

## Greek Science in the Long Run



Greek Science in the Long Run:  
Essays on the Greek Scientific Tradition  
(4th c. BCE-17th c. CE)

Edited by

Paula Olmos

**CAMBRIDGE**  
**SCHOLARS**  

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**P U B L I S H I N G**

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## TABLE OF CONTENTS

Acknowledgements .....	vii
Introduction: The Greekness of Science.....	1
Paula Olmos	
<b>Part I: Method, Argumentation and Transdisciplinary Issues</b>	
Categorical Anachronisms and their Consequences for the History of Science .....	12
Geoffrey Lloyd	
Ancient Greece and Gender Studies .....	27
Valeria Andò	
The Field of Argumentation: From Aristotle to the Present Day .....	53
Luis Vega	
Stochastic Knowledge: <i>For the Most Part</i> and Conjecture in Aristotle ....	78
Salvatore di Piazza	
<i>Euge, Graeculi nostri!</i> Greek Scholars among Latin Connoisseurs in Macrobius' <i>Saturnalia</i> .....	96
Paula Olmos	
Giorgio Valla, Editor and Translator of Ancient Scientific Texts .....	127
Amedeo Alessandro Raschieri	
<b>Part II: Arts, Sciences and Technologies of Quantification</b>	
The More it Changes ... Reflections on the World Historical Role of Greek Mathematics .....	152
Reviel Netz	

Musical Terminology in Plato's Dialogues: The Image of Concord in the <i>Republic</i> and in the <i>Timaeus</i> .....	169
Marianna Tomasello	
On Ptolemy's <i>Harmonics</i> 2.4: Does the Text Refer to the Diagram?.....	191
Cristian Tolsa	
Euclid's Swan Song: Euclid's <i>Elements</i> in Early Modern Europe .....	205
Antoni Malet	
<b>Part III: Arts and Sciences of Life and Health</b>	
Philosophy and Teleology: The Creation of the Marrow and the Head in Plato's <i>Timaeus</i> .....	236
Jorge Cano	
<i>Pharmaka</i> : Medicine, Magic and Folk Medicine in the Work of Euripides .....	249
Sara Macías	
Galen on Body, Temperaments and Personalities .....	265
Mario Vegetti	
Knowing the Body: Renaissance Medicine and the Classics .....	281
Helen King	
The <i>Forum Vulcani</i> in the Work of Juan Huarte: Geographical Argument and Renaissance Medicine.....	301
Andrés Vélez	
Contributors.....	322

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Madrid, November 2011

# INTRODUCTION: THE GREEKNESS OF SCIENCE

PAULA OLMOS

Throughout both classical and late antiquity, the European Middle Ages and most of our early modern period, systematic *technical* knowledge related to fields as varied as medicine, biology, mathematics, astronomy or even rhetoric and grammar repeatedly made reference to Greek sources, theories and discussions. In classical and post-classical Latin texts, medieval compilations or the Renaissance humanist return *ad fontes*—in part made possible through the teachings of Greek-speaking Byzantine émigré scholars—the content and legacy of Greek scientific production was esteemed and treasured. It was of course also reinterpreted, but not (not yet) discarded or much contradicted. If the dominance of the Aristotelian corpus as the basis of a broadly-construed scientific curriculum—albeit philosophically-driven—was a remarkable late medieval phenomenon with a rather prolific afterlife, more sustained indeed was the medical authority of a figure like Hippocrates, whose attributed corpus came to be mostly interpreted through the work of Galen, another Greek authority. Euclid and Archimedes were synonymous with advanced mathematics and although Cicero’s textbooks were the main medieval source of information on technical rhetoric in the West, any attentive reader would note that what they really transmitted was the Latin translation of a systematic model based mainly on Hermagoras of Temnos and other Greek sources.

As is well known, the Greekness of technical literature and vocabulary was already an issue for early Latin writers such as Cicero, who tried to coin Latin terms equivalent to those used in Greek philosophy and rhetoric. However, for example, his *ratiocinatio* for *sullogismos* had very little impact, and he did not even try to come up with an alternative to *enthumema*. In the case of fields in which concept and object identification and naming were particularly pervasive, such as mathematics or rhetorical elocution—which included the study of an extensive and ever-growing list of “figures of speech” or *schemata lexeos*—Greek vocabulary remained the norm ... until today.

The present volume is not intended to give a full account of the historical problem of the *longue durée* of the dominance of Greek science in itself. This is a complex topic that must be framed within a broader comprehension of the formation, development and survival of ancient literary culture as a whole, an issue to which some of the contributors to this volume are beginning to pay significant attention.<sup>1</sup> Our more modest aim is to offer a series of individual studies focused on different aspects, periods and fields related to the ongoing recycling of the Greek scientific legacy undertaken from the perspective of full awareness of this phenomenon.

When I began to make preparations for the international colloquium that was the starting point for this book and contacted different scholars about it, most of them seemed fascinated by the implications of the very title chosen, “Twenty centuries of Greek science”. Nevertheless, I now clearly see that it was a somewhat restrictive one, if we take into account both the legacy of the Greek archaic period and the present-day usefulness of many Greek technical concepts (especially in fields like mathematics and rhetoric). In any case, the limits I set at the time and which are still present in the subtitle of this volume—4<sup>th</sup> century BCE to 17<sup>th</sup> century CE—remain useful in focusing our attention on the long period during which the Greekness of most of science was to a certain extent widely taken for granted.

The essays in this collection thus contain the response of a significant group of scholars to this call for attention to the way Greek scientific traditions enjoyed such an incredibly long reputation, while also displaying a kind of versatility that challenges any simplistic, dogmatic or *a priori* viewpoint about the meaning and social functioning of systematic knowledge. They revisit the different processes by which such doctrinal traditions originated, were transmitted and received within diverse socio-cultural contexts and frameworks. The concepts of continuity and discontinuity, *deuteronomic* or meta-textual recycling and contextualized originality therefore inform the various approaches presented here, while some of the contributions (see especially Lloyd, Netz and King) address them in a more direct way. Although the boundaries between scientific

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<sup>1</sup> Reviel Netz is currently working on what he calls the *parameters* of ancient literary culture that, among other things, account for their preservation. I myself am working on the way the classical cultural legacy, and Greek science in particular, was filtered and *packed* for its future reception in the context of the crumbling world of late antiquity, a little studied period in the history of the sciences which is particularly crucial to the issues addressed in this volume.

fields and their denominations are rather problematic,<sup>2</sup> I have tried to structure the book in such a way that groups the different contributions into more or less coherent sections.

The first section includes six papers which address relatively general, method-focused and trans-disciplinary issues. They can be read in pairs as dealing first with method-centred caveats regarding our initial approach to Greek scientific traditions (Lloyd, Andō); then with the characteristically Greek—and specifically Aristotelian—concern with reasoning and argumentation in and of themselves (Vega, di Piazza) and finally, with the historically subsequent, *deuteronomic* compilation and reception (in different periods) of a comprehensive encyclopaedia of knowledge based on Greek sources (Olmos, Raschieri). The essays in the second section of the volume are devoted to arts and sciences based on numbers or quantification: mathematical or exact sciences in very general terms, with two original contributions to the study of Greek musical theory and its concepts, focused on very different authors of different periods and with very different aims (Tomasello, Tolsa), and two reflections on the historical processes of continuity, discontinuity, tradition and reception of Greek mathematics (Netz, Malet). The third section includes essays dealing with the arts and sciences relating to life and health. Here it is possible to distinguish two distinct blocks, the first exploring the broad social and intellectual spectrum of medical concerns (theoretical, philosophical) and practices (healing disciplines and professions) within ancient Greek culture (Cano, Macías), and the second looking at different aspects of the historical shaping (particularly undertaken by Galen) of a comprehensive, and to a certain extent forcefully coherent, idea of Greek medicine worthy of being passed along (Vegetti, King, Vélez).

Geoffrey Lloyd's paper, "Categorical Anachronisms and their Consequences for the History of Science", warns us about the perils of an anachronistic approach to the evolving fields and genres of Greek science that could create false expectations as to what we may find, for example, in Greek *mathēmatikē* or *harmonikē*. Following on from the fruitful comparative approach of his recent publications, he turns once more to his extensive knowledge of Chinese culture in order to explore significant cross-cultural differences in the classification of scientific fields. They thus appear as characteristic cultural products in themselves, rather than being dictated by the nature of their object.

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<sup>2</sup> See Lloyd in this volume, although Netz has a somewhat different take on this issue, at least regarding the compactness of the field of the "exact sciences".

For its part, the exegetic review offered by Valeria Andò in her contribution, “Ancient Greece and Gender Studies”, reminds us of the necessity to take gender issues into account—as the authors referenced by her have successfully done—in our exploration of the Greek literary and cultural realms. It will serve as a guide for anyone interested in this aspect of classical studies, which is necessarily intertwined with certain scientific practices and concerns, especially within the field of medicine, as the paper by Helen King in this same volume so keenly reveals.

The paper by Luis Vega, “The Field of Argumentation: From Aristotle to the Present Day”, consciously exceeds the chronological limits initially set for this volume in presenting the particular case of Aristotle’s broad and comprehensive approach to argumentation and its contemporary relevance. Aristotle’s argumentative theories—contained in works like the *Topics*, the *Analytics* and the *Rhetoric*—although preserved and studied piecemeal for many centuries, seem to have required today’s involvement with such issues to reveal all their potentialities. However, Vega shows how Aristotle’s *approaches* essentially differ from the contemporary perspectives that have inherited the denominations of his triple legacy: logic, dialectic, rhetoric.

In “Stochastic Knowledge: *For the Most Part* and Conjecture in Aristotle”, Salvatore di Piazza tries to reconstruct the meaning and philosophical import of the Aristotelian expression “ὡς ἐπὶ τὸ πολὺ” (“for the most part”), used with characteristic determinations (predications) applied to objects or states of the world, and opposed to both what is *necessary* and what is merely *by chance*. Di Piazza demonstrates the pervasive nature of this expression within the Aristotelian corpus—which is so abundant in self-referent methodological considerations—and seeks to establish its relationship with a kind of *conjectural* cognition that would be proper for wise (φρόνιμος) and reasonable people, capable of dealing with “truths *for the most part*” in a flexible, adaptable way.

My own contribution to this volume, entitled “*Euge, Graeculi nostri!* Greek Scholars among Latin Connoisseurs in Macrobius’ *Saturnalia*”, focuses on this significant text, a literary piece with encyclopaedic ambitions dating from the first third of the 5<sup>th</sup> century—and therefore belonging to the still poorly understood literary and scientific culture of late antiquity. The *Saturnalia* in fact reveals to us one of the main contentions of this volume, the Greek character attributed to systematic knowledge even within the context of a truly advanced and somewhat multicultural state within Latin culture. The text, in a Ciceronian mood, portrays a three-day gathering with highly social and partially *symptotic* or convivial erudite dialogues between members of the Roman elite and some

Greek scholars. It presents to us—mainly through its clever choice of characters—a series of confrontations and oppositions in which the tensions, as well as a certain sought-after harmony, between different approaches to advanced knowledge are brought to the fore. Among these approaches some are considered more Greek, which usually means more technical and systematic, than others.

To conclude the first, method-centred and metadisciplinary, section of the book, we have Amedeo Raschieri's contribution, "Giorgio Valla, Editor and Translator of Ancient Scientific Texts", focusing again on an author with encyclopaedic ambitions based on the Greek legacy, although this time situated at the latter extreme of our chronological range. Raschieri offers a very precise description of the significance of Giorgio Valla's publishing agenda, undertaken during the late 15<sup>th</sup> century in Northern Italy. This included a summary text aiming at compiling, in Raschieri's words, "the entire scientific and philosophical knowledge of the time" (*De expetendis et fugiendis rebus*), but also a vast programme of Latin translations of Greek scientific texts by, among others, Aristotle, Galen, Alexander of Aphrodisias, Aristarchus of Samos, John Philoponus, Nicephorus and Hypsicles. The works addressed such fields as rhetoric, mathematical and astronomical science, medicine and Aristotelian philosophy. Their presentations and extremely revealing preliminary material are the main focus of the paper.

The second section of the book, devoted to Greek traditions in the exact sciences, begins with Reviel Netz's useful and extensive panorama. Under the title "The More it Changes ... Reflections on the World Historical Role of Greek Mathematics", this contribution covers the variations—continuities and discontinuities—endured by what Netz sees as the relatively compact and identifiable field of the Greek exact sciences, from pre-Socratic times up to the "late ancient synthesis" (4<sup>th</sup> to 6<sup>th</sup> centuries CE). This paper—along with Helen King's on Greek medicine—is a very serious response to the challenge posed by our initial call for reflections upon "twenty centuries of Greek science", providing a thought-provoking and insightful overview. After reviewing the different periods of creativity in Greek mathematics and exploring its genres and ways of expression, Netz concludes that, whereas Greek medicine and philosophy base their continuity on a canon of authors and schools, it is "formal style" that defines Greek mathematics, which can, once and again, avoid the mention of masters and individuals.

According to Netz's periodization, Marianna Tomasello's contribution can be seen as a case study on the *philosophical mathematics* of the 4<sup>th</sup> century BCE and the way authors like Plato or Aristotle engage in

methodological reflections that make use of mathematical terminology and concepts—the terminology of music or harmonics in this case—albeit with significant cosmological repercussions. Thus, “Musical Terminology in Plato's Dialogues: The Image of Concord in the *Republic* and in the *Timaeus*” reviews Plato's understanding of the concept of σύμφωνος (what is concordant) and its crucial role in the theoretical comprehension of a kind of cosmology that, as is to be expected from this author, has ethical and political consequences. The mathematical basis of a cosmos which is initially perceived through its sensible phenomena—an allegedly Pythagorean idea—and its similarity to the also mathematical structure of the human soul, is conceived by Plato as suitable justification for his “teleological discourse” involving the harmony between the subject and the object of her knowledge.

Cristian Tolsa engages with a rather different aspect of Greek mathematical practice, so brilliantly explored in other publications by Reviel Netz: the use and meaning of diagrams. Medieval manuscripts have transmitted to us both the words and the graphical schemas of the original Greek mathematical treatises, but until recently, most attention has been focused on the words, while the diagrams have been deemed mere dispensable *representations* of the theorems and propositions allegedly developed and fully proved within the text. After the work of Netz and others, this is no longer acceptable and a whole world of new research on Greek mathematical diagrams has been opened up. In “On Ptolemy's *Harmonics* 2.4: Does the Text Refer to the Diagram?”, Cristian Tolsa analyses a particular diagram belonging, according to part of the manuscript tradition—and thus assumed by modern editions—to the aforementioned treatise, but whose relationship to the text is rather problematic. His conclusion is that this particular diagram does not belong within the original treatise, but must rather be part of the commentary on it by Porphyry, a conclusion that in itself reveals the rather fascinating possibility of a visual commentary. The paper brings to the fore interesting aspects of the inner story of the texts within the long-standing tradition that is the main focus of this volume.

Antoni Malet's “Euclid's Swan Song: Euclid's *Elements* in Early Modern Europe” closes this section with a detailed review of the early modern reception of Euclid's *Elements*, ranging from the philologically-driven concerns of 16<sup>th</sup>-century editions of the text, to the conceptual and pedagogical criticism of its 17<sup>th</sup>-century editors and commentators, who tried to “amend” what they saw as the text's geometrical bias with clarifications and modifications that would make it more appropriate to the theoretical challenges of a general science of magnitude, especially in

regards to the theory of ratios or proportions. His account ends with the changed context in which 18<sup>th</sup>-century authors such as Euler reinterpreted the content of the *Elements*, further confirmation of the lasting significance of Euclid's contribution.

After the section devoted to sciences based on numbers and quantification comes the vast field of sciences which examine and give an account of the diverse physiological aspects of living creatures. These are inevitably intertwined—something especially present in some of the papers (Macías, King)—with their most obvious practical side, concerning the health and physical condition of human beings.

As was the case with Tomasello's contribution on harmonics and cosmography, there is also room in this section for a paper on Plato's philosophical approach to and exploitation of scientific ideas and models in several of his dialogues, but most especially in the *Timaeus*, a work which because of its particular story, transmission and reception could in itself be considered one of the pillars of the long-standing tradition of Greek science. Jorge Cano's paper "Philosophy and Teleology: The Creation of the Marrow and the Head in Plato's *Timaeus*" addresses Plato's rationalistic treatment of the somewhat inferred anatomy and physiology of the organs allegedly associated with the body-soul relationship, i.e. the marrow and the brain. Cano explores the way Plato's contentions regarding the *encephalo-myeloid* system relate to the theories and speculations of other authors and schools, most especially Empedocles, Philolaus of Croton and the Hippocratic tradition, and concludes by restating the Platonic commitment to a general teleological scheme of divine creation and order: "As happens with arithmetic and geometry, other *mathemata*, medical physiology serves as proof and evidence of the mark of the demiurge underlying the entire universe."

With Sara Macías' "*Pharmaka*: Medicine, Magic and Folk Medicine in the Work of Euripides", we concentrate on matters relating to popular magic and folk medicine that have had a prominent place in recent literature. In this particular case, what is explored is the evidence of certain widespread ideas and popular prejudices involving these issues—and particularly the use of remedies with various properties (*pharmaka*)—in the literary work of Athens's most successful drama writer of his day, the enduring canonical author, Euripides. Reflecting the vastly *performative* culture of the Greek *polis*, with its high standard of citizen social participation, Euripides' tragedies bring to us expressions and images that were purportedly shared and understood by the laymen of the city, even as they also reflected certain controversies and conflicts within the technical and specialized realm of medical practice and literature.

This eminently technical and, by Hellenistic and Roman times, clearly professionalized medical field is the main focus of Mario Vegetti's contribution, "Galen on Body, Temperaments and Personalities". Galen's only somewhat successful efforts in building a coherent and unified theory of temperaments and humours that would also be the basis of a theory of personality, becomes Vegetti's object of study in what is also an account of the synthetic reworking of an earlier Greek legacy at the hands of the great Greek physician of a then Roman world.

The role of Galen in passing on his own synthesis of Greek medicine to the Western scientific tradition is also emphasized in Helen King's "Knowing the Body: Renaissance Medicine and the Classics". Before focusing on the very revealing and complicated reception of renowned classical case studies—involving moreover gender issues—in Renaissance medical and exemplary literature (that which compiles didactic stories, anecdotes and *exempla*), this paper offers us an insightful historical panorama of what would traditionally be considered Greek medicine. According to King's account, the concept of Greek medicine itself was an early construct whose canonical origins can be found in Hippocrates and which rather successfully resisted any temptation of fragmentation into different specialized practices—diet, surgery, drugs or gynaecology—by presenting itself as a unified field for an all-around practitioner. The Renaissance continued to revere the classical authors of Greek ancient medicine, while sometimes offering confused amalgamations of their case studies.

The final contribution to the volume is by Andrés Vélez: "The *Forum Vulcani* in the Work of Juan Huarte: Geographical Argument and Renaissance Medicine". The paper focuses on how renowned Spanish Renaissance physician Juan Huarte, author of the extremely well-received *Examen de Ingenios*, made use of the classical imagery associated with Pozzuoli. Located on the Gulf of Naples, this area of sulphuric emissions was traditionally linked, through mythological accounts, with the gates and halls of hell. Vélez's avowed aim is to explore the function of this and other geographical references as a basis for arguments based on location (*argumentum a loco*) in Renaissance medicine and science. Thus for Vélez, the preservation of the long tradition of classical, and particularly Greek, medicine involving itself with geographical knowledge in texts like *Airs, Waters and Places* (within the Hippocratic Corpus), as well as in Galen's writings, several Platonic dialogues, especially the *Timaeus*, and Aristotle's *Problemata*, is something that must be taken into account in the analysis of Juan Huarte's work and his way of employing erudite, typically

humanist, scavenging of an ample encyclopaedic tradition for his medical goals.

This last paper, concerning the theories and writings of a renowned professional physician, while showing evident meta-disciplinary concerns, like those addressed in the first section of the volume, rounds off our journey through different aspects of the long tradition of the Greek sciences. It completes a book that has been put together with the aim of quite consciously attempting to convey what Greek science has meant in the long run.



**PART I**

**METHOD, ARGUMENTATION  
AND TRANSDISCIPLINARY ISSUES**

# ANCIENT GREECE AND GENDER STUDIES

VALERIA ANDÒ

## Introduction

This paper deals with issues of methodology without focusing upon any particular area of Greek science. The intention is to analyse the specific contribution of *Gender Studies* and their underlying epistemology to the study of Greek texts. To begin with, the origin, use and definition of *gender studies* will be clarified.

Ever since the notion of *gender* was first elaborated in the 80s by the American historian Joan Scott, it has constituted an effective analytical tool. While sexual dimorphism appears to be determined by biological data and therefore an outcome so to say of “nature”, gender on the other hand is the result of a social construction in that it is the cultural processing of the sexual differences inscribed in our bodies. In a certain sense, one could state that gender constitutes the development and theorisation of Simone de Beauvoir’s famous statement “One is not born a woman, but becomes one,”<sup>1</sup> in which the insufficiency of biological data for the construction of a sexual identity is expressed. Therefore, the application of this notion in the field of historical/social and scientific study has revealed all its heuristic potential and methodological effectiveness. Joan Scott defines gender as follows: “*gender* is a constitutive element of social relationships based on perceived differences between the sexes, and gender is a primary way of signifying relationships of power.”<sup>2</sup> As such gender has opened up modes of investigation which can penetrate deep into the social framework, the dynamics of social relationships and the tensions which come across the fabric of society. That is to say, polarity of gender has been considered as the key to interpret social history, institutions, ethical/political thought and scientific observation.

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<sup>1</sup> Beauvoir (1999 [1949]: 325).

<sup>2</sup> Scott (1986: 1071). The notion had been earlier propounded within the field of sociological research by Oakley (1972).

*Gender Studies* have therefore ended up substituting or at least running in parallel with *women's studies*, studies of women considered as a single group to be analysed independently with the aim of restoring the presence, words and actions of women to history, from which they had been excluded for centuries. The standpoint of *women's studies* emerged from the period of post-modernism, and has been directly influenced by the feminist movement of the 70s and the emancipationist trends in political, social and economic life. Women, excluded from history, returned thanks to the libertarian and egalitarian thrust of feminism and became the object of individual studies which restored their roles, social functions, legal status, artistic subjectivity and creativity.

The risk of essentialism, inherent in the history of women, together with the blurring of the boundaries of the category of "sex" now free from the chains of biological determinism, and finally the weakening of militant feminism in politics, have permitted the category of "gender" to establish itself in academic studies. It has also become considered more inclusive and as such has given rise to a more reassuring neutrality: that is women are studied in dialectic tension with the opposing and historically hegemonic group of men, in the belief that "gender" is the determining factor in power dynamics, and therefore a valid investigative tool in the social sciences. Moreover, against the potential fixity of the category of sex there is the legal and changeable nature of gender, subject to historical change and changing social contexts. The passage from history of women to history of gender has therefore permitted the important passage from documentation to representation. That is, the analysis of the opposite poles male/female considered to be in constant tension and reciprocal exchange leads to the employment of data regarding social individuals ready for an overall interpretation of society as a whole and connected symbolic implications.

So far the category of gender continues to be used in research as an effective key to interpret all aspects of society<sup>3</sup> and to stimulate theoretical thought.

However, the American philosopher Judith Butler, who has concentrated all her theoretical research on *gender* has recently "undone" the idea. Within *queer theory*, which breaks down the rigid male/female dichotomy to open out to *transgender* sexuality and to different forms of sexual orientation, gender turns out to be the product of a continual and incessant work of *doing* and *undoing*, in the sense that it is necessary to undo it, deconstruct it, to avoid the risk of hypostatization and acceptance of

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<sup>3</sup> Among the latest socio-historical contributions cf. Maruani (2005).

ethical/social norms. Moreover it is necessary to do it, construct it, to construct identity, even if it is fluid and continually evolving (Butler, 2004). Such deconstruction of the notion, which is certainly stimulating in philosophical and ethical terms, has not yet shown its effects in historical/social research in which, as has already been said, *gender* continues to be a useful research vehicle.

Gender studies have been and continue to be a fertile line of research in classical studies, especially in the field of the history, culture and texts of ancient Greece. Even here they have steadily replaced womens' studies though womens' studies have provided a far more well-founded theoretical epistemological framework. An interweaving between the two types of research sometimes makes distinguishing between them difficult: indeed in many cases the history of women in Greece is anyway *gendered* or *genrée*, perhaps because of the impossibility of ignoring it in the accounts of women which are almost all written by men. In the general silence of Greek women, save for a few sporadic voices which confirm the rule, it has been left to men to narrate, describe and codify the feminine according to rules and standards which reflect the social organisation of the relationships between the sexes.

As in all other areas of research, whether Anglo-American or European, and even those concerning the Greek world, gender studies have had various orientations and have focussed on different subjects and themes. While these studies are always in some way inspired by feminist politics, as well as Marxism, psychoanalysis, structuralism and post-structuralism, they are also influenced by the different ways the movements and currents of thought have been adopted in Europe and the United States.

Indeed, in the United States the university departments of women's studies have supplied a fully endorsed academic framework<sup>4</sup> within which to place the specialised study of women in antiquity. With this comes the radicalism that American feminism adopts at a political level: that is, a feminism far from the bourgeois, intellectual nature of white and largely heterosexual European feminism so criticised by American feminists, who on the contrary are receptive and welcoming not only of sexual difference but all the other differences such as skin colour or sexual orientation. Indeed, *Black Feminism* and *Lesbian Studies* are American disciplines, which surface even in studies about women in ancient times, with a strong political and cultural thrust, thus extending research to other marginal areas and other interests such as colonialism and inter-culturality.

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<sup>4</sup> For the development of *Women's Studies* in the USA cf. Boxer (2001).

Given the academic success of Women's Studies it is therefore no coincidence that, shortly following on volume VI *Arethusa* (1973),<sup>5</sup> the first monograph on women in Greece and Rome by Sara Pomeroy appeared in the United States in 1975.<sup>6</sup> Then, again in the United States, a reading entitled *Feminist Theory and the Classics*<sup>7</sup> was published in 1993. This one, significantly dedicated "for all our sisters", falls within the theoretical framework of black and lesbian feminism in a spirit of sisterhood, that encompasses all women and their many differences.

Within the steady shift towards *Gender Studies*, the US approach to the Greek world has in some ways maintained a militant and political character towards discrimination and social exclusion.

As for Europe, these preliminary notes will simply mention that in France women's studies have always been contextually permeated by the notion of gender. Indeed in France these studies are on one hand linked to the writing of history by the *Annales* School and therefore influenced by social dynamics in all their complexity. On the other they have arisen from the Louis Gernet Centre of Comparative Research on Ancient Societies, founded by J.-P. Vernant and his disciples, in whose research one still feels the effects of Lévi-Strauss' structuralism as well as of social psychology and which is integrally inclined towards the reconstruction of social representation in all its forms, especially the gender relationship. For this reason French criticism has claimed a certain cultural priority with regard to the discovery and use of the notion of gender in spite of its declared genesis in an Anglo American setting.<sup>8</sup> Indeed, it was already in 1963 that the seminal article "Hestia-Hermès" by J.-P. Vernant<sup>9</sup> was published, which analysed these two Greek deities and identified their areas of expertise and consequent areas of activity, the interior and exterior worlds, which determine the social setting. Then in 1968 we have Vernant's well quoted statement "le mariage est à la fille ce que la guerre est au garçon,"<sup>10</sup> which marks the separation between different destinies and functions. Furthermore a large part of Nicole Loraux's work, which will be discussed more widely later, shows how much the feminine, because it is the product of a representation, is an effective research vehicle to reconstruct the masculine and approaches to social organisation

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<sup>5</sup> In this volume cf. e.g. Arthur Katz (1984 [1973]).

<sup>6</sup> Pomeroy (1975). By the same author cf. Pomeroy (1984b).

<sup>7</sup> Rabinowitz and Richlin ([eds.], 1993).

<sup>8</sup> Cf. Offen (2006).

<sup>9</sup> Vernant (1965-1971 [1963]).

<sup>10</sup> Vernant (1968: 15).

in ancient Greece, particularly in the classical city.<sup>11</sup> And again, closely “genrée” is the *History of Women* edited by George Duby and Michelle Perrot, whose first edition was published in Italy. The introduction to the first volume, dealing with antiquity, which came out in 1990 and was edited by Pauline Schmitt Pantel, Duby and Perrot, explicitly states that their work follows twenty years of *Women’s Studies*, in the historiographical tracks of the *Annales* and set amid the new interest in the centrality of *gender*.<sup>12</sup> In France, interest in this specific approach continues, fostered by the theories of the anthropologist Françoise Héritier and her research into male/female opposition.<sup>13</sup> More recently, in 2007 there is the French volume, *Problèmes du genre en Grèce ancienne*,<sup>14</sup> that collects different contributions from social history and literature. And, also in France, the online revue *Clio, Histoire, femmes et sociétés*, which deals with the social history “of gender”, has been available since 1995.

It seems therefore that *gender studies* have been, and indeed continue to be, developed particularly in French and Anglo-American research centres, sometimes engaging in bitter debate but sometimes in a productive, scientific exchange of ideas.

Italy has made original contributions too, albeit not specifically declared as such. These are mainly in relation to scientific and philosophical ideas, rituals, sexuality and the theatre. Over the last few years a strong impetus has come from Germany where there have been individual works on specific subjects, which will be examined later. However, in 2002 the situation gained momentum when the proceedings of a meeting about gender studies in relation to classical antiquity were published, with the intent of interesting German academics.<sup>15</sup> There are also recent contributions from Spain.<sup>16</sup> Finally, in Greece, research has been conducted by Norwegian and Greek researchers with the Norwegian Institute for Classics, Archaeology and Cultural History in Athens. Through an examination of Greek literary texts and artistic works they have investigated the division of sexual roles as a social strategy, and also focused on the destabilisation forces that can provoke a crisis. This, they

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<sup>11</sup> Cf. Loraux (2005).

<sup>12</sup> Duby and Perrot (1990: v-xvii).

<sup>13</sup> Héritier (1996; 2002).

<sup>14</sup> Sebillotte Cuchet and Ernoul ([eds.], 2007).

<sup>15</sup> Feichtinger and Wöhrle ([eds.], 2002).

<sup>16</sup> Cf. Zaragoza Gras (2007). The proceedings of a discussion about maternity have also been published in Riu *et al.* (2000-2001)

hold, is the case both in Ancient Greece and, most originally, in contemporary Greece.<sup>17</sup>

Having established this, an attempt will now be made to analyse works from different research settings and subjects. The sheer volume of this work is unmanageable. So, far from providing an exhaustive review,<sup>18</sup> only brief references will be made to highlight the heuristic nature, new perspectives and new questions which the notion of gender has permitted propounding, referring only to the studies which best exemplify the critical debate.

### Social History

The main area in which research is located is history, in particular social history, because the notion of gender was originally elaborated in historical surveys. It is a field which in fact includes all the others which will be treated later, since the rituals, literature, biological ideas, philosophical thought and art are only cultural expressions of the society which has produced them and are therefore directly connected to ideology and dominant political culture. There is nevertheless a specific area of study which is directed at reconstructing sexual roles within the organisation of the city and therefore defining the history and anthropology of social relationships and power differentials within them. These studies are above all in the French and Anglo-American fields and manifest two different approaches, veering between studies which document the status of women and more markedly anthropological studies on social structure, on the imaginative world and different mentalities. Examples of the two types of research are, on one hand, the useful and rich collection of accounts about the lives of women in antiquity by Mary Lefkowitz and Maureen Fant,<sup>19</sup> and, on the other, the work by Sally Humphreys,<sup>20</sup> which has fuelled interest in identifying the spaces and relationship between public and private, between *oikos* and *polis*, and from there in the socio-political organisation as a whole. Her research, which concentrates mainly on classical Athens, also makes use of the cult of the tombs in an attempt to reconstruct the anthropology of the family through the way death is represented.

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<sup>17</sup> Berggreen and Marinatos ([eds.], 1995).

<sup>18</sup> Over the years and even recently there have been several attempts to synthesise this research field. Among the latest, cf. Demand (2002); Bruit Zaidman and Schmitt Pantel (2007).

<sup>19</sup> Lefkowitz and Fant (1982).

<sup>20</sup> Humphreys (1983).

Both documentary and anthropological research have therefore multiplied, exploring the specific differences regarding women, the family and social fabric, both in different geographical areas, mainly Athens and Sparta, and different historical periods. Consider the monograph by Sarah Pomeroy on women in Hellenist Greece (1984b) and her more recent one on Spartan women (2002).

These studies are interesting because of the possibility through women to reconstruct their relationship with males and therefore the entire political fabric. This is the case in the study by Elke Hartmann (2002), in Germany. It deals with the three women who in the speech *Contra Neaeram*, the pseudo Demosthenes declares to be at the disposal of the Athenian man: the wife, the concubine and the courtesan (LIX 122). Their various functions are investigated by the author, who also states that in spite of their differences they all contribute to defining the male identity of the city.

In French research, the historian of the Greek world who in the course of her activities has constantly maintained a gender perspective is Pauline Schmitt Pantel. She is convinced that the relationship between the sexes is an indispensable lens to penetrate deep within the structures of social organisation and mentality. Schmitt Pantel has already been mentioned as editor of the first volume of *History of Women* dealing with antiquity. More recently, she collected her most significant papers in a single volume (2009), a work which covers over thirty years of research conducted with methodological rigour and focus. The author emphasises repeatedly the interest that the adoption of the notion of gender entails for the historian, particularly in antiquity, in that it can enrich and refine the feminist writing of history with other conceptual tools to extend thinking to forms of power other than the hierarchy between the sexes.<sup>21</sup>

After a survey of the history of gender studies regarding the Greek world, the book is organised around three main subjects: that is adolescents of both sexes whose initiating rituals reconstruct their function and the value that the city holds for them, the division of sexual space within the city, in particular of the *oikos*, and finally the *gender* of violence and heroism.

However, regarding the reconstruction of sexual roles in the city it is necessary to highlight the original contribution to the subject made in

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<sup>21</sup> Cf. Schmitt Pantel (2009:162): “Poser la question du genre de façon théorique et globale permet à l’histoire féministe d’affiner et d’enrichir ces outils conceptuels, et en particulier de réfléchir au rapport entre la hiérarchie entre les sexes et d’autres formes de pouvoir”. Also cf. pp. 23-48 for an analysis of women’s studies and gender studies in the 80s and 90s.

earlier years by Nicole Loraux. She used analyses of historical, literary and mythological sources and actually developed a consistent and unitary piece of work on the organisation of the city and its world imagination, placing the division of the sexes right at the centre. Already her wide examination of funeral speeches had led to the assertion that the properties of male speech construct and establish the city as a men's club (Loraux, 1981a). In *Les Enfants d'Athènes* (Loraux, 1981b) she reconstructs the myth of the autochthones Athenians through mythographic sources and drama, such as Euripides' *Hippolytos*, and *Lysistrata* by Aristophanes, once again construing them as expressions of a constant game of exclusion/inclusion between the two sexes.<sup>22</sup> In the article *Le Lit, La Guerre* (Loraux, 1991) as well as her thoughts on the notion of *ponos* and its uses, the author shows the superimpositions and reciprocal interferences between the representation of female pain at childbirth and male war.

In this area of research it seems that the latest trend is to challenge the rigid dichotomies seen in the work of Pauline Schmitt Pantel and Nicole Loraux, and to substitute reciprocal exchange and interrelation between males and females. Indeed recent work has rendered traditionally established distinctions even more problematic, above all that of *polis/oikos*, public/private, to be understood in sexually connotated opposition, since modern categories not applicable to the ancient world are recognised in it; areas of interchange and cross fertilisation have been identified between *oikos* and *polis*, between internal and external, between private and public, and therefore between feminine and masculine.<sup>23</sup> In my own work *L'ape che tesse* (Andò, 2005) the aim is to show how female knowledge, which grew in the *oikos*, enables the epic and stage heroine to have access to the public area of the *polis*. Moreover it is this same knowledge that became a political metaphor and paradigm in philosophical thought.

The trend to overcome opposition and develop marginality as expressions of autonomy had already been seen in the works edited by Giampera Arrigoni ([ed.], 1985) and Nicole Loraux ([ed.], 1993) respectively, and is the main thrust of a book by Claudia Montepaone (1999).

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<sup>22</sup> Cf. also Loraux (1996).

<sup>23</sup> Wagner-Hasel (1988). And the collection of studies Polignac and Schmitt Pantel ([eds.], 1998). For the Hellenist-Roman age cf Frei-Stolba and Bielman ([eds.], 1998); Bielman (2002).

### **Rituals and myth**

The works just quoted show that the privileged area occupied by women is in the sphere of the sacred and ritual. The organisation of religious rituals is a conspicuous aspect of social relations, and the problem regarding the presence of women has solicited questions which directly address not only the status of women, but more generally the entire social organisation. So what role did women have in the world of the sacred, the priesthood and sacrificial rites as well as in the numerous feasts reserved to them? This is an essential question, especially if one thinks that Greek religion is directly connected to the political sphere. And therefore, if women are excluded from political life, what function do they have in rituals in which their presence is planned, sometimes exclusively so? In substance, does female religious life consolidate male values in the city or—especially in the case of exclusively female rituals—can we speak of an alternative rituality and religiosity? As can be seen, we are posed with another dichotomy as regards religiosity.

The question is posed first of all regarding sacrifice, the act upon which the civic community consolidates its values and group cohesion. What therefore is the place reserved for women in ritual sacrifice? Is it not necessary to think that, in order to match with political life, they are excluded from sacrificial rites too? This is the response of Marcel Detienne in *La cuisine du sacrifice* (Detienne, 1979), in which, if indeed he really does identify rules of worship which enable women to have access to the sacred area of sacrifice and the meat banquet, they are seen as exceptions confirming the rule of the male monopoly in the sphere of bloodthirsty sacrifice and eating of flesh. He adds, moreover, that women are absolutely forbidden to hold the knife of the sacrificer and butcher. According to Detienne it is as if the city, which in its female feasts of Thesmophoria celebrates the reproduction of the entire civic body, must therefore avoid the danger that the women become the slaughterers, ready to lash out against men, as certain marginal myths suggest. The attractive idea in this study is that of having placed the presence of blood and its symbolism at the centre of the analogous relationship between politics and religion: namely, women would be excluded from pouring the blood of the sacrificial victim because they themselves bleed during menstruation. Political ideology and physiology are therefore interwoven here in the claim that women were excluded from the role of slaughterer. Detienne's position has been discussed and partially improved upon by Robin Osborne (2000), among others, who contests the homology between religion and politics which he sees as overestimated in the research. He

claims that conversely, on the basis of the accounts, it is possible to state that women had access to the sacrificial area and, more importantly, ate the sacrificial meat. On the other hand, Giulia Sfamemi Gasparro (1991) states that intrinsic to the role of priestess would be the central function of sacrificer, something which would certainly distort Detienne's reconstruction of the situation. Matthew Dillon's position is analogous. He goes further saying that given the absence of conceptual distinctions between *polis* and temple, such a large participation of women in rituals is evidence against their exclusion from the city (Dillon, 2002).

A successful attempt at improving upon the idea of polarity which has been referred to is the work by Barbara Goff, *Citizen Bacchae* (Goff, 2004), one of the many studies dedicated to female ritual practices. Indeed, as the author demonstrates, if it is true that the civic context is dominated by patriarchs, it is also true that there are some areas of autonomy, albeit controlled ones: Goff observes that women seem to have a certain independence in ceremonies within the *oikos*, those for births, weddings and funerals, just as the rituals reserved for them at different ages, the Arreforia, the Brauronia ritual, the Adonis rituals and the Thesmophoria contribute to construct their gender identity and make them assume a kind of latent citizenship. This she claims is clearly shown by the voluntary sacrifice of virgins seen in the tragedies. Furthermore, there is poetry which, like Sappho's, rests upon worship practices of women only, while the rituals present in the tragedies imply the existence of a conflict between women and the city. Therefore we have a new perspective which strives to identify practices of gender construction in rituals albeit within the dominating male ideology.

A product of the same Californian university and equally original is the work by Susan Cole (2004) on ritual space, in which the quality *gendered* is highlighted: the landscape, cultivated fields, locations for politics and sacred space are analysed through detailed literary and epigraphic documentation. She starts from the first spatial organisation present in Hesiod's poems and continues with the reconstruction of the feasts and rituals of the city. The novelty of the book lies in the comparison of medical texts from which an image of the female body emerges, with its impurities and contaminating nature, a "ritual body", a body to fertilize, like the soil. This body is excluded from certain rituals or on the contrary called to enter the sacred space, in particular in Artemisian rituals, which are interpreted as being closely tied to the political community.

As regards the Artemis rituals at Brauron, the proceedings of a seminar in Urbino<sup>24</sup> are considered worth mentioning. They belong to that Italian output that doesn't claim to be "gender studies" but because of its tone and theme can be fully described as such.

There are many studies which focus on individual female rituals and clarify both their sense and function.<sup>25</sup> Inevitably, closely interwoven with these are the studies of the myths, where the perspective of gender has brought about new viewpoints and studies. One of the latest arguments is that provided by Lillian Doherty (2001), who after reviewing the different approaches to research into myths, including psychoanalysis, structuralism, post-structuralism and ritualism, shows how far myths subvert and reaffirm gender roles. The myths therefore represent a paradigm which, whatever method of analysis is adopted, leads towards an interpretation of the relationship between the sexes.

Some of Nicole Loraux's studies move in the same direction, even in this innovative and original field. In the previously quoted *History of Women*, her article "Che cos'è una dea?" (Duby and Perrot, [eds.], 1990: 13-55) goes to the roots of the conception of female divinities in the Greek pantheon and their function in the imaginative world, again facing, among other things, the historical-religious problem of the Great Mother Goddess, a phantom so common as to have become real. More generally, many of her studies, which sweep between different texts and epochs, tend to show how far the female is intrusively present in the construction of male heroic characters, such as warriors of the *Iliad* or Heracles.<sup>26</sup>

### Literature: poetry texts and more

It is certainly difficult to isolate and distinguish an independent contribution from gender studies in relation to "literary" texts. And yet some attempts have been made. For example, to compensate for the substantial silence of women in antiquity, scholars have wanted to give voice to female expression, be they the few poetic voices of women or the voices of female characters which male writers speak about. This is the case in the collection of articles *Making Silence Speak. Women's Voices in*

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<sup>24</sup> Gentili and Perusino ([ed.], 2002). Reference point on the religion of young Athenian girls is Brulé (1987).

<sup>25</sup> E.g. the *Halōa* festivities, cf. Patera and Zografou (2001). By re-examining the sources these scholars have scaled down the amount of obscenity and therefore the nature of the agricultural festival.

<sup>26</sup> Loraux (1991: chh. IV, V, VII).

*Greek Literature and Society*,<sup>27</sup> in which different contributions are dedicated to female lyric voices, the funeral epigrams for dead women and the women who emerge from Attic oratory.

Another interesting form of inquiry regards poetic *performances*, both choral and individual, in which gender has been effectively highlighted through the analysis of performance contexts, mainly at the thiasus and symposium.<sup>28</sup>

However, it is certainly Attic theatrical scripts, both tragedy and comedy, which have supplied most material, both in terms of quantity and prominence, to interpret gender. This is partly because of the paradoxical abundance of female characters on the Attic stage but mainly in consequence of the intrinsically politicised Greek theatre which imposed questions about ideology and social models conveyed in the drama. North American studies stand out in this sector, above all those by Froma Zeitlin and Helene Foley. In a 1996 collection of articles, Zeitlin closely examines the paradigmatic figures of Penelope and Pandora. She then dwells upon the dramas which best lend themselves to the reconstruction of social dynamics from gender relations such as the trilogies of *The Oresteia* and *The Danaides* (*Hecuba*, *Hippolytus*, *Ion*) and Aristophanes' *Thesmophoriazusae*.<sup>29</sup> Helen Foley has also collected and published her previous contributions on tragedy, which highlight in the first part the politicisation of the female tragic lament, in the second the dynamics in marriage relationships, and finally the numerous female characters who are "moral agents", of whom in spite of the apparent contradiction, she confirms there is real fear in Athenian life.<sup>30</sup> Laura McClure's *Spoken like a Woman, Speech and Gender in Athenian Drama* (1999) lies in the same area of research. She analyses female speech in five dramas: *Agamemnon*, *Hippolytus*, *Andromache*, *Thesmophoriazusae* and *Ecclesiazusae*, through which she shows the hegemony of male speech on which the role of the citizen is constructed and civic ideology is founded. Research on sexual language specifically in the tragedy *Oresteia* has been done by Simon Goldhill (1984).

Between the studies on rituality and those on literary texts lies the work of Laurie O'Higgins, *Women and Humor in Classical Greece* (2003), which after an analysis of cult obscenity focused on Iambe in the *Homeric hymn to Demeter*, concentrates on the women in Attic comedy.

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<sup>27</sup> Lardinois and McClure ([eds.], 2001).

<sup>28</sup> Cf. Stehle (1997).

<sup>29</sup> Zeitlin (1996).

<sup>30</sup> Foley (2001).

However, among the analyses of drama texts from the perspective of gender one cannot but once again refer to Nicole Loraux, who has concentrated a large part of her research on the representation of the female on the Attic stage, both tragic and comic, to trace the social dynamics and mentality of the time. The works in question are: *Façons tragique de tuer une femme* (1985), *Les mères en deuil* (1990), and *La voix endeuillée* (1999). In the latter she shows that the female funeral lament is the counterpart of male funeral oration and that both have a public and political character.

### **Biology, Medicine: Body, Sexuality**

Among the human sciences it has obviously been above all the studies on Greek medicine which have adopted the perspective of gender. In spite of the evidence of sexual dimorphism, which is mentioned insistently in the medical and biological texts, women's studies needed a push towards these non-literary texts and other sources thus far ignored by scholars. Thus emerged the first pioneering studies on ancient gynaecology intended to reveal its underlying ideology: e.g. the works of Aline Rousselle and Paola Manuli, which were both published in 1980. Since then there have been numerous studies giving credence to this perspective, mainly in Italy and among the Anglo-Americans, less so in France. What emerges is the strong character of ideological construction of the female body made by male medical discourse, which has represented females via the role of motherhood. For this reason female physiology and pathology are always directly linked to such a role, in the various events to which the female body is subjected at different ages and functions: virginity, pregnancy, childbirth and post partum.

After the papers by Geoffrey Lloyd in *Science, Folklore and Ideology* (1983), a series of monographs in England and the USA have further examined the nature of the female in Greek medicine. These include the work by Lesley Ann Dean-Jones (1994) on the female body in Greek science and that of Nancy Demand (1994) on maternity. In *Hippocrates' Woman* (1998), Helen King is credited with having picked out and followed the only thread which leads from the first "mythical" ideologised gynaecology to the Victorian age. The diachronic study on "hysteria" reveals its social construction, and the acute observations regarding menstrual blood, declared in the sources to be similar to that of the sacrificial victim, highlight the link that the Greek city endorses between the sacrificial function and the reproductive function of women. Work by

Lidie Bodiou (1999) is entirely concerned with female blood, both with regard to its symbolism and physio-pathological phenomena.<sup>31</sup>

Construction of the male is also necessary from a gender perspective. Jean Baptiste Bonnard (2004) takes steps to address this in *Le complexe de Zeus*, looking at the way in which the Greek world constructed and represented paternity. A peculiarity of the book is that of not only having used sources on biological and philosophical thought but also mythological and literary sources. From these Bonnard confirms the binary hierarchical logic between male and female, as suggested by the myths about paternal generation of children without a mother, for example the births of Athena, Dionysos and Aphrodite, and the embryological conceptions which, even if they relate the female contribution, never question the indispensability and superiority of male sperm.<sup>32</sup>

The study of the physiology and pathology of the body leads to the study of its management and social representation, particularly in the more intimate and personal sphere of sexuality. The brilliant research by Michel Foucault in the second and third parts of his *Histoire de la sexualité* (1984, *L'usage des plaisirs* and *Le souci de soi*), dealing with archaic and classical Greece and the first centuries of the Christian era respectively, have clarified how far sex is a product of social construction, the effect of dynamics of control and dominant relationships. Foucault's analysis is not from the perspective of the heterosexual/homosexual dichotomy, but that of active/passive, already present in *Greek Homosexuality* by Kenneth Dover (1978), considered apt to express sexual and political power of the adult male within the "realm of phallocracy" that is the classical city.<sup>33</sup>

Dover and Foucault have greatly influenced later studies on sexuality. There are those by Eva Cantarella (1988) in Italy, Halperin (1990) and Winkler (1990) in the USA,<sup>34</sup> as well as a collection of papers edited by Maria Wyke ([ed.], 1998), in which male and female bodies are explicitly and markedly interpreted as "parchments" on which each gender writes its own power discourse.

A different analysis is that of David Konstan (1994), who talks about "sexual symmetry" in the Greek novel, as well as that of James Davidson (1997), who challenges Foucault's dichotomy and phallogocentricity by speaking of the important role of courtesans and prostitutes and of other pleasures of the body in classical Athens.

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<sup>31</sup> Also cf. Jufresa ([ed.], 2000).

<sup>32</sup> On masculinity cf. also Foxhall and Salmon ([eds.], 1998a; [eds.], 1998b).

<sup>33</sup> cf. also Keuls (1985).

<sup>34</sup> Cf. also the collection Halperin, Winkler and Zeitlin ([eds.], 1990).

These last two studies have focused attention on heterosexuality, neglected in the works previously cited, and have highlighted the risk that ideological factors and an excess of political militancy on the part of scholars could blur the object of inquiry to the point of identifying sexuality in Greece with homosexuality.<sup>35</sup>

Until recently, the main reference point on female homo-erotic experience was the excellent studies on the young female choirs by Claude Calame.<sup>36</sup> However, a recent book by Sandra Boehringer (2007) investigates the subject with depth of analysis and from an original perspective. She underlines the inexistence of “homosexuality”. In the wake of American teaching and the Foucault school she asserts that to understand the construction of sexuality one has to refer to sexual practices, which develop and change over time in relation to the different social role assumed in different contexts.

### **Botany, practices of magic**

Over the last few years the notion of gender has offered interesting results in the area of biology and also botany. Indeed an attempt to analyse and interpret the botanical texts of Theophrastus has been conducted to show how ancient society even projected cultural representation of male and female onto plants. Through stimulating comparisons with both Aristotelian biology and the ensemble of myths and rituals ascribable to the divinity of the pantheon it is thus possible to elaborate the symbolic value of vegetal species and the cultural function assigned to them in the social context and religious sphere.<sup>37</sup>

*Animal Studies* consists of the recent interest towards animals, analysed as the intersection of multiple cultural and symbolic combinations. Within this field we have the work by Cristiana Franco (2003) on the dog, in which the perspective of gender helps highlight the dog’s substantial belonging to the female world, because it is an animal “without restraint”, bearer of that *anaideia* which marks women in the Greek world.

Christopher Faraone (1999a; 1999b) has clarified the crucial importance of gender in the area of talismans and spells for the reconstruction of practices of love magic, namely distinguishing the sex of the performer of the practice from the person at whom it is aimed. His

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<sup>35</sup> Cf. misgivings and advice on caution from Martos Montiel (2002). Very harsh criticism in Gourevitch (1999).

<sup>36</sup> Calame (1977; 1992, 2010; [ed.], 1983).

<sup>37</sup> Cf. Bretin-Chabrol and Leduc (2009). Cf also the previous article by L. Foxhall (1998).

analysis fully confirms the hierarchy between the genders emerging at a social level, even where roles are apparently inverted such as in the case of courtesans.

On the subject of magic the studies of Heinrich von Staden (1991) on female gynaecological medicine should be mentioned. Here the use of so-called unclean therapy, such as excrement are to be traced back to “homeopathic” magic, in that the contaminating nature of women’s bodily functions leads to curing impurity with impurity.

### Philosophy

The work *Madre materia. Sociologia e biologia della donna greca* (1983), from the Pavia school in Italy constitutes a kind of pivot between the studies on biology and those on philosophical thought. Indeed, Silvia Campese and Giulia Sissa show how according to Aristotle the male biological concept of the female is in perfect parallel with his political and ethical concept. This is in so far as the *adynamia* of the female body, incapable of reproduction without semen, corresponds to a deliberative faculty (*bouleutikon*) lacking in authority (*akyron*), which leads women to have need of the male *archon*, endowed with the right to control, for the sake of her *soteria*. Later Giulia Sissa (1990) returned to the subject, extending this idea to Platonic thought. Here she emphasises the “appropriative” use of the female in particular in Plato’s metaphors of pregnancy and childbirth to show the production of philosophical thought. Important in her study is the analysis of the notions of *genos* and *eidōs* in both Aristotle and Plato, an analysis directed towards establishing the relationship between sexual difference and uniqueness of the *genos anthropinion*.

The recent work by Michael Kochin (2002) has a different structure. He analyses gender in the political works of Plato, where he sees a plan for real sharing between males and females in terms of justice. Spain has also supplied a recent overview on the conceptualisation of the female in Greek philosophy.<sup>38</sup>

Another way to understand the relationship between women and philosophy has been that of analysing and studying female philosophers,

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<sup>38</sup> Pérez Sedeño E. ([ed.], 1994).

like Aspasia, Teanò and others about whom it is possible to have accounts.<sup>39</sup>

While on the subject of philosophy, the Italian philosopher Adriana Cavarero should be mentioned because of her completely different approach which follows in the wake of the theory of sexual difference. In *Nonostante Platone* (1990) she makes use of female figures, some of whom are in Plato, such as the Thracian maid or Diotima, to reconstruct the underlying symbolic maternal and female order that can be read between the lines. Work on the Greek world more generally seeks out archetypal power figures distinct from universalistic male speech and from a standpoint which permits women, traditionally uninvolved in philosophical *logos*, to recognise categories of thought which belong to their gender and themselves. Such is the case with Hannah Arendt's category of "birth". This is a philosophical perspective largely outside gender studies, still rooted in the feminism of equality and which in both France and Italy is unaffected by ideas of sexual difference, in spite of the philosophical practice of Luce Irigaray and the Diotima community active in Italy.

### **Art and Archaeology**

Gender studies regarding artistic monuments, ceramics, painting and sculpture "read" as texts, able to supply significant testimony about social structures and ways of thinking, reveal the marked effects of the different approaches already mentioned by the French and North American academics. The miscellaneous collection of articles *Pandora. Women in Classical Greece*,<sup>40</sup> which, in so far as it is a catalogue for an exhibition, is rich in illustrations and contains French and American contributions, clearly shows the dual methods of analysis of artistic monuments. The political militancy of radical North American feminism was explicitly revealed in the 1990s in the Archaeological Institute of America when studies directed towards the canons of Greek art revealed their dependence on hegemonic power structures and therefore the ideology underlying the depiction of bodies, in particular the female nude. Perhaps the most

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<sup>39</sup> On Teanò and Aspasia see contributions by C. Montepaone and N. Loraux respectively in the collection Loraux ([ed.], 1993). An attempt at an overall summary in Pietra (1997).

<sup>40</sup> Reeder ([ed.], 1995).

militant and political example of this is the collection of articles *Naked Truths*.<sup>41</sup>

However, the French scholars François Lissarrague and Françoise Frontisi have different objectives. Starting with the images depicted in art, they aim at reconstructing the mental images that it is possible to hypothesise from specific subjects<sup>42</sup>. In this work the representation of the female and the times and places in life to which she is destined, for example the gynaeceum or marriage, is always analysed in relation to the male, although the authors concede that reality cannot truly be reflected or described in these pictorial images. In these studies there is evident challenge of notions which by then were held to be established, such as the participation of only heterosexuals and prostitutes in the male symposium. Such notions were unverifiable from the images, or even from the exclusive destination of space within the *oikos* reserved for women.

A full rediscussion of the life of Greek women through iconology is found in the book by Sian Lewis (2002), which is presented as an iconographic manual: all aspects of women's lives are analysed from the documentation offered by ceramics. The main objective in the book is to underline the distance between the images on one hand and real life and literature on the other. The vases were mainly produced for the foreign market so women are depicted in circumstances in which the city tended to value their role, such as religious rituals, funerals, the robing of warriors rather than other moments of their life. The same goes for domestic life where the depictions certainly show instances and objects of daily life, but lend more weight for example to working with wool rather than cooking, corresponding with the traditional and ideologically based sexual division of work. Moreover, it is difficult to identify the clear, distinct free/heterosexual to whom we are accustomed in the written sources, just as the traditional interpretation of female reclusion in the gynaeceum contrasts with iconographical data.

In the same year, 2002, we have the work by Gloria Ferrari in which some fine research is conducted into "gender scenes" on vases, analysed as communicative events and using language theory. The research concentrates on the tension between male and female at times of life change for both sexes. It highlights that the passing of a young male into adulthood constitutes a sort of gender change in that he has to lay down female attributes to acquire *andreia*, while in nuptial rites the bride does not change gender but status, becoming a potential reproducer of citizens.

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<sup>41</sup> Koloski-Ostrow and Lyons ([eds.], 1997); in particular see contribution by S. Brown (pp. 12-42).

<sup>42</sup> Cf. contributions by F. Lissarrague and F. Frontisi in Veyne ([ed.], 1998).

Attention to gender has produced particularly original and innovative results in archaeological research when excavations have been confronted with trying to identify an organisation which accounts for specific differences regarding gender in the necropolis, urban layout and domestic architecture.<sup>43</sup>

### Conclusions

This rapid analysis has shown how much the adoption of the category of gender in studies of the Greek world over the last thirty years has enabled scholars to pose new questions and follow new lines of research. It is also true that in some cases, especially when ideology overruled and ended up determining the selection of sources, thereby obscuring them, the gender approach has shown limitations and potential risks for research.

I believe that gender can continue to be, to quote Joan Scott “a useful category for historical inquiry” if ideology is abandoned once and for all, without hypostatising and being inflexible regarding the female/male dichotomy. I would like to add Judith Butler’s suggestion of *undoing* gender, when one is in danger of forcing the sources, locking them in simple and preconceived schemes. However, gender can still be a valid heuristic tool: that is, *doing* is also necessary, looking at the polarity between the sexual genders in their continual dialectic tension, continually shifting from one pole to the other, checking all the areas of intersection and exchange. The unambiguous traditional model of the hierarchy between the sexes is of course still an effective model to identify power structures even beyond the male/female dichotomy. In what it rejects and its anomalies, one will be able to find a much more complex and modulated reconstruction of Greek society in its different forms of expression, from politics to art, philosophical thought or science in its symbolic structures and its imaginative world. In the area of conflict and negotiation, loans and appropriation, resides the possibility of finding fresh answers to the ever new questions which we continue to pose the Greek texts.

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<sup>43</sup> Cf. Schmitt Pantel (2009: 105-122); Morris (1999).

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## MARIO VEGETTI

Mario Vegetti is now emeritus professor of ancient philosophy after a long career chiefly based at the Università degli Studi di Pavia. His research has covered many different aspects of ancient thought but especially focuses on its scientific-epistemological and ethical-political implications. He has edited and translated works by Hippocrates and Galen and Aristotle's biological works. He has been the coordinator of the collective work in three volumes *Introduzione alle culture antiche* (Boringhieri, 1992). Among his chief publications we may mention *Tra Edipo e Euclide* (Il Saggiatore, 1983), *L'etica degli antichi* (Laterza, 1996), *Quindici lezioni su Platone* (Einaudi, 2003, Premio di filosofia di Siracusa), *Dialoghi con gli antichi* (Academia Verlag, 2007), *Un paradigma in cielo. Platone politico da Aristotele al Novecento* (Carocci, 2009, Premio di filosofia di Castiglione). Many of his books have been translated into English, French or Spanish.

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