

Healthy Thought as the Basis for Olympic Spirit and Humanism

By

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Abstract

This presentation deals with the basic principles of education which will help modern world to reenter into the course of the Olympic Spirit on behalf of humanism. The Olympic spirit has advanced on creating a healthy body for humans but did not affect the educational course to develop a healthy thought. The aims of this work are to develop fundamental philosophical basic principles which will help to build a healthy thought to modern people in order to face and provide solutions to current problems. Such principles have been found by philosophers such as Plato and Aristotle in ancient Greece but somehow their course of evolution based on the Olympic spirit, has been broken and needs reestablishment. The Fulbright spirit provides the opportunity to reestablish the connection to the ancient Greek philosophy so that such foundations at the time of globalization will make it possible to look at the problems of humanism from the inside of humans and not by treating humans as groups of objects like masses. This work develops and presents ten basic principles according to the Olympic spirit which will help education to promote healthy thought to face the problems of humanism.

Introduction

A philosophical question raised by any University educator could be: *What could happen if the knowledge which a higher education institution produces and transmits is not used correctly?* No matter how simple such a question is, the answer is so difficult as the decision to be made about right and wrong or about correct and error, or about good and bad. It is required however a great effort to provide foundation for such meanings. On the other hand the education institution and its faculty and staff need to be even typically covered against the wrong use of such knowledge. The fact that such issues have not yet been resolved, gives the magnitude of the discontinuation of the Olympic Spirit on developing a healthy human thought which would first resolve such issues and then move towards the production and transmission of knowledge. Fortunately, similar questions were raised by people thousands years ago, and there has been developed enough material from which one can draw answers to similar kind of problems always based on logic as founded by philosophy. Moreover, having drawn basic ingredients from previous knowledge that developed by leading philosophers, one can establish philosophical foundations to build modern education. This work however, takes advantage of the Fulbright spirit to provide the opportunity to reestablish the connection to the ancient Greek philosophy so that education will produce a healthy thought and resolve current problems and other issues introduced by globalization. Such effort has also been tried last century by European philosophers and educators (Jaeger, Werner[4]).

Point of departure consequently in order to locate the philosophical foundations of modern education is the classic period of ancient Greece and this because over there

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² Presented at the *1st International Fulbright Conference "Humanism in Action"*, Athens Greece Oct. 8-10, 2004.

the continuity of growth of philosophy is broken away. At that period has also been developed the writing and become accessible to people like Plato and his contemporary fellows together with their students, which appreciating the value of many thousands of years of accumulated knowledge of culture and education which up to then was transferred from generation in generation, they blended it up with their own ideas and then they transferred it with writing into books. Those basic principles were the subject of study of a series of work ended up to a book (Hatzopoulos [1]) where an effort was made to enumerate those principles, put them in a reasonable order, and delimit them so that to eliminate any contestation. The final result is a concrete proposition which must be officially adopted in order to constitute in the current period of globalisation international models which will support the quality of modern life.

The basic principles of education to develop a healthy thought

Combining work done by Plato[3] *The Republic*, Aristotle[2] *The Nikomachean Ethics* then it is concluded (Hatzopoulos [1]) that education means developing a healthy thought. Consequently production and transfer of knowledge is not education unless such knowledge is used to develop a healthy thought. What is a healthy thought and how it is defined to constitute fundamental principles for education has to do with the right or wrong use of knowledge. Right and wrong has to be based on logic evidence and therefore we may talk about right and wrong logic. Following are given ten fundamental principles for education as concluded by Hatzopoulos [1] which will help in turn to analyse with the use of mathematics the right logic. Those basic philosophical principles cover the educational institutions and their faculty and staff against the wrong use of knowledge, and they are proposed to be adopted worldwide and, in particular, to be incorporated in the under development constitution of the European Union because they are constitutive principles. They are as follows:

1. Education is the development of healthy thought to those who follow the way of virtue.
2. Training is the development of healthy thought on a specific field (i. e. the environment) to those who follow the way of virtue.
3. Thought is one of the three states of human mind before one does or acts upon something. These states are: (a) logic, (b) desire and (c) anger. Thought designates all actions performed by a person at present and future and always precedes the action.
4. Healthy thought exists when the logic state of the mind checks and balances the other two states of the mind namely desire and anger.
5. Healthy action exists when it is done under healthy state of mind and it follows the way of virtue.
6. Virtue is the action of a person who follows a midway between two extreme positions or badness. Responsibility, for example, is a virtue and is between irresponsibility and over responsibility (fear for not being responsible).
7. The person of virtue is the one who tries to follow the way of virtue; is characterized by the effort to maintain the way of virtue (midway).
8. An action of virtue is the effort of an action to maintain the way of virtue (midway).
9. Justice is the supreme virtue and incorporates all virtues.
10. Democratic rules are those procedures which determine the midway of virtue.

Those philosophical foundations are, among other things, capable of supporting the building of modern education and of restoring the access to its roots so that education can be developed by itself, lively, self evolving and, getting rid of its dry branches. Those foundations will serve as the bases of the reformation of education programs of all ranks and help teachers' education. In this way, modern person will raise the impasses that threaten and degrade the quality of his / her life, will have participation more actively and substantially in current challenges, such as the globalization, and will be able to manage national resources better thus being able to help more his/her socially weak fellow persons. These foundations will allow peace and prosperity to come from the insides of humans and not by resolving conflicts through collisions and wars. Furthermore, these foundations will be the guiding light for the right use of knowledge for all those who produce knowledge through research and transfer it through teaching.

A Mathematical Expression of Right Logic

Here a mathematical foundation of logic is attempted to clarify the meaning of right logic and to stimulate younger philosophers so that they advance more the use of mathematics in philosophy.

Mathematics as defined [5] is the science of structures and deals with the existing relation among structural elements of simple and/or complex structures. Mathematics helps us because it describes analytically with mathematic expressions the existing relation among the structural elements of a structure. Consequently if we know the values of certain structural elements of a structure, then we can calculate or estimate the values of the rest of the structural elements.

If we consider that right logic is the virtue, defined by [2] as midway between two kinds of badness, or faults, or errors then virtue is a symmetric structure with structural elements or parameters. It is evident that humans by their own nature make errors. Now, if we suppose that there exist a being that does not err and she / he is infallible, then this being is not a human being and so we call it a supreme being. The Supreme Being, however, is defined to have zero badness or error. Having those things in mind, then the definition of right logic is performed as follows (Hatzopoulos [1]):

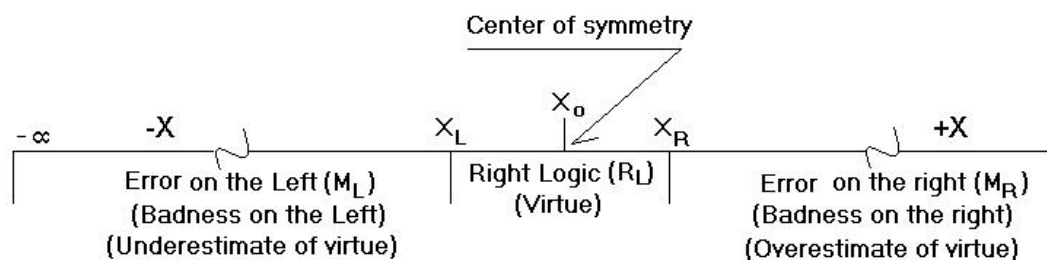


Figure 1. Structural elements ordered along the X axis(Hatzopoulos [1]).

1. We may establish an axis X (See Figure 1), consisting of three straight line segments:

(a) the segment on the left named “Error on the left (M_L)”, that measures the degree of error or badness and shows the amount of underestimation of virtue,

(b) the intermediate segment in the middle named “Right Logic (R_L)” or virtue, and

(c) the segment on the right named “Error on the Right (M_R)”, that measures the degree of error or badness and shows the amount of overestimation of virtue.

The adopted distribution of quantities is symmetric with respect to a central point X_0 in the intermediate segment of virtue. The order of those quantities is given in Figure 1. This arrangement works as follows:

For example, If economy is the virtue, then stinginess is the error on the left and is an underestimation for economy, while the overspending is the error on the right and is the overestimation of economy. There are many levels of stinginess. Some stingy people are stingier than others depending on the degree of underestimation of economy. There are many levels of overspending. Some overspending people spend much more than others, depending on the degree of overestimation of economy. Consequently, economy as a virtue, is unique and there is no smaller or bigger virtue of economy. In the same way, right logic is unique and there is no smaller or greater right logic. Similarly, if one is judged innocent by a court decision, one cannot be judged as more innocent or less innocent. However, if one is judged guilty, then one can be considered as more or less guilty.

2. Considering the midway of virtue then it is concluded that interpretation of right logic has many different and conflicting sides. The same matter that one considers right, it is possible that some others may consider it wrong and from there ambiguity starts. As a result the definition of right logic results from a wider consent which is obtained through democratic process. Thus the democratic process is founded philosophically. The democratic process however, gives the opportunity to individuals of a certain population to vote between specific regions in the X axis so that the midway of virtue is located with a wider consensus. The choice of the point in the X axis on which each individual votes depends on the inherent level of error of each individual and on the existence of specific points on the X axis. We have, however, a structure with parameters the population of voters and the total number of votes that will be accumulated in each region of the X axis. In order to facilitate this process, we consider that the X axis has infinite number of points and use a second axis the Y axis which is perpendicular to the X axis and represents the number of votes for each region in the X axis (See Figure 2). The best suited function to represent $Y=f(x)$ is the standard normal distribution (Hatzopoulos [1]).

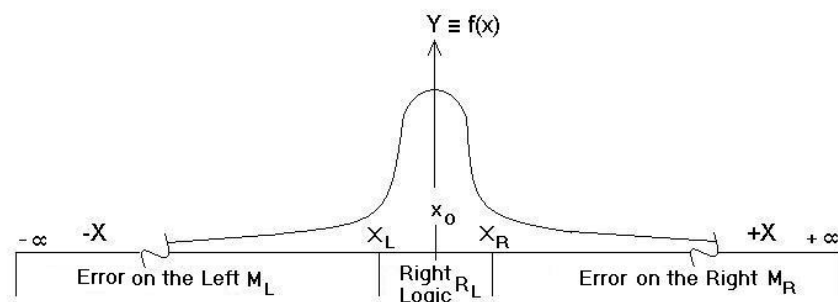


Figure 2. The distribution of preferences (votes) for the definition of midway of virtue(Hatzopoulos [1]).

3. Important factor for the definition of right and wrong is education that each individual has received. Education, on the other hand, has to do with the configuration of thought and is influenced considerably by the natural and cultural environment within which the individual was born and has grown up. The natural environment creates stimuli which through senses activate thinking which in turn processes them and generates views and opinions. The cultural environment (or cultural milieu) intervenes dynamically and many times violently compels the individual, usually starting from very young age, to adopt certain opinions that the cultural environment itself accepts globally. Consequently, it should be considered here that it is possible to have a bias in the population of the voters. The bias however, is another parameter of the structure.
4. The existence of bias is determined by comparing the existing situation to an ideal case, which is represented by a set of parameters describing right logic without bias. Nevertheless, there must be well understood that the decision made up through a wider consensus using the democratic processes could possibly have a bias and, therefore, such decision is located in the error region of the X axis. The bias causes the departure of function $f(X)$ from its symmetric structure, where the symmetry defines the peace state in a wider population of voters. Any departure from symmetry creates a potential state of conflict in the population. Also the closer to to zero error the accumulated votes are, the more stable peace exist.

Interrelation of structural elements

If we consider the X axis either from left or from right where the error is represented, then we can quantify the error as follows (Hatzopoulos [1]): The more left or the more right we go along the X axis, the greater the magnitude of the error is. Consequently, the error has the following attributes: Let us assume that there is an error of size of $|X_i|$ ³, then it will always exist a different point $|X_j|$, for which it will be valid: $|X_j| > |X_i|$ (see previous section). This means that the magnitude of the error tends by absolute value at infinity.

Let us now consider the intermediate space of the X axis or the space of midway of virtue where right logic is to be found. If we accept that the X axis is extended by its negative direction at infinity and by its positive direction also at infinity, then there will be a single and unique point with error value $X = 0$ in this intermediate space. Provided that we accept that the person of virtue is the one who tries to be a person of virtue and hence she/he commits errors (badness) but tries to limit such errors, then the value $X = 0$ does not belong to a human being and therefore, as mentioned above, if we introduce a new parameter that corresponds to the value $X=0$ then the result is the **Supreme Being**. The point $X = 0$ is also the centre of symmetry of the X axis.

The quantities in Figure 2, represent the X axis which take values from point $X_0 = 0$ and are extended symmetrically from left to minus infinity and from right to plus infinity. As described analytically in the previous section, points X_L , X_R have been selected to define the limits of the midway of virtue with mathematical and

³The symbolism $|X|$ means absolute value of X that is to say the X can take positive or negative values but its absolute value is always positive in magnitude.

geometrical clarity and completeness. The values of X are reported as error values and at the point $X_0 = 0$, where the Supreme Being is located, we have zero error. If we assume that the reciprocal of the error is the right (the virtue), then (Hatzopoulos [1]):

$$\text{(Right or virtue)} = 1/X$$

The function of $1/X$ gives then the values for the right (virtue), therefore

$$\text{for } |X| \rightarrow 0 \text{ we have } 1/|X| \rightarrow \text{infinity.}$$

In order to have a border between the right and the error (wrong), then both of them they should have exactly the same value at the border. However, we are looking at a value in the X axis where:

$$X=1/X \text{ and for another value where: } -X=1/-X.$$

This happens only when

$$X=1 \text{ and } X=-1 \text{ accordingly.}$$

This determines precisely the borders of the midway of virtue as having values:

$$X_L = -1, \text{ and } X_R = +1.$$

Thus, we see that the correct (right) or virtue defined as $(1/|X|)$ takes values from the absolute value of one (|1|) up to infinity. The same thing happens for the error (wrong), it takes values from minus one up to the minus infinity and from plus one up to the plus infinity. According to previous discussion, the person of virtue is a person of virtue independently on the value that takes with the limitation that there is an effort such value of X to be within the interval:

$$-1 \leq X \leq +1 \quad \text{and } X \neq 0$$

Which means that there is no virtue better than another virtue or there is no correct better than correct or there is no right better than right.

It is important to understand that the function $1/X$ is used here temporarily to locate the borders of right logic (virtue) and, hence by the X axis the variable X which represents the value of the error is the one from there on we study. The quantification of error is accordingly a much major philosophical question. Legislation in a constitutional system and court decisions try and make such quantification. However, in this content, we accept that by in the one or the other way there is quantification which is more comprehensible on a hierarchical rather than on a ratio scale of measurement. For example, it is possible to separate easily felony from fault, but this does not make any difference for mathematics when using a ratio scale. Eventually, the values of the X axis are continuous values corresponding to real numbers. Here, we also see that right logic (virtue) in order to be right logic, must have an error function that take values within the interval $-1 \leq X \leq +1$ and $X \neq 0$. For any other value of X we have wrong or badness. The quantification of the error can be found through research which will involve the gathering and analysis of documents of processes that

took place or they are taking place around the world and have to do with the definition of right and wrong with a wider consensus. Through such process it is important to have check and balance criteria to minimise the bias. Younger researchers however must try to locate and collect as many documents as they can about legislative decrees, juridical decisions etc., and use them as a basis to attempt to quantify the error (badness) in a ratio scale. There are many of such documents and they must be collected, archived and evaluated for this purpose.

Regarding of bias, we must always have in mind that virtue is defined by the democratic processes and under the condition that there is almost impossible to have no bias in the population. For this reason, if we want to determine the ideal case, then bias should be located in and removed from the population, otherwise, there is danger that the results of a wider consensus may not locate right logic (virtue) but the error (wrong, badness).

The mathematical consideration of bias

The adoption of the standard normal distribution as expressed by the mathematical model of Gauss represents the ideal way of delimitation of right logic, and as mentioned earlier, the sample must be free of bias, if it is to make sense. It is also important to understand that the scale along X axis must be such so that it ensures a standard deviation of the sample $\sigma = \pm 1$. For this reason and in order to have a comparison unit of measurement with regard to bias, we will imagine an ideal society with basic principles of education, as developed before. Then, in this ideal society we will have distributions of errors as they are given by the mathematic model of Gauss.

The present reality however is quite different because the society is composed of groups which have more or less bias. The mathematical expression of right logic in present societies may have the form as illustrated in Figure 3.

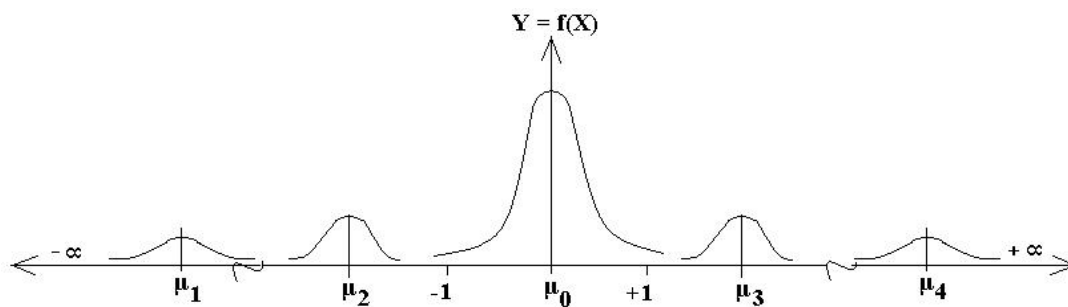


Figure 3. The ideal society with bias ($\mu_0 = 0$) and the real social groups with biases ($\mu_1, \mu_2, \dots, \mu_n$) (Hatzopoulos [1]).

The degree of error or bias in every social group is expressed by the mean value μ of the votes of this group. Moreover, the mean value μ expresses the size of the lever that creates the dynamics or the energy of each individual group. The energy (E) can be expressed as the product of the area (A) under the distribution curve of the group times the lever (μ) of the group:

$$E_i = A_i \mu_i$$

In this case, the ideal society has a mean value $\mu = 0$ and zero bias. When a social group creates a bias in the interval $-1 \dots +1$, which is also the interval of right logic,

then its dynamics to claim rights at the expense of other social groups is practically zero because the lever magnitude is less than one. As a result, these social groups must have a large percentage of votes in order to survive.

Conclusions

Humanism can be developed in the direction of reducing the bias of groups of people. Bias is the one that provides most differences and creates most conflicts and collisions among people. Fulbright idea however, follows that direction trying to bring people from different cultures together and cooperate and work on scientific projects. This Fulbright idea can be substantially strengthened by officially adopting the basic principles of education as they were presented here, and also by considering more specific measures based on the above scientific analysis using mathematics to help in reducing bias.

It is important to understand that most people who decide today about right and wrong, about good and bad, about correct and error, are people with strong bias in their thought and the scientific community does not react to that. Consequently the analysis presented in this paper shows that there are scientific bases to approach such issues and the scientific community together with programs like the Fulbright program must help in this direction.

Acknowledgements

I would like to acknowledge the valuable help of Dr. Nikolarea Aikaterini in editing this document.

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