

# Pythagoras Foundation



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Website <http://www.stichting-pythagoras.nl/>  
Emailadres [nico.bader@stichting-pythagoras.nl](mailto:nico.bader@stichting-pythagoras.nl)  
Editors Nico Bader, Marie-Anne de Roode

This semi-annual Newsletter will give short articles and a summary of literature, book reviews of recent publications concerning Pythagoras and Pythagoreans. Interesting internetsites, work in progress and conferences are included. We will be very pleased to receive information of books and (journal, internet) articles to keep our lists up to date.

Nico Bader - Chairman of the Pythagoras Foundation.

Doch es lebte unter jenen ein Mann von uberragendem Wissen, der wahrlich den grossten Geistesreichtum erwarb, allerlei kluger Werke am meisten machtig. Denn wenn er mit allen seinen Geisteskräften sich reckte, schaute er leicht jedes einzelne von allem Seienden in seinen zehn und zwanzig Menschenleben.  
(Diels, Fragmente, Empedokles 31 B 129)

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## **Introduction**

From time to time I think of Han van der Meulen, co-founder of the Foundation Pythagoras. Many times he emphasized the importance of a newsletter for the Foundation. In the beginning it sounded like a fantasy. What should be the content and to whom do we send it? Already after the first newsletter it became clear that he was right! It became an important way to communicate with others all over the world interested in Pythagoras.

Thanks very much for all the reactions on our third newsletter. Through these mails we are able to improve the content of the newsletter. Please let us know if you have suggestions, wishes, comments. Do use our email address. This edition the technical mathematical part has been taken out. On request it can be sent to you.

The next newsletter will be published December 2005.  
If you like to send an article please let us know.

All the best wishes,  
Marie-Anne de Roode

## **Pythagoras Foundation Library Information.**

The Pythagoras Foundation owns a library with extensive documentation on the subjects mentioned above. The collection consists mainly of works on the following topics:  
Pythagorism, Philosophy, Philology, Vegetarianism.

What are the targets of the Pythagoras Foundation?

- to collect information on the philosophies of Pythagoras and other Pythagoreans.
- to collect information concerning the Pythagorean (= vegetarian) way of life and vegetarianism in general, and make this information accessible to the general public.
- to carry out and support relevant archaeological, historical and bibliographic research.
- to support other relevant activities.
- to propagate its goals through the media.
- to maintain / seek contact with associations and groups which share the same or similar objectives.

The foundation would like to hear from anyone interested in contributing to its work, by  
- contacting the foundation for information and  
- collecting articles and books about Pythagoras and relevant subjects.

The Library collects all publications concerning Pythagoras and Pythagoreans.

The library is a lending library; also copies of articles can be ordered.

Copy costs and postage will be calculated.

The Foundation is a non-profit organisation; our Newsletter is free of charge. Donations are welcome.

The Pythagoras Foundation

Thorbeckelaan 46

1412 BR Naarden

The Netherlands

Postbank 27423.

International Bank Account Number (IBAN): NL84 PSTB 0000 0274 23

BIC: PSTBNL21

We are working on a bibliographic database of all the articles in the library (this includes journal articles, conference papers, chapters or parts of books etc.).

The card index of (the bibliographic information of) publications, which we do not have yet, is updated. Thanks to PiCarta, a Dutch interlibrary service of OCLC PICA, most of the publications are traced in Dutch libraries.

Nico Bader

We would very much like to add the following books to the Library:

- Alessio, L.** Pitagora. 1940  
**Benson, B.A.S.** Pythagorean aesthetics and the poetry of John Donne. 1972  
**Bohme, A.** Die Lehre von der Seelenwanderung in der antiken griechischen und indischen Philosophie: ein Vergleich der philosophischen Grundlegung bei den Orphikern, bei Pythagoras, Empedokles und Platon mit den Upanishaden, dem Urbuddhismus und dem Jainismus. 1989  
**Brumbaugh, R.** Aristotle's criticism of the "Pythagoreans". 1938  
**Galimard, P.** Hippocrate et la tradition pythagoricienne. 1939  
**Haase, R.** Geschichte des harmonikalen Pythagoreismus. 1969  
**Schavernoeh, H.** Die Harmonie der Sphären: die Geschichte der Idee des Welteneinklangs und der Seeleneinstimmung. 1981  
**Segl, R.** Die Pythagorasrede im 15. Buch von Ovids Metamorphosen. 1970  
**Skovgaard Jensen, S.** Dualism and demonology. The function of demonology in Pythagorean and Platonic thought. 1966  
**Stricker, B.H.** De praehelleense ascese. 1994.  
**Teti, D.** Alcmeone e Pitagora: scuola medica crotoniate e scuola pitagorica italica. 1988  
**Thimus, A. von** Die harmonikale Symbolik des Alterthums. 1870 (or reprint 1988)  
**Tortorelli Ghidini, M.** Tra Orfeo e Pitagora: origini e incontri di culture nell'antichità : atti dei seminari napoletani 1996-1998.

### **Acknowledgements**

The Pythagoras Foundation thanks the following individuals for their contributions and generosity:  
Ralph Abraham, Aphrodite Alexandrakis, Cosmin Andron, Konstantine Boudouris, Geoff Bowe, Luc Brisson, Christopher S. Celenza, Mita Darbari, Christos Evangeliou, John Finamore, Daniel Graham, Charles Kahn, Thomas Kiefer, Deepa Majumdar, Mark L. McPherran, Phil Meade, Melanie B. Mineo, Asger Sørensen, Apostolos Pierris, Oliver Primavesi, Tony Preus, Christoph Riedweg, Marc Schafer, Harold Tarrant, Justin Taylor, Johan Thom, Eliza Tutellier, Algis Uzdavinyis, Dave Yount, Leonid Zhmud, Ruud de Zwarte.

## Pythagorean Mathematics in an Archaic Temple at Paestum in South Italy

Ruud de Zwart

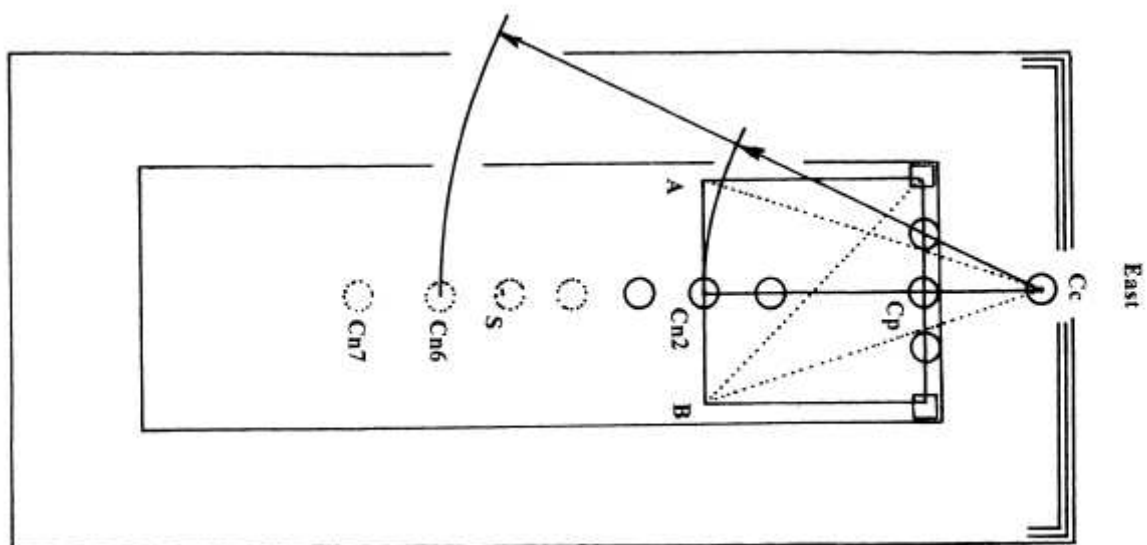
Given the degree of specialization characteristic of modern architectural studies, an investigator cannot expect to attract many readers outside the circle of historians of Greek architecture. The purpose of this paper is to inform anyone interested in Pythagoras and Pythagorean mathematics. I give a selective account of the results of my inquiry.

In the course of an inquiry into the design of the archaic temple of Hera (formerly called 'Basilica') at Paestum (Poseidonia) I discovered by chance that the middle step on both flanks of the temple platform revealed measures which are of no use for the construction of the temple but can easily be explained as to put on record the golden section on a very large scale.(1) Beginning at the west end of both steps, the sum of a row of block measures indicate that Pythagoreans had something to do with this temple during its erection. North side: 7 blocks (1943.5 cm) joined with 11 blocks (3144.5 cm) and on south side 7 blocks (1943.5 cm) joined with 10 blocks (3145.4 cm). Proportion on north side 0.61806 and on south side 0.61788, which is very accurate as the ratio of the golden section is 0.61803.. (irrational; most handbooks give 0.618). Nobody can see it, so it cannot be considered an aesthetical feature. Therefore, I held it to be a mathematical exercise. But for what purpose? It seems good for nothing. Of course, I started a more thorough study of the dimensions of the temple.(2)

The Hera temple I has been measured by the German Archaeological Institute at Rome, directed by Dieter Mertens.(3) The colonnade is still *in situ*, but, in the Middle Ages, about 90 % of the building within the colonnade was demolished to its very foundations. Fortunately, the careful measurement of small traces saved Pythagoras' inheritance.

The colonnade of the temple has 50 columns, that is two times the square of 5, the square of 3 on fronts (corner columns included) and the square of 4 on flanks (corner columns excluded). As I know no other temple of 50 columns in this configuration, I suggest that the architect attempted visualization of the theorem of Pythagoras.

A golden isosceles triangle and a square are invisibly extant in a horizontal plane about two metres above floor level. The internal width of the naos (Mertens, drawing 8), at floor level 1149 cm (of no importance), is 1153.5 cm (from level + 190.5 cm). This width represents the base of the triangle and a side of the square, situated south-north in the centre of the second naos column Cn2. The apex of the



triangle is the centre of the central colonnade column Cc on east front. The axial distances of 4 successive columns in the east-west axis of the temple are (Mertens, drawing 2) 621.3 cm (Cc-Cp), 812.5 cm (Cp-Cn1) and 341.1 cm (Cn1-Cn2). It follows that Cc-Cn2 (1774.9 cm) represents the perpendicular of the triangle. The distance Cp-Cn2 (1153.6 cm) proves the existence of the square. Using the theorem of Pythagoras, it is easy to calculate the length of the leg of the triangle, which gives 1866.3 cm. The proportion of base to leg,  $1153.5 : 1866.3 = 0.61806$ , proves that it is indeed a golden isosceles triangle. Such a triangle is the essential part of the pentagram. Analysing in cm, the meaning of the square cannot be discovered. Knowledge of the metric value of the foot-standard of Pythagoras is of vital importance. As Pythagoras was born on the Greek island of Samos, historical evidence comes in very useful. The Egyptian royal cubit (52.255 cm) was divided into 28 digits. Herodotus (II 168) tells us that the Egyptian and Samian cubit are equal. Since Greek architects seem to have worked in feet (of 16 digits) rather than cubits, the Samians preferred the foot of  $16/28 \times 52.255 = 29.86$  cm. The Hera temple I at Paestum is also a source for the foot-standard. Length and width of the outlying altar (Mertens, p. 3, fig. 2) are 2100 and 607 cm. Pythagoras' foot-standard =  $(2100 - 607) : 50 = 29.86$  cm. This system of proportioning rectangles, length minus width is a whole number of feet, is very practical as it avoids the use of complicated fractions of the foot in designing rectangles. The infrequency of simple arithmetic ratios in Greek temples is striking.

Knowing the foot length, we are prepared to convert metric measurement into Pythagorean numbers, which are represented in this case by double digits (dd = 3.7325 cm) and digits (d = 1.86625 cm). It may be useful to emphasize the accuracy of the laying-out. The side of the square is 309 dd = 1153.3 cm. The calculation of the diagonal gives 436.991.. (1631.07 cm); 437 dd = 1631.1 cm. Thus Pythagoras was acquainted with a very accurate expression for the square root of two in whole numbers! Telling numbers were used for the golden triangle: base 618 d and leg 1000 d; the perpendicular is 951 d = 1774.8 cm.

Let us now return to the golden section on the steps. A geometrical progression is a series of integral numbers, each of which is the sum of its two predecessors and any two of which will produce an approximation for the golden section, e.g., the well-known series of Fibonacci. Pythagoras used a progression which is called the series of Lucas since 1877 (4): 1, 3, 4, 7, 11, 18, ..., 521, 843, 1364, etc.; 521 dd = 1944.6 cm and 843 dd = 3146.5 cm.

It is immediately apparent that the temple furnishes concrete evidence of geometrical constructions, but it remains to be clarified for what purpose these constructions have been laid out. From level + 190.5 cm one can visualize triangle and square by stretching strings horizontally between five points. However, three points got inaccessible long before completion of the temple and so the final result was a hidden treasure of mathematical knowledge which was inaccessible for the Pythagoreans themselves. Thus there are three accurately constructed features in this temple – golden section, golden triangle and special square – which are invisible for human beings. However, the ancient Greeks gave credence to demons. The only explanation that fits in with the evidence is that the magic power of the invisible constructions screened Pythagoreans from demons.

It is not easy to co-ordinate the available information. To sum up: the temple is dated to about 530, or even earlier, soon after the middle of the sixth century BC; Paestum is not mentioned in the myths and legends dealing with the period 531-480. According to tradition, Pythagoras came from Samos to Kroton in 531 or about 520, where he taught till 510 when he died in a fire or left Kroton for Metapontion; Paestum lies, as the birds fly, about 260 km from Kroton. Clearly, there is something wrong with the tradition or the date of the temple. Thus it is possible to argue that Pythagoras lived at Poseidonia before he went to Kroton or lived at Poseidonia, not Metapontion, after 510.

(1) R. de Zwarte, Evidence of the so-called Golden Section in Archaic South Italy: the Hera Temple I ('Basilica') at Paestum. With an addendum on the Parthenon at Athens, *Bulletin Antieke Beschaving* 77 (2002), pp. 9-18.

(2) R. de Zwarte, Pythagoras' Inheritance at Paestum in South Italy - Number is the Substance of All Things, *Bulletin Antieke Beschaving* 79 (2004), pp. 41-50.

(3) D. Mertens, *Der alte Heratempel in Paestum und die archaische Baukunst in Unteritalien* (Verlag Philipp von Zabern, 1993).

(4) D. Wells, *The Penguin dictionary of curious and interesting numbers* (Harmondsworth, 1986); see information at number 11.

## Contribution of Pythagoras towards Women Empowerment

### Mita Darbari

In the ancient Greece, the opportunities to become educated were limited for most women. Women had practically no chances to participate in the educational, cultural, or political life of their communities. Most women in the ancient Greece never had the liberty to venture out from the home away from their duties of managing household affairs. Greece generally denied women any place in the life of the mind. Nothing mirrors a society's attitude toward women more strongly than its view of their mathematical ability.(1) Male-dominated societies have always discouraged women from learning mathematics and philosophy.

And that's why the contribution of Pythagoreans is momentous. The Greek philosopher Pythagoras founded a scholarly community in Crotona, Southern Italy in 539 BC, a commune somewhere between a religious order and a university where about twenty-eight women were admitted. Pythagoras won an important battle at his school's outset when he forged an agreement that women would be recognized as coequal to men in the order. One of his pupils was Theano, the young and beautiful daughter of his host Milo, whom he married and who was put on the faculty later on. These select women entered the Pythagorean society on an equal basis as men. Pythagoras was well respected and we are told by Diogenes Laertius, who is the most important source for female philosophers, often men "gave their wives into the charge of Pythagoras to learn his doctrines"(2). This was a revolutionary step because at that time, women were needed to help run the oikos (house) where she would cook, spin, weave, manage servants and raise children. A servant did chores like fetching water and going to market if the family could afford it. Higher-class women were expected to have a chaperone accompany them when they left the house .(3) Custom dictated that a Greek woman limited her time outside the house to visiting with her nearest female neighbors. Exceptions to this rigid social convention were weddings; funerals and state religious festivals in which women were expected to play prominent public roles.(4) Keeping the women inside made it almost impossible for women of the 'respectable' class to pursue a profession. The Pythagoreans founded their philosophy on mathematics, which embraced musical structure and other arts as well. Philosophy was a male dominated profession even less likely to include women "since its practice often involved the discussion of theories in groups or sects". (5) The minority of women who were able to enter the field of philosophy overcame subjugation and found great opportunities in education in order to learn to read, write, think and teach.

Theano and her three daughters, Arignote, Myia and Damo, who were educated by Pythagoras, along with others in his school, contributed to mathematics, cosmology, astronomy and other areas in their life times. Theano gave the concept of the "golden section". She also wrote on physics, medicine, child psychology and about the ethics that a woman should adopt in daily life. In her book, On Piety, she explained that men and women have different natures and a woman's special virtue is temperance:

*Now some people think that it is not appropriate for a woman to be a philosopher, just as a woman should not be a cavalry officer or a politician ... I agree that men should be generals and city officials and politicians, and women should keep house and stay inside and receive and take care of their husbands. But I believe that courage, justice, and intelligence are qualities that men and women have in common ... Courage and intelligence are more appropriately male qualities because of the strength of men's bodies and the power of their minds. Chastity is more appropriately female. (6)*

Several of Theano's maxims exhibit Pythagorean attitudes towards women. A woman's responsibility was solely to maintain law, justice and harmony in the home. A woman who did not abide by this contributed to the chaos and disorder of society. Although Theano was able to make great contributions to her husband's school and achieve success, she was well aware of the woman's place in society and felt strongly enough to maintain those ideals. The Pythagorean women faced the task of educating other women about living harmonious lives and creating justice and harmony in their homes. They used a more "realistic" approach to moral philosophy while male philosophers attempted to educate men about harmony in their souls and the state through an "ideal" approach. This proves the female importance in the home while men had the responsibility and power to make economic and political decisions.

Pythagoreanism described a harmony in the "cosmos" that exhibits order and beauty. Numbers could explain all things in the universe. Since numbers include both odds and evens, all things have a contradiction- light and dark, the limited and unlimited, good and evil, male and female. The reconciliation of these opposites creates harmony. For human behavior, this was harmony resulted from behaving temperately or by exhibiting moderation. Most Pythagorean women's writings

demonstrated that life was harmonious. These philosophers directed their discussion of this theory towards women to explain the relationship "between marital fidelity, child-rearing, parental piety, religious worship, and public demeanor on the one hand, and the nature of [the woman's] soul, on the other". They also wrote letters to other females about various female behaviors and expectations- women's chastity, women's duties, and women's behaviors if their husband were to acquire a mistress.(7) The Pythagorean beliefs offered advice for others as to how to "survive" given the circumstances. The application of the principle of harmonia could help a woman decide what she ought to do and how she should act. Theano stressed the importance of a woman's duty to please and accommodate her husband and Myia wrote about raising children, with a characteristically Pythagorean emphasis on measure and balance in all things.(8)

Women lacked the political rights and social opportunities the men had, yet in order to be good and orderly they needed excellence. Wisdom was not an excellence considered necessary for a woman. Moderation was the appropriate virtue for women because with that they were able to love and honor their husbands appropriately. The social roles of this time period reflect the nature of both men and women. The roles of the Greek males were based on the political, economical and social aspects of society. Therefore, it was necessary for females to philosophize about the roles of women. These works were able to offer support and guidelines on how to live within the social structure and maintain the harmony in the home and the daily life as well as leave behind an understanding of the history of the status of women in the ancient Greece. About one hundred and fifty years later, Plato visited a Pythagorean order and later modeled his own Academy on it. He was outspoken in saying that men and women are not just intellectual equals, but they're also intellectually alike. In his *Republic* Plato wrote,

*The gifts of nature are alike diffused in both ...  
all the pursuits of men are the pursuits of women. (9)*

Nothing seems more than a reasonable statement by a reasonable man in present context. But not so when we learn that, by prevailing Greek law, women couldn't even attend public meetings in Plato's day. The Pythagoreans lasted only until the middle 300s BC. But the Pythagorean respect for women's minds lingered in the Hellenistic (10) world for seven hundred years. Thus, Pythagoras was the first philosopher who dared to open a co-educational school to empower women thereby attempted to mould the citizens by giving them a good home and hence strived earnestly to build a better society.

Mita Darbari  
Head of Department, Mathematics  
St. Aloysius College, Jabalpur.

## Notes and References

- (1) Liehard, John. No. 213: THE PYTHAGOREANS, University of Houston. Online. Cited 31/1/05.  
<http://www.uh.edu/engines/epi213.htm>
- (2) Finnegan, Rachel. The Professional Careers: Women Pioneers and the Male Seduction. CLASSIC IRELAND, 1995. University College Dublin, Ireland. Online. Cited 4/2/05.  
<http://www.ucd.ie/classics/95/Finnegan95.html>
- (3) Gill, N.S., Women in Archaic Greece. Online. Cited 4/2/05.  
<http://ancienthistory.about.com/library/weekly/aa022900a.htm>
- (4) The Ancient Greek World: Daily Life Women's Life. University of Pennsylvania Museum of Archaeology and Anthropology, 2002. Online. Cited 5/2/2005.  
[http://www.museum.upenn.edu/Greek\\_World/women.html](http://www.museum.upenn.edu/Greek_World/women.html)
- (5) See 2.
- (6) Lefkowitz, Mary R and Fant, Maureen B., Women's Life in Greece and Rome Private Life 208. A Source Book in Translation, 2nd Edition, Baltimore: University of Kentucky, 1992. Online. Cited 5/2/05.  
<http://www.stoa.org/diotima/anthology/wlgr/wlgr-privatelife.shtml>
- (7) Greek Women Philosopher, Women's Studies Department, University of Arizona, 1997. Online. Cited 5/2/05. <http://w3.arizona.edu/~ws/ws200/fall97/grp3/part4.htm>
- (8) Lefkowitz, Mary R and Fant, Maureen B., Women's Life in Greece and Rome Private Life 250. Baltimore: University of Kentucky, 1992. Online. Cited 4/2/05.  
<http://www.stoa.org/diotima/anthology/wlgr/wlgr-privatelife.shtml>
- (9) Plato, The Republic, The Equality of Women. Online. Cited 7/2/05.  
<http://www.eco.utexas.edu/facstaff/Cleaver/350kPEEPlatoWomentable.pdf>
- (10) Greek period from 300 BC to 300 AD.

## Books

Beare, J.I. Greek theories of elementary cognition : from Alcmaeon to Aristotle  
Mansfield Centre, Conn.: Martino Pub., 2004. ISBN: 157898470X

Brede, M. Eine Bemerkung zur Satzgruppe des Pythagoras  
Kassel : Univ., Fachbereich Mathematik/Informatik, 2004.  
Series: Mathematische Schriften Kassel : Preprint ; 2004,19

Bridgman, T.P. Hyperboreans : myth and history in Celtic-Hellenic contacts  
New York : Routledge, 2004. ISBN: 0415969786  
Contents: Inventing mythical Greek time -- From the beginnings to the second purification of Delos -- From Herodotus to Antimachus of Colophon -- The fourth century and beyond -- Antimachus of Colophon -- Heraclides Ponticus -- Hecataeus of Abdera -- Apollonius of Rhodes -- Posidonius of Apamea

Celenza, C.S. The Lost Italian Renaissance: Humanists, Historians, and Latin's Legacy.  
Baltimore: The Johns Hopkins University Press, 2004. ISBN 0-8018-7815-2  
Note: (pp.87-8) on Pythagoras and his connection to the coining of the term philosophy; and chapter 4, Ficino and his "neopythagoreanism."

Cerchiai, L. The Greek cities of Magna Graecia and Sicily  
Los Angeles : J. Paul Getty Museum, 2004. Einheitssachtitel: Città della Magna Grecia e della Sicilia. ISBN: 0-89236-751-2

Citrini, C. Da Pitagora a Borges. Discussioni in reti sull'infinito  
Mondadori Bruno. 2004. ISBN : 8842491470  
Un inatteso contatto permette all'autore di dialogare, o meglio, di "chattare" con numerosi personaggi, vissuti in diverse epoche, dall'antichità al secolo scorso. Eminentissimi letterati, matematici e filosofi parlano tra loro e con l'autore usando sovente le loro stesse parole, in un dialogo a più voci surreale e ucronico che Maria Gaetana Agnesi tenta inutilmente di moderare. Il gusto della citazione dotta ma anche impertinente, spesso presentata nella lingua originale, si accompagna a una curiosità poliedrica, al gioco di parole e al piacere di divulgare in allegria. Il libro è una carrellata sul mondo dell'infinito, avente la matematica come filo conduttore ma senza tecnicismi né pretese di completezza, pieno di digressioni, variazioni sul tema.

Clarke, E.C. Iamblichus: de mysteriis  
Leiden : Brill, 2004. Schriftenreihe: Society of biblical literature writings from the Greco-Roman world ; 4. ISBN: 90-04-12720-8

Durando, F. Magna Graecia : Kunst und Kultur der Griechen in Italien ...[Übertr. aus dem Ital. von Wolfgang Ehrhardt]  
München : Hirmer, 2004. Einheitssachtitel: I Greci in Italia ISBN: 3-7774-2045-X

Favre-bulle, S. Thalès, Pythagore, Euclide, Archimède  
Français Éditeur : Ellipses Marketing. 2004. Collection: Maths en Bulles. ISBN : 2729819533  
Thalès ? Pythagore ? En avez-vous déjà entendu parler ?... Non, pas des théorèmes portant leurs noms, bien sûr, mais des hommes. De leur vie, de leur légende, de leur place dans l'Histoire des Sciences. Maths en Bulles met en scène les grands savants de l'Antiquité dans des récits de fiction pour vous présenter leur monde, leurs recherches, leur quête. Ainsi, les mathématiques grecques restent vivantes, les mathématiciens célèbres retrouvent leur part d'humanité. Si l'on dit souvent que les mathématiques sont cachées au cœur des choses, pourquoi devrait-on vous les cacher pour autant ? La rigueur du texte scientifique, le plaisir du dessin et la beauté des couleurs.

Feichtinger, H. Mediatorem ergo quaerunt (S.Dolb. 26.37) [microform] : a comparative study of Iamblichus and Augustine on the human need for mediation  
Ottawa : National Library of Canada. 2004. Canadian theses. ISBN: 0612836320

Firmenich, A. Seele der Welt : Max Kaminski - Friedrich Holderlin ; Gemalde und Papierarbeiten zu Empedokles  
Bad Homburg : Altana AG, 2003. ISBN: 3-934860-05-2. Konzeption von Ausst. und Katalog.

Florentin, C. Le tableau de Cébès : oeuvre anonyme (fin du I<sup>er</sup>, début du II<sup>e</sup> siècle de notre ère)  
Montpellier : Greges. 2004. ISBN 2951909039

Hadot, I. Studies on the Neoplatonist Hierocles  
Philadelphia : American Philosophical Society, 2004. Transactions of the American Philosophical Society ; 94,1. ISBN: 0-87169-941-9

Hirsch-Luipold, R. Pseudo-Kepes : Allegorie des Lebens ; Die Bildtafel des Kebes (Pinax) / Kebes  
Darmstadt : Wissenschaftliche Buchges., 2004. Schriftenreihe: Sapere ; 8. ISBN: 3-534-15574-2

Huffman, C.A. Archytas of Tarentum : Pythagorean, philosopher and mathematician king  
Cambridge, UK ; New York : Cambridge University Press, 2005. ISBN: ISBN 0-521-83746-4

Hull, M.A. Pythagoras' infinite spiral of fifths : an overview of historical keyboard temperaments.  
Undergraduate honors paper.  
Mount Holyoke College, 2004. Dept. of Music.

Karamanides, D. Pythagoras  
New York : Rosen Pub. Group, 2005. Series: The library of Greek philosophers. ISBN: 1404205004  
Contents: The early years -- The traveling student -- Egypt and Babylon -- A return to Greece -- The Pythagorean school -- Pythagorean thought -- Pythagoras' legacy.

Margaritis, S.C. The new morality : is it really new?  
Pythagoras, c2003. ISBN: 0972830707  
Morality in theory and practice -- The influence of Pythagoras on Socrates and Plato -- How do philosophers and scientists perceive the nature of man? -- American society and culture in the 19th century: from agricultural to industrial -- The student movement: the 1960's and 1970's -- The use of the machine -- A brief account of the immigrant story -- Modern American moral attitudes compared to classical Greek moral attitudes

Marshall, H.R. Plutarch as a source for Empedocles [microform]  
Ottawa : National Library of Canada. 2004. Canadian theses. ISBN: 0612896501

Mayr, F. Herders metakritische Hermetik : eine Untersuchung zum Diskurs über die "Heilige Tetraktys" im Deutschland des 18. Jahrhunderts  
Erschienen 2003. Hochschulschrift: München, Univ., Diss., 2002.

Michelstaedter, C. Parmenide ed Eraclito ; Empedocle : appunti di filosofia  
Milano : SE. 2003. ISBN: 887710564X  
Notes: Writings, partly publ. for the first time. Contains bibl. refs., notes, appendix of photographs. Parmenides (5th cent. B.C.); Heraclitus (550 ca.-480 B.C.); Empedocles (5th cent. B.C.).

Michler, M. Westgriechische Heilkunde : eine Skizze.  
Würzburg : Königshausen & Neumann, 2003. Schriftenreihe: Würzburger medizinhistorische Forschungen ; 82. ISBN: 3-8260-2797-3

Nolting, A.C. Pythagoras eagle & the music of the spheres  
Mahomet, IL : Mayhaven Pub., c2003. ISBN: 187804494X

O'Grady, P.F. Meet the Philosophers of Ancient Greece. Everything You Always Wanted to Know About Ancient Greek Philosophy but didn't Know Who to Ask  
Ashgate. 2005. ISBN: 0 7546 5132 0  
Commencing with Thales of Miletus and continuing to the end of the Ancient Period of philosophy by way of Heraclitus, Parmenides, Protagoras, Socrates, Plato, Aristotle, Archimedes, Epictetus this book explores the major contributions of each philosopher as well as looking at archaeological and historical sites where they lived, worked and thought.

Contents: Foreword. Part I Introductory Essays: Introduction, Alan Chalmers; What is philosophy?, Trevor Curnow; What Greek philosophy means to us today, Ian Hunt. Part II The Precursors of Philosophy: Homer, Seamus Sweeney; Hesiod, Aude Engel; Aesop, Leo Groarke. Part III The Pre-socratics and Socrates: Thales of Miletus, Patricia O'Grady; Anaximander of Miletus, Dirk L. Couprie and Heleen J. Pott; Sappho, Christina Clark; Pythagoras, Thomas Kiefer; Xenophanes, Hye-kyung Kim; Aeschylus, Seamus Sweeney; Anaxagoras, Patricia O'Grady; Heraclitus, G. S. Bowe; Parmenides, Allan F. Randall; Empedocles, James M. Magrini; Protagoras of Abdera and Plato's Protagoras, Jonathan Lavery; The Sophists, Jonathan Lavery; Zeno of Elea, Doukas Kapantais; Sophocles, James M. Magrini; Euripides, Seamus Sweeney; Herodotus of Halicarnassus, Christine Farmer; Diotima of Mantinea, Melanie B. Mineo; Hippocrates of Cos, Andrew Gregory; Socrates, Hope May; Thucydides, Matthew Usher; Democritus, Alan Chalmers. Part IV The Classical Period: Aristophanes, Robert Phiddian; Plato, Gerasimos Santas; Plato's Symposium, Steven R. Robinson; The Anonymous Iamblichus, Louis Groarke; Diogenes of Sinope, Marjolein Oele; Eudoxus of Cnidos, Andrew Gregory; Aristotle, Hope May. Part V The Hellenistic Philosophers: Theophrastus of Eresus, Irene Svitzou; Pyrrho, Leo Groarke; Epicurus, Dirk Baltzly; Zeno of Citium, Maria Protopapas-Marneli; Archimedes, Suzanne Roux; Aristarchus of Samos, Andrew Gregory; Carneades, G.S. Bowe; Lucretius, Tim O'Keefe; Seneca the Younger, Kartika Panwar; Apollonius of Tyana, Gabriele Cornelli. Part VI The Roman Period: Epictetus, Keith Seddon; Apuleius of Madauros, Bruce J. MacLennan; Marcus Aurelius, William O. Stephens; Plotinus, David J. Yount; Sextus Empiricus, Sabatino Dibernardo; Iamblichus of Chalcis, Bruce J. MacLennan; Anthony of Egypt and The Desert Fathers, Louis Groarke; Eusebius, Bishop of Caesarea, Linos G. Benakis; Hypatia of Alexandria, Virginia Haddad; Proclus, Dirk Baltzly; John Philoponus, Antonia Kakavelaki; The Closure of the Academy of Athens, George Arabatzis. Part VII Archaeological Sites: The Athenian Acropolis, Evanthia Speliotis; The Athenian Agora, Kevin Glowacki; Corinth, G. S. Bowe; Delphi, Deborah Nash Peterson; Didyma, Peter Sommer; Eleusis, Anne Farrell; Epidauros, Glenn Rawson; Marathon, Trevor Curnow; Miletus, Patricia O'Grady; Ancient Olympia: athletic games and intellectual contests, Glenn Rawson; Piraeus, Daniel Silvermintz; Samos, Tim O'Keefe and Patricia O'Grady; Syracuse, Phillip Meade; Troy and Henry Schliemann, Patricia O'Grady. Glossary, Glenn Rawson; Time Line, Andrew Gregory.

Ousager, A. Plotinus on Selfhood, Freedom and Politics  
Aarhus Studies in Mediterranean Antiquity, 6. 2004. ISBN 87 7934 098 9  
Note: discussing the (Neo-)pythagorean issue of self-generation

Pierris, A.L. The Empedoclean Cosmos: Structure, Process and the Question of Cyclicity.  
Proceedings of the Symposium Philosophiae Antiquae Tertium Myconense, July 6th-13th,  
2004. Publication of the Institute for Philosophical Research, Conference Series, Vol. III. Sp.

Pythagoras. Los versos de oro  
Buenos Aires Libronauta, 2003. Biblioteca filosofía (Buenos Aires, Argentina) ; v. 6, no.1  
ISBN 1417508817

Riedweg, C. Pythagoras : his life, teaching, and influence.  
Ithaca : Cornell University Press, 2005. ISBN: 0801442400  
Contents: Fiction and truth : ancient stories about Pythagoras -- In search of the historical Pythagoras -- The Pythagorean secret society -- Thinkers influenced by Pythagoras and his pupils.  
Notes: translated by Steven Rendall in association with Christoph Riedweg and Andreas Schatzmann

Rossetti, L. Studi sul pensiero e sulla lingua di Empedocle  
Levante Editori. Bari. 2004. ISBN 88-7949-355-8

Schaffer, E. Hegel und die pythagoreische Tradition  
Halle (Saale), 2003. Thesis: Halle, Univ., Diss. 2003

Schoot, A. van der Die Geschichte des Goldenen Schnitts : Aufstieg und Fall der göttlichen Proportion  
Stuttgart-Bad Canstatt : Frommann-Holzboog. 2005. Reeks: Frommann-Holzboog: Ästhetik ; 3  
Vert. van: De ontstelling van Pythagoras : over de geschiedenis van de goddelijke proportie. –  
Kampen : Kok Agora, 1998. ISBN: 3-7728-2218-5

Seddon, K. Epictetus' Handbook and the Tablet of Cebes : guides to Stoic living  
New York, NY : Routledge, 2005. ISBN: 0415324521 (hc.), 0415324513 (pbk.)

Sedley, D.N. Lucretius and the Transformation of Greek Wisdom  
University of Cambridge. 2003. (ISBN-10: 0521542146 | ISBN-13: 9780521542142)  
Contents: 1. The Empedoclean opening; 2. Two languages, two worlds; 3. Lucretius the fundamentalist; 4. Epicurus, On Nature; 5. Lucretius' plan and its execution; 6. The imprint of Theophrastus; 7. The transformation of Book I; Epilogue.

Suglia, J. Holderlin and Blanchot on self-sacrifice  
New York [u.a.] : P. Lang, 2004. Schriftenreihe: Currents in comparative Romance languages and literatures; 139. ISBN: 0-8204-7273-5  
Impossible sacrifices -- Empedokles and the absence of sacrifice -- On hermeneutic desire and the desire for death in the critical reception of the Empedokles project -- The communication of the impossible -- Authorship and sacrifice in Maurice Blanchot.

Uzdaviny, A. The Golden Chain  
World Wisdom. 1501 East Hillside Drive, Bloomington, IN 47401. ISBN: 094153261  
This anthology of Pythagorean and Platonic philosophy promotes a new and fresh view of what Hellenic philosophy is and what kind of wisdom it offers us. The book demonstrates, through excerpts from the great Pythagorean and Platonic writers, that to these thinkers "philosophy" is a way of life and a means of spiritual realization—not the dry, rationalistic, mental exercise philosophy has become in the modern world. The "Golden Chain" of the title refers to the ancient belief that such "philosophy" transmits a heritage of unitive knowledge through a succession of enlightened teachers and students.

## Chapters in books

Brisson, L. Platon, Pythagore et les Pythagoriciens  
In: Platon, source des Présocratiques. exploration, éd. par M. Dixsaut et A. Brancacci, Histoire de la philosophie, Paris (Vrin) 2003, p. 21-46.

Narcy, M. "The Limits and Significance of Simone Weil's Platonism"  
In: The Christian Platonism of Simone Weil, Doering, E Jane (ed), Univ-Notre-Dame-Pr : Notre Dame, 2004. p 23-41  
This paper aims at rectifying two prejudices: the first one is that S. Weil (French woman philosopher, 1909-1943) was a Platonist throughout her philosophical career; the second one, that, in a way quite similar to that of Christian apologists, she understood Platonism, and ancient thought in general, as anticipations of Christianity. The first part of the paper shows that, as a philosopher, Weil's Plato is viewed through the lenses of this branch of neo-Kantianism the representatives of which were her teacher Alain (Emile Chartier) and the latter's teacher Jules Lagneau. In the second part, I investigate Weil's claim that Plato wasn't an original thinker, but the last, and for us the unique, representative of what she takes as Greek mysticism, that is a mixture of Orphism and Pythagoreanism. The truth that Weil, at the end of her life, thought to find in Christianity was, in her view, a legacy of Ancient Greek and, more generally, ancient Mediterranean culture, religion and mysticism: Platonism is not an anticipation of Christianity, but Christianity an heir to paganism.

Riedweg, C. Zum Ursprung des Wortes 'Philosophie' oder Pythagoras von Samos als Wortschöpfer, in: Antike Literatur in neuer Deutung. Festschrift für J. Latacz, A. Bierl/A. Schmitt/A. Willi (Hg.), München 2004, p 147-181.

Tarrant, H. Must Commentators Know Their Sources? Proclus In Timaeum and Numenius  
In: Philosophy, Science and Exegesis in Greek, Arabic and Latin Commentaries, ICS BICS Suppl., London, vol. I. Ed. P. Adamson, H. Baltussen, and M.W.F. Stone, ISBN 0 900587 94. p. 175-190.

Tarrant, H. Background Issues  
In: Aristotle on Plato's Metaphysics. Proceedings of the Symposium Philosophiae Antiquae Secundum Thersense. Edited by Apostolos L. Pierris. Institute for Philosophical Research Publications, Conference Series, vol. II, ISBN 960 881830 3. p 15-32.

Thom, J.C. « The mind is its own place » : defining the topos

In: Early Christianity and classical culture : comparative studies in honor of Abraham J. Malherbe. John T. Fitzgerald, Thomas H. Olbricht and L. Michael White (eds.), Leiden ; Boston (Mass.) : Brill, 2003 (Supplements to Novum Testamentum, 110). ISBN : 9004130225. p 555-573.

Although the term « topos » is used in different contexts, the notion of an ordered cognitive space underlies all these uses. Some of the principles according to which this space is organized may be universally valid, but on the whole the topography of this cognitive space is culturally determined. Use of the term « topos » in New Testament authors (especially Eu. Matt. 5, 7) is usefully considered in light of use by classical authors from both the sophistic and rhetorical tradition and the moral and philosophical tradition. Includes discussion of the subject matter of the « topos » in Philodemus' « On frank criticism », Musonius Rufus' diatribes, Plutarch's « Moralia », Epictetus' « Discourses », Maximus of Tyre's « Philosophical orations », the Pythagorean treatises and « Golden verses » (5-20), and Aristotle's « Nicomachean Ethics ».

### **Forthcoming books**

Flashar, H. Werke in deutscher Übersetzung 20/I. Fragmente zu Philosophie, Poetik, Rhetorik Aristoteles.

Übers. von: Breitenberger, Barbara/Dubielzig, Uwe/Primavesi, Oliver.

Akademie Verlag. 2006. ISBN: 3-05-004072-6

Note; includes a fairly detailed treatment of the very considerable fragments from Aristotle's lost works on the Pythagoreans (Primavesi, Oliver)

Zhmud, L.

In: "Biographical Encyclopedia of Ancient Scientists", ed. by Paul T. Keyser and Georgia L. Irby-Massie, to be published soon by Routledge,

10 small articles on Pythagoras and the different Pythagoreans

Zhmud, L. Pythagoras von Samos; Pythagoreische Schule,

in: Grundriss der Geschichte der Philosophie.

Bd. 1: Philosophie der Antike. Vorsokratiker. Hrsg. von H. Flashar et al. Bern 2006.

### **Book reviews**

**Celenza, C.S. The lost Italian Renaissance. Humanists, historians, and latin's legacy. 2004.**

Reviewed by: C.S.C. History and theory, 2005, 44, 1, p 150.

Reviewed by: Borgognone, G. Belfagor, 2005, 60, 1, p 119-120.

**Hermann, A. The Illustrated to Think Like God: Pythagoras and Parmenides: The Origins of Philosophy. 2004**

Reviewed by: Anonymus. Publishers Weekly, 2004, 251, 50, p 60-61

Reviewed by: Goldsmith, F Library Journal, 2005, 130, 3, p 134

**Kuhn, T. and Leeder, K. (ed). Empedocles' Shoe:Essays on Brecht's Poetry. 2004.**

Reviewed by: Humble, M. Modern Language Review, 2004, 99, 2, p 541

**Reimer, A.M. Miracle and magic. A study in the acts of the apostles and the life of Apollonius of Tyana. 2002.**

Reviewed by: Klauck, H. Biblical Interpretation, 2004, 12, 3, p 319-321

**Schibli, H.S. Hierocles of Alexandria. 2004.**

Reviewed by: Bonazzi, M. Rivista di storia della filosofia, 2004, 4, p 980

Reviewed by: Lautner, P. Classical World, 2004, 97, 4, p 463-464

Reviewed by: Opsomer, J. Etudes Classiques, 2003, 71, 3, p 288-289

Reviewed by: Steel, C. Tijdschrift voor filosofie, 2003, 65, 4, p 750-751

Reviewed by: Thom, J. Classical Review, 2004. 54, 1, 59-61

## Journal articles

Albrecht, C. Johann Sebastian Bach's 'Kunst der Fuge'. A Pythagorean work and its realization  
*Musik und Kirche*. 2004, 74, 4, p 249-250.

Alliot, C. Où l'abondance de biens nuit: les sandales d'Empédocle face à la surproduction éditoriale  
*Bulletin des bibliothèques de France*, 2004, 49, 3, p. 10-13.

Andron, C.I. Damascius: Commentary of Plato's 'Parmenides', vol 4.  
*Classical Review*. 2004, 54, 2, p 353-354

Baltzly, D. Melissus and the Pluralists: A Philosophical Morality Play  
*Diotima*, 2004, 32, p 32-46

In philosophical theorising, we attempt to "save the phenomena". In doing so, we often posit the existence of things or processes which are not as obvious as the phenomena which we seek to save by means of positing them. We may also decide to sacrifice some of the appearances to save others. Call this juggling act 'metaphysical and epistemological cost-benefit analysis'. I read Melissus as engaged in competing efforts cost-benefit analysis with his pluralist opponents, Anaxagoras and Empedocles. The paper attempts to draw some morals for present day theorists from the consideration of this ancient agon.

Damschen, G. The Latin acrostic - Recently discovered passages in Ovid, as well as Vergil, Grattius, Manilius and Silius Italicus  
*Philologus*. 2004, 148, 1, p 88-115

In this paper, I put forward the hypothesis that the Latin acrostic was an important poetic and poetological device in the Roman literature of the Augustan period and early empire. Acrostics discovered by me provide evidence of this (1) Ovid's description of a mixing-bowl (*Met.* 12,235-44) is framed by the acrostic FAS, SUCCUM/RES ARSAE/ AER which summarizes the Lapithes battle with the Centaurs and relates to Empedocle's four elements. (2) Ovid's moon-acrostic CANES (*Met.* 15, 194-8) proves to be a central part of a poetological tradition founded by Arat's programmatic acrostic AEPETH (*Phaen.* 1, 783-7) in a challenge to Homer's (pseudo-) acrostic of his own name (*Goerg.* 1, 429-8: ASCRA), Manilius (*Astron.* 2, 93-7: SAETA), and Silius (*Pun.* 15, 559-63: ARATeA): these poets convey their poetological programmes as five letter acrostics hidden in passages describing the moon or the moon goddess.

Dillon, J. Iamblichus: Of the mysteries. A manifesto of the miraculous.  
*Classical Review*, 2004, 54, 2, p 349-351

Donnay, G. De la raison à la foi: le pari de Socrate  
*Diotima*, 2004, 32, p 77-85

Drozdek, A. Empedocles' theology  
*Myrtia*, 2003, 18, 5-21.

Emanouilidis, E. Notes 89.01 to 89.27 - Construction of Pythagorean magic squares  
*The mathematical gazette : the journal of the Mathematical Association*, 2005, 89, 514, p 99-100

Fazlioglu I. 'Alemuddin Kaysar and a Theorem of Geometry (in Turkish)  
*Kutadgubilig*, Mr, 2004, 5, p 199-208

In the ancient geometry embodied in Euclid's *Elements*, the basic idea was "to draw/to bring into being a figure that has certain properties (theorem, proposition)" by using definitions, postulates and general concepts (axioms). In this study we shortly introduce the life and works of one of the major 13th century scientists 'Alemuddin Kaysar. Then we present a treatise of him concerning the Pythagoras theorem with its Turkish translation and evaluate it in the above mentioned framework of Euclidean geometry.

Franke, W. Of the ineffable: Aporetics of the notion of an absolute principle (Damascius: Mystic as well as philosopher)  
*Arion. A journal of humanities and the classics*. 2004, 12, 1, p 19-39

Glaister, P. Pythagoras and Golden Bisection  
Mathematics in school, 2004, 33, 5, p 8

Goldstein, J.D. The 'bees problem' in Hegel's political philosophy: habit, phronêsis and experience of the good

History of political thought. 2004, 25, 3, p 481-507.

As in the transmigration of souls after death in the Pythagorean myth that Socrates recounts in the *Phaedo*, for G.W.F. Hegel, in the *Philosophy of Right*, individuals are also 'reborn' out of their original nature into a 'second nature'. This article asks whether the Hegelian transmigration aims at their becoming nothing higher than that 'race of tame and social creatures ... bees perhaps, wasps, or ants, which the Pythagorean myth relates is the fate of those who 'practiced popular and social goodness ... but devoid of philosophy and intelligence'. Through an analysis of duty, virtue, rectitude, custom and habit, this article argues that Hegel's account of the nature of fully ethical self-consciousness contains within it a robust, practical knowledge that resists the 'bees problem', shifts the focus of criticism from the truncation of human possibilities to the vitality of life, and ultimately furnishes resources that can secure the latter - all without abandoning conventionality as the ethical horizon.

Grattan-Guinness, I. History or Heritage? An Important Distinction in Mathematics and for Mathematics Education

American Mathematical Monthly, 2004, 111, 1, p 1-12

Considers the distinction between history and heritage in mathematics and for mathematics education. Pythagoras' theorem; Role of chronology; Historical consequences; Axiomatisation; Philosophical background

Hughes, J.R. Did all those famous people really have epilepsy?

Epilepsy & Behavior, 2005, 6, 2, p 115-139

Many famous individuals are said to have had epilepsy, and these names often find their way into books and lectures on epilepsy. The goal of this study was to investigate in detail the histories of 43 of those people who had various kinds of attacks, but not epilepsy. They range chronologically from Pythagorus, born in 582 BC, to the actor Richard Burton, born in 1925 AD. Epilepsy was misdiagnosed in 26% who had psychogenic attacks, in 21% with attacks of anguish, nervousness, fear, agitation, or weakness; and in 12% with alcohol withdrawal seizures. In some instances no evidence of any episodic symptom could be found. One unexpected finding was that 40% of these well-known, individuals had serious, often life-threatening, physical conditions as infants or very young children. This article is an attempt to correct the record with respect to these people and also to remind us of the many reasons similar misdiagnoses are being made today.

Janko, R. Empedocles, on nature 1233-364 : a new reconstruction of P. Strasb. gr. Inv. 1665-6  
Zeitschrift für Papyrologie und Epigraphik, 2004, 150, p 1-26

Khan, I.A Evolution of the theory of circulation

International Journal of Cardiology. 2005, 98, 3, p 519-521

The first known descriptions regarding the basic aspects of circulation was probably in 500 B.C., by the Greek thinker Alcmaeon of Croton who observed arteries and veins to be dissimilar in animal dissection, and this was followed by the description of the human heart as a three chambered organ by Aristotle in 350 B.C. Herophilus of Chalcedon, a Greek anatomist, confirmed the findings of dissimilarity between arteries and veins in human cadaver dissections in 300 B.C., and determines that arteries were thicker than veins and contained blood. The advancement by far in the learning of human circulation was made possible first by significant contribution of Galen followed by observations of Ibn al-Nafis, Servetus, Colombo, Cesalpino, Vesalius and Fabricius. In 17th century William Harvey, an English physician, made important advancements into the understanding of this important area of medicine, advancements that continued with the observations of Malpighi.

Konoval, B. What does science have to do with music?

Annals of science, 2005, 62, 1, p. 107-121.

Koskenniemi, E. Pythagorus: A biography of Pythagoras Legend - Science - Life design.

Biblische Zeitschrift, 2005, 49, 1, p 155-157

Kourmenos, T. Solid geometry, astronomy and constructions in Plato's 'Republic'  
Philologus. 2004, 148, 1, p 34-39

In Rep. 528 a6-c8 Plato paints a deliberately anachronistic picture of solid geometry as an undeveloped branch of mathematics in order to draw attention to the progress of solid geometry since the dramatic time of the republic and, more specifically, to the solutions of the cube duplication problem by Archytas, Eudoxus and Menaechmus. Robins has argues that this is so because Plato's true astronomy will be modeled on solid geometry which subordinates geometric constructions to the focus of its study, i.e. the discovery of ratios and proportions obtaining within or between solids. However, nothing in Plato's treatment of geometry implies that the ratios and proportions within or between geometric objects are singled out as the focus of geometric investigation. In Rep. 528 a6-c8 Plato can only suggest that the mathematical sophistication of true astronomy will be comparable to that attained by his contemporary solid geometry in the sense that innovative constructions will be as prominent in true astronomy as they are in Plato's contemporary solid geometry.

Liern, V Fuzzy tuning systems: the mathematics of musicians  
Fuzzy sets and systems. 2005, 150, 1, p 35-52

We present some mathematical properties which determine tuning methods. We introduce the concept of fuzzy tuning systems and we analyze four of the systems coexisting within the current orchestras: Pythagorean, Just Intonation, Holder's and Equal Temperament systems. We show that the theoretical and practical tuning methods are the same. We introduce the idea of compatibility between tuning systems and we give some sufficient conditions to determine an appropriate number of notes into which the octave must be divided.

Meade, P. II Logos and Life – Presocratic cosmology and a return to onto-poiesis.  
Phenomenological inquiry, 2003, 27 (2003), pag. 77-93

Note; contrasts the Modern day Philosopher Anna-Teresa Tymieniecka's "Logos and Life" with Pythagorean cosmological ideas.

Moutsopoulos, E. La notion de controverse  
Philosophia, 2003, 33, p 21-25

A controversy consists of a certain number or series of value judgments, wholly or partially opposed, on a given subject. Its improvised character allows the further reconciliation of these judgments, thanks to their subtlety. This allows a pragmatic solution of problems. Insoluble problems exist exclusively within passionate minds. The sincere respect of the Other leads to a final agreement with him.

Mudry, P. Le chou de Pythagore : Présence des modèles grecs dans le De Agricvltura de Caton  
Etudes de lettres, 2004, 1-2, p 25-45

Depuis l'Antiquité, Caton doit à Pline une réputation d'opposant farouche à la culture et aux lettres grecques. Une analyse attentive des pages célèbres du De agricultura consacrées à ce qu'on a appelé la médecine du chou, medicina brassicae, y révèle pourtant une présence significative des doctrines médicales grecques. Un tel constat relativise la figure de Caton héraut de la tradition médicale italique, populaire et autochtone. Il invite aussi à réviser notre jugement sur son attitude générale envers la culture grecque. Aussi proposons-nous une interprétation nouvelle de la fameuse recommandation que, selon Pline, Caton fait à son fils Marcus à propos de la littérature grecque: illorum litteras inspicere, non perdiscere.

Ne'eman, Y. Symmetry and "Magic" numbers or from the pythagoreans to Eugene Wigner  
Acta Physica Hungarica New Series-Heavy ion physics. 2004, 19, 3-4, p 241-246.

I trace the evolution of the scientific world view in general and of the variational approach specifically, including transformation groups I then review the impact of these ideas at the atomic, nuclear and particle levels.

Oberrauch, L. Metempsychose, Universalgeschichte und Autopsie: Die Rede des Pythagoras in Ovid, Met. XV als Kernstück epischer Legitimation  
Gymnasium, 2005, 112, 2, p 107-121

O'Meara, D.J. Iamblichus' 'Peri Tou Pythagoreiou Biou'. *Pythagoras: Legend, philosophy and construction of biography*  
*Classical Review*, 2004, 54, 1, p 84-86

Ousager, A. 'Sufficient Reason, Identities and Discernibles in Plotinus'  
*Dionysius* 21 (2003) 219-40  
Note: discussing the identity of numbers, also Ideal Numbers.

Pataki, E. Ordre musical et sagesse instinctive: quelques notions pythagoriciennes chez clément d'alexandrie  
*Acta antiqua academiae scientiarum hungaricae*, 2003, 43, 1-2, p. 151-211.

Phillips, J. Numenian Psychology in Calcidius?  
*Phronesis*, 2003, 48, 2, p 132-151  
The 1962 publication of J. H. Waszink's edition of Calcidius's commentary on Plato's *Timaeus* focused attention on the question of Calcidius's source for a group of chapters where he presents an interpretation of Plato's account of the creation of soul. I discuss three attempts to answer this question: that of Waszink himself, who argues that the source is Porphyry who was here influenced by the neo-Pythagorean/Platonist Numenius, that of J. M. Van Winden, who claims Numenius as the direct source, and that of Werner Deuse, who offers reasons for excluding Numenius as either directly or indirectly responsible. If, then, the origin of the doctrines of the unity of the soul and of the undescended higher soul can be traced to the work of Numenius, there is the strong possibility that in his formulation of these same doctrines Plotinus was indebted to Numenius. (edited)

Polycarpou, C.N. Did Eudoxus fix the date of Pythagoras' birth?  
*Diotima*. 2005 , no 33 , pp. 176 – 181

Ragot, P. Une construction archaïque chez Empédocle  
*Les études classiques*, 2004, 72, 3, p 195-216

Reeve , M.D. Tradizione medievale ed edizione critica del 'Somnium Scipionis'  
*Gnomon : kritische Zeitschrift für die gesamte klassische Altertumswissenschaft*, 2004, 76, 8, p 677-680

Rieger, M. Essay review  
*Annals of Science*, 2005, 62, 1, p 103-106  
This article discusses the historicity of sound and hearing. For over two thousand five hundred years, philosophers have asked why certain musical intervals are perceived as beautiful. The history of these reflections is treated by Patrice Bailhache in his "Une histoire de l'acoustique musicale." In his first chapter he deals with the discovery of the numerical ratios corresponding to the principal intervals of the musical scale by Pythagoras. This decisive event in the history of music defined the ratios of the first four numbers as the source of the musical consonances: 2:1 for the octave, 3:2 for the fifth, and 4:3 for the fourth

Safire, W. Vegan  
*New York Times Magazine*, 2005, 154, 53110 (30 01), p 24  
Focuses on the evolution of the word "vegan." Vegetarian philosophy set forth by Pythagoras and Percy Bysshe Shelley in 1813; Invention of the word "vegan" by Donald Watson as the title for his newsletter; Distinction between vegetarianism and veganism; Use of the term pescetarian by those who eat vegetables and fish, but not meat

Shaya, J.L. Masterworks of Greek Italy  
*Archaeology*, 2003, 56, 2, p 58-59  
Presents information on the Magna Graecia: Greek Art From South Italy and Sicily, an exhibition at the Tampa Museum of Art in March and April 2003. Goal of the exhibition; Artifacts displayed in the exhibition

Thom, J.C. "Moenie op land seil nie": Wysheid en hermeneutiek in die akoesmata van Pitagoras.  
*Akroterion*. 2004, 49, p 33-46.

Trépanier, S. Empédocle: les pommes de la discorde  
Phoenix, 2004, 58, 1-2, p. 131-143.

Weddigen, T. Italienreise als Tugendweg. Hendrick Goltzius' Tabula  
Nederlandsch kunsthistorisch jaarboek, 2003, 54, p 91-140

Wright, M.R. Between Orpheus and Pythagoras. Origins and encounters of the culture of antiquity.  
Acts of the Naples seminary 1996-1998  
Classical Review, 2004, 54, 2, p 292-294

### Conferences / Presentations

26th Annual Ancient Philosophy Workshop.  
March 27-29, 2003, Texas A&M University, College Station.  
Huffman, C. The Pythagorean precepts of Aristoxenus: crucial evidence for Pythagorean moral philosophy.

American Philosophical Association Pacific Division: 79th Annual Meeting,  
March 22-27, 2005, San Francisco  
X-D. Invited Symposium: **Plato, Pythagoras, and the Pythagoreans**  
Chair: Richard McKirahan (Pomona College)  
Brisson, L. (CNRS Paris) "Pythagoreanism in Plato: The Case of Philolaus"  
Kahn, C. (University of Pennsylvania) "What Is Pythagorean in Plato?"  
Commentator: Carl Huffman (DePauw University)  
IX-D. Invited Symposium: **Presocratic Philosophy**  
Chair: Victor Caston (University of California-Davis)  
Graham, D.W. (Brigham Young University) "On the Nature of Things"  
Palmer, J. (University of Florida) "Parmenides' Three Ways"  
Curd, P. (Purdue University) "Gorgias and What-Is-Not"

Department of Classics at Northwestern University  
CLASSICAL TRADITIONS INITIATIVE: EVENTS. April 14, 2005  
Apostolos Pierris, Institute for Philosophical Research, Patras, Greece.  
Lecture: Reconstructing the Unity of Empedocles' Poem and System

Bowe, G.S. Plotinus on the notion that the end of the journey is beyond being: a  
Pythagorean/Neoplatonic reading of Plato's Republic,  
International Society for Neoplatonic Studies, Liverpool (24-28 Jun 2004)

SYMPOSIUM TERTIUM PHILOSOPHIAE ANTIQUAE MYCONENSE. JULY 6th – 13th, 2003

#### **The Empedoclean Κόσμος: Structure, Process and the Question of Cyclicity**

Coordination: APOSTOLOS L. PIERRIS, INSTITUTE FOR PHILOSOPHICAL RESEARCH

- Kenny, A. Life after Etna: the legend of Empedocles in literary tradition  
Bollack, J. The Purifications in political and religious history  
Nuenlist, R. Journey of Discourse and Path of Stories: Programmatic Imagery in Empedocles  
Janko, R. Empedocles' On Nature and Purifications: two poems or one?  
Curd, P. The Question of Religion and Natural Philosophy in Empedocles  
Mc Kirahan, R. Assertion and Argument in Empedocles' Cosmology  
Most, G. Revelation and Logic of Being in Empedocles' Poetry  
Pierris, A. Ὅμοιον Ὅμοίῳ and the Δίη: Nature and Function of Love and Strife in the Empedoclean System.  
Graham, D. Cosmic Topology and Dynamics in Empedocles  
Primavesi, O. Empedocles: The physical theory and the doctrine of reincarnation  
Laks, A. Cyclic Model, Eschatological Model: can Plato's Phaedrus help us in reading Empedocles?  
Osborne, C. Sin and moral responsibility  
Tonelli, A. Cosmogony is Psychogony is Ethics: Some Thoughts about Empedocles' fragments 17; 110; 115; 134 DK, and P. Strasb. gr. Inv. 1665-1666d, vv. 1-19.  
Sedley, D. Empedocles' double zoogony  
Gemelli-Marciano, L. Empedocles' Zoogony and Embryology

### **Forthcoming conferences**

Symposium Philosophiae Antiquae Quintum. 2005, July 16th to 28th,  
at Pythagoreion (Samos) and Ephesus.  
“Polarity and Tension of Being: Pythagoras and Heracleitus”  
Apostolos Pierris, Institute for Philosophical Research, Patras, Greece.

### **Internetsites**

#### **Ralph Abraham**

[http://www.ralph-abraham.org/articles/2005: MS#116-117](http://www.ralph-abraham.org/articles/2005:MS#116-117)  
MS#116. The Death and Rebirth of the World Soul, 2500 BCE -- 2005 CE, A Concise Overview  
To appear in Ervin laszlo, The Reenchanted Cosmos, Inner Traditions, 2005.  
MS#117. The New Sacred Math  
Submitted to World Futures

#### **Stanford Encyclopedia of Philosophy**

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| <a href="http://www.science.uva.nl/~seop/entries/alcmaeon/">http://www.science.uva.nl/~seop/entries/alcmaeon/</a>     | <b>Alcmaeon</b>   | Carl Huffman      |
| <a href="http://www.science.uva.nl/~seop/entries/archytas/">http://www.science.uva.nl/~seop/entries/archytas/</a>     | <b>Archytas</b>   | Carl Huffman      |
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| <a href="http://www.science.uva.nl/~seop/entries/philolaus/">http://www.science.uva.nl/~seop/entries/philolaus/</a>   | <b>Philolaus</b>  | Carl Huffman      |
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