

383
McCARTHY H, S
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Possible Pythagorean influences on Plato's views of physical education in *The Republic*

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This study examined the relationship between the Pythagoreans and Plato in order to further illuminate the derivations of Plato's views of physical education. Concepts from Pythagorean and Platonic writings were examined. A search for historical connections between Plato and the Pythagoreans was made. Possible Pythagorean influences on specific Platonic concepts of physical education were suggested. General concepts in The Republic which appear to be influenced by Pythagoreanism were the theories of soul, forms, harmony, justice, and simplicity. Related to these concepts, but more inherent to physical education specifically, the following concepts were thought to be of Pythagorean origin: that the pre-eminent objective of physical education was character training, that the body was inferior to the soul and needed physical education primarily to prepare it for service to the soul, that simplicity of diet and regimen was to be maintained for an adequate physical education program, and that participation in physical education was not reserved for men but also included women.

MOST REFERENCES TO PLATO'S VIEWS regarding physical education emphasize what Plato said about physical education rather than why he said what he did. Plato was personally acquainted with the Pythagoreans and had access to their writings. This study was made to identify Pythagorean concepts as they were expressed in Plato's views on physical education, and to define the relationship between Pythagorean and Platonic views of physical education in *The Republic*.

Procedure

Philosophical concepts from Pythagorean and Platonic writings were compared; the historical setting surrounding Pythagoreanism and Platonism was examined; and a search was made for historical connections between Plato and the Pythagoreans. It was then possible to suggest specific Pythagorean influences on Plato. Inference was used as a research method in the final step; i.e.,

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Platonic statements were compared with Pythagorean statements to see if similarities in content appeared. If such similarities existed, then it was inferred that there was possible Pythagorean influence. Such inference also depended on scholars' opinions found in primary and secondary sources.

Sources

Although ethical, political, and religious teachings were ascribed to Pythagoras, he left no writings of his own, so it was difficult to determine exactly how much Pythagoreanism was due to this "founder" of the Society and how much was due to his disciples. Pythagoreanism reached its zenith during the sixth century B.C. and was extended into the fourth century by such men as Archytas and Philolaus.

Allusions made to Pythagoras were traced to three major sources, namely the Pythagorean biographies by Diogenes Laertius, Iamblichus, and Porphyry, which were based on fragments of writers who were either Pythagoreans themselves or had direct contact with them. The three recognized biographies plus various other Pythagorean fragments were translated and collected into one text by Kenneth Sylvan Guthrie. Thomas Taylor translated Iamblichus' biography and a translation of Diogenes' biography of Pythagoras is available in the Loeb Classical Library.

Two biographies of Plato were available. The first, by Apuleius, was translated by Thomas Taylor. The second, by Diogenes Laertius, was translated in the Loeb Collection. Some biographical information was obtained from the Platonic letters which were also translated in the Loeb Collection. Benjamin Jowett's translation of *The Dialogues of Plato* was the source used for Platonic excerpts.

Findings

City states were characteristic of the sixth and early fifth centuries and a growing dissatisfaction with the aristocracy caused unrest. However, as birth and ownership of land became less important as a means to prominence, men gathered together in cities and the seeds of democracy were sown. Petty wars between rival states were prevalent and the Greeks of this period maintained a high degree of physical fitness in order to defend themselves. This was also a period of athletic festivals where competition became highly organized and strength was characteristic of the athletes.

PYTHAGORAS AND HIS SOCIETY

Samos, in the Ionian section of Greece, was Pythagoras' original home, although he spent most of his adult life at Croton in Southern Italy. His birthdate was approximately 569 B.C. Pythagoras was portrayed as a remarkable man, described as a lawgiver, social reformer, philosopher, scientist, and the prophet of a new religion. Pythagoreanism represented a "body of thought" and Pythagorean Brotherhoods were well organized and influential during the sixth and fifth centuries B.C.

The character of the Pythagorean Society itself was somewhat ambiguous. It was described as a school, club, association, and brotherhood. The Pythagoreans were highly selective when choosing new members and had various degrees of initiation which resulted in a hierarchy of grades and ranks within the mem-

bership. The actual process of initiation into a Pythagorean Society was involved. There was much concern with the candidates' opinions and manners. Much attention was also given to their physical structure and carriage because the Pythagoreans believed that the state of the body reflected the less apparent state of the soul.

In 454 B.C., during a period of persecutions against the Pythagoreans, their power was dissolved. Many of the surviving Pythagoreans had to emigrate from Italy into other areas, including the Greek mainland. It was not until Plato's time that they again gained prominence. Pythagoras was over eighty years old when he died. Some of the Pythagoreans escaped from the persecutions in Italy and lived at Thebes on the Greek mainland toward the end of the fifth century. Philolaus, the most prominent Pythagorean connected with the community at Thebes, was represented as the connecting link between the older Pythagoreans and those of the fourth century, when the chief seat of the Pythagorean Society was at Tarentum in Southern Italy. Here Archytas, the Pythagorean associate of Plato, came to power.

Pythagorean philosophy. One of the first problems that confronted early philosophers was that of substance. The Pythagoreans, also concerned with this problem, proposed that the essence of everything was number. To the Pythagoreans, number did not mean an actual stuff or substance per se. The term only represented the quantitative relations or form of a thing and was a symbol of the relation. For example, the point was one, the line two, the figure three, etc. They divided number into two major types, the "even" and the "odd," which could be blended into various combinations. Even numbers, having the capacity to be divided by two, were termed unlimited or infinite. Odd numbers were referred to as limited or finite. Thus, the Pythagoreans held to a doctrine of dualism represented as the limited versus the unlimited. Number principles were also extended to the moral world of man's conduct as was seen in the Pythagorean concept of justice:

Justice is based on the conception of a state composed of equal parts. A number is square so long as the equality of its parts remains: a state is just, so long as it is distinguished by the equality of its parts, and justice is the preservation of such equality.¹

Other aspects of Pythagorean philosophy were based on a belief in transmigration of the soul and the various purifications which eventually freed the soul from a pattern of birth and rebirth. Inherent in the doctrine of transmigration was the doctrine of the soul, which the Pythagoreans claimed had three parts — reason, courage, and appetite.

Pythagorean physical education. Pythagoreans held to the dualistic concept of body and soul and regarded the body as the tomb of the soul. In order to attain salvation and free one's soul from the wheel of birth, the Pythagoreans deemed it necessary to first be purified from the "earthly and sensual." This belief led to the use of abstinence and gymnastics for purification. Purification through gymnastics was probably based on the idea of "hardening" the body to resist external influences in order for it to become an effective instrument of the soul. The Pythagoreans used exercises to aid in maintaining a balanced physical state which they considered an "honorable and beautiful thing." To

¹ Sir Ernest Barker, *Greek Political Theory* (London: Methuen and Co., 1960), p. 54.

them, intemperance and a good physical state did not subsist together and they recommended that symmetry be maintained between food, relaxation, and exercise. Pythagoreans regarded strong healthy bodies as necessary components for a harmonious and ordered universe.

The world's virtue is harmony; the city's virtue is equitable legislation, and the body's virtues are health and strength.²

Pythagoreans practiced the views they espoused. Exercise programs were listed among their daily activities. Throughout their history they were associated with gymnasiums and the activities which took place there. Many of the Pythagoreans, including the famous Milo of Croton, were outstanding athletes.

PLATO

Pythagoras spent most of his life in Italy. Plato, however, lived mainly in Athens (427-347 B.C.). Thus, a gap of 27 years (454-427 B.C.) existed between the Pythagorean persecutions and Plato's birth. During this period Athens was on the decline. The city state had disintegrated. There was no longer any need for citizen soldiers so athletics and physical training lost their social and military purpose.

Historical accounts related that Plato left Athens to travel when he was approximately twenty-eight and returned to Athens about fifteen years later. These were the same years during which the Pythagoreans regained prominence in Italy, especially at Tarentum. Both of Plato's biographers related that Plato visited the Pythagoreans during his travels, "was furnished with accurate and magnificent doctrine," and expressed a desire to imitate them. They also mentioned particular Pythagoreans whom Plato visited — Eurytus, Archytas, and Philolaus. A subsequent close friendship supposedly developed between Archytas and Plato. When Plato visited Sicily at a later date and was suspected of treason by Dionysius, the ruler there, it was Archytas, the Pythagorean associate of Plato, who procured Plato's pardon.

Besides knowing the Pythagoreans personally, Plato had access to their writings. In one instance, he purchased three Pythagorean books from Philolaus. He obtained other Pythagorean works from Archytas. It was generally agreed that Plato wrote *The Republic* before he founded the Academy in 388 B.C. Thus, *The Republic* must have been written sometime during or shortly after his travels, close to the years when he associated personally with the Pythagoreans.

PLATONISM AND PYTHAGOREANISM COMPARED

Relationship of body and soul. Both Plato and the Pythagoreans expressed a belief in transmigration and the immortal soul. Closely associated with these doctrines was the Platonic and Pythagorean description of the soul which they both said had three parts — reason, courage, and appetite. Both philosophers defined physical education as *gymnastic*, which meant the training of the body by a system of exercises in which the naked limbs were allowed full play. Plato envisioned gymnastics for military goals and for character training. The Pythagoreans were not interested in gymnastics for military purposes, but, like

² *Pythagoras Source Book and Library*, trans. by Kenneth S. Guthrie (Alpine, N. J.: Platonist Press, 1920), p. 87.

Plato, recommended gymnastics for character training. They maintained that the individual's character was strengthened as the soul was uplifted. Character was developed as the reasoning part of the soul began to govern those parts associated with appetite and desire. "Health, strength, and sense-perfection are satellites of the body," said the Pythagoreans. "Prudence, courage, justice, temperance are the satellites of the soul . . . for the army obeys the general, the sailor the pilot."³

For the candidates to Plato's guardian class in his *Republic* and for candidates in Pythagorean Societies, a prime requisite was a good physique. Concerning the selection of potential state guardians Plato said, "The trial of their quality in gymnastic exercises is one of the most important tests to which our youths are subjected."⁴ Plato stipulated that only those "sound in limb and mind" would be chosen. Similarly, Pythagorean initiates were judged on "their form, their mode of walking . . . the whole motion of their body . . . and the natural indications of their frame."⁵ Apparently, concern for one's body did not end after initiation into Plato's guardian ranks or into the Pythagorean Societies, for Plato stated that exercises and care of the body were to be continued throughout life, and elder members of Pythagorean Brotherhoods recommended the maintenance of a similar standard.

Throughout Pythagorean and Platonic thought concerning physical education, there were many references depicting the body in opposition to the soul, the soul always being considered superior to the body. A comparison of the following statements, for example, showed such a distinction.

Platonic: The soul is better than the body. The body is an instrument of the soul.⁶

Platonic: The soul is marred by her association with the body. The good body and bodily excellence doesn't improve the soul but the good soul by her excellence improves the body.⁷

Gymnastics were recommended by Plato and the Pythagoreans to bolster the body. Otherwise, the inferior body would corrupt the virtuous soul. Both philosophers were of the opinion that things at their best were least liable to be altered or decomposed. Examples of Platonic and Pythagorean opinions regarding this matter were as follows:

Pythagorean: The bodily virtues are health, strength, vigor, and beauty.⁸ The body must possess the better properties under its control, namely health, and correct perception, and strength, and beauty.⁹

Platonic: The body is perfected and ennobled by receiving gifts of beauty, strength, and health.¹⁰ During the period of youth, the chief and special care should be given to the body so it may be used in the service of philosophy.¹¹

³ *Ibid.*, p. 42.

⁴ *The Dialogues of Plato*, trans. by B. Jowett, Vol. II, 4th ed. (Oxford: Clarendon Press, 1953), p. 401.

⁵ Iamblichus, *Life of Pythagoras*, trans. by Thomas Taylor (London: A. J. Valpy, 1818), p. 51.

⁶ Guthrie, *op. cit.*, pp. 41-42.

⁷ Jowett, *op. cit.*, p. 252.

⁸ Guthrie, *op. cit.*, p. 141.

⁹ *Ibid.*, p. 188.

¹⁰ Jowett, *op. cit.*, p. 466.

¹¹ *Ibid.*, p. 358.

Harmonious physical development. Concerning the concept of harmony, Pythagorean influence appeared to be observable in *The Republic*, in Plato's theories of maintaining a harmony between bodily parts and a balance between training in music and gymnastics. Plato explained that the creation of a symmetrical, well-balanced body existed when "a natural order and government of one by another in the parts of the body" existed.¹² The Pythagoreans expressed an almost identical opinion when they said that all of the body's faculties were to be kept in a "peaceful relationship with each other."¹³

Plato's training of his auxiliaries and guardians in *The Republic*, by music and gymnastics, corresponded closely to the purging of the soul by music and gymnastics advocated by the Pythagoreans. Examples of Pythagorean and Platonic opinions regarding harmonious training in gymnastics were as follows:

Pythagorean: Nature has arranged the body, like an instrument to be subservient to and in harmony with, the subjects of life. The soul must likewise be brought into harmony with its analogous good qualities . . . as the body is in the case of health.¹⁴

Platonic: As there are two principles of human nature, one the spirited and the other the philosophical, some God . . . has given mankind two arts of answering to them . . . in order that these two principles (like the strings of an instrument) may be relaxed or drawn tighter until they are duly harmonized . . . And he who mingles music with gymnastic in the fairest proportion and best attempers them to the soul, may be rightly called the true musician and harmonist. . . .¹⁵

Simplicity. In both the Pythagorean and Platonic views on physical education, the key word was simplicity, for both insisted that there should be no excessive care given to the body. Plato strongly opposed the intense training and athletic competition required of the athlete of his day. He judged such training as perilous to good health. A comparison of Pythagorean and Platonic excerpts concerning simplicity in gymnastic training showed marked similarities.

Pythagorean: They so attended to their bodies that they might always remain in the same condition, not at one time too heavy and another time too lean.¹⁶ The body suffers from both excesses and lack.¹⁷

Platonic: Excessive care of the body when carried beyond the rules of gymnastic is most inimical to the practice of virtue.¹⁸ Whereas simplicity in music was the parent of temperance in the soul; simplicity in gymnastic of health in the body.¹⁹

Gymnastics for women. Pythagorean influence appeared to be observable in Plato's views concerning gymnastics for women. The Pythagoreans, against tradition, admitted women into their societies to be educated along with the men. Plato, also against tradition, included women among the ranks of his state's guardian class. The following excerpts demonstrate the similarity of Pythagorean and Platonic views concerning gymnastics for women.

¹² *Ibid.*, p. 300.

¹³ Edwin L. Minar, *Early Pythagorean Politics* (Baltimore: Waverly Press, 1942), p. 103.

¹⁴ Guthrie, *op. cit.*, p. 188.

¹⁵ Jowett, *op. cit.*, p. 252.

¹⁶ Iamblichus, *op. cit.*, p. 40.

¹⁷ Guthrie, *op. cit.*, p. 44.

¹⁸ Jowett, *op. cit.*, p. 256.

¹⁹ *Ibid.*, p. 253.

Pythagorean: It is necessary that boys and girls . . . be trained up in exercises and proper endurance.²⁰ Both husband and wife should achieve the virtues of body and soul. The bodily virtues are health, strength, vigor of sensation, and beauty.²¹

Platonic: The education which was assigned to men was music and gymnastic. Then, women must be taught music and gymnastic too.²² Men and women alike possess the qualities which made a guardian; they differ only in their comparative strength or weakness. The gifts of nature are alike diffused in both. There is nothing unnatural in assigning music and gymnastics to women.²³

Conclusions

Although approximately 150 years elapsed between the origination of the Pythagoreans and the writing of *The Republic*, Pythagorean influence appeared in *The Republic*. Inherent in the Pythagorean and Platonic views of the soul was the idea that education occurred as the soul was freed from its earthly associations and sought truth and purification. Such development of the soul was synonymous with the Pythagorean and Platonic idea of the perfecting of character and both viewed gymnastics as an instrument for accomplishing such an end. Furthermore, both regarded the body as inferior to the soul and gymnastics as a means of strengthening the body in order to make it a more worthy receptacle of the soul. The idea of combining music and gymnastic training and the idea of using gymnastics as a means of maintaining a balance between bodily parts were expressive of the Pythagorean and Platonic views of gymnastics as a contributing factor in establishing man's ultimate harmonious existence. The Pythagorean and Platonic objectives for physical education did not include all the objectives described by physical educators of today. For instance, they were not concerned with recreational and social values. However, they did recognize the moral values and fitness derived from physical education and envisioned both men and women as fit recipients of these values.

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²⁰ Guthrie, *op. cit.*, p. 81.

²¹ *Ibid.*, p. 141.

²² Jowett, *op. cit.*, p. 305.

²³ *Ibid.*, p. 310.

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