hammer and sickle, the Cross of Loraine etc.) but through commercial symbols (a beautiful elegant girl advertising an expensive automobile, etc.). This way the girl was identified with the automobile just like the ringing of the bell for the dog.

The environment plays a great role in our lives and the same is true about technology which can change the environment. The natural resources of a country, including the climate, exert without doubt great influence on its development. Among the political philosophers Montesquieu supported this theory, especially about the climate, in his classic work "L'espirit deloi". He also pointed out, however, the importance of ideas, traditions and convictions. Today, a younger Montesquieu could observe that man can create his own climate. With artificial rain he can cultivate the dry fields and with the help of technology he can turn the jungles into sources of wealth. Israel was able, through irrigation, to produce roses in the Negev desert, where nothing had grown for two thousand years.

Dr. Vlavianos-Arvanitis in her inspired paper "Man in the Age of Technology", presented at the European Philosophy Conference in Athens two years ago, declared that "Biotechnology is presently inducing the expression of human potential", and that "Values need to be re-examined in order to allow for the challenge of new dimensions".

This is absolutely correct. I believe that the great difference in mentality between today's people and the ancient ones, is mainly the result of a biotechnology capable not only to extort from nature a meagre living, but capable of guaranteeing us an abundance of goods, comforts and luxuries. When the white man arrived, there were less than a million Indians living in the United States. These people were practically starving depending on the weather and the whims of nature. Today, two hundred and fifty million people live there and, as a result of biotechnology, they have a standard of living which is the envy of everybody else.

Indeed, one of the characteristics of modern societies is the ability, as I indicated before, to transform nature with the help of science and biotechnology. And, of course, there is no event in history with the revolutionary repercussions of the industrial revolution. As man got the power to control nature, he realised that he could use this new power in politics as well.

The application of biotechnology can be very important, even today, in the development of the underdeveloped agrarian societies which are

completely dependent on nature. In such societies life depends on maintaining a precarious balance. A few years ago, thousands of children died in Biafra Because, as a result of the Civil War, they could not get the corn-meal, known as casavara, which was the only kind of food, ordinarily, available to them. Such societies badly need the help of biotechnology because they are self-exploitive as the people are negative in changing their mental attitude and their methodology. What makes things worse is the lack of liquid money and the element of isolation of the agrarian occupation. The basis of agrarian technology is the wood, leather, water, the wind and muscle power. The lives and personalities of the people are being shaped by their daily contact with nature, the change of the seasons and the opportunities and pleasures offered by the land. Education and wisdom are measured by age.

The civilisation of the era of the tractor is different from the civilisation of the era of the hoe. The introduction of gun powder and the printing press has brought revolutionary changes in western society. And it was biotechnological change which made possible the modern democratic regimes because these regimes could not possibly operate without the printing press and the mass media. We can say, therefore, that biotechnology proved a strong force in the dynamics of history.

Professor **Emmanuel E. Marcoglou** received his B.A. in government and international relations, and M.A. in international relations, from the University of Connecticut, and his Ph.D. from New York University, Government Department-Area Studies Program, Middle Eastern and African Section. He is presently a Professor at Deree, the American College of Greece, and is Division Manager and advisor of the American Life Insurance Company, and a Scholarship Trustee of the Hellenic Canadian Association. He has published many articles on American-Greek relations, and has served as former Foreign Editor of the Athenian weekly, the Greek-American review "Ellinika Chronika".