Aristotle on Money and on Economy: First remarks¹

Catherine BRÉGIANNI

PhD on Modern History, Research Director Modern Greek History Research Centre, Hellenic Academy of Science [Academy of Athens] Associated Member (external), LaDéHis/CRH-EHESS cbregiann@academyofathens.gr

Abstract. This proposed paper (being a part of a work in progress on money and on monetary/ economic crises' conceptualization) examines the institutional facet and the symbolic function of money as its diachronical qualities; this global perception of money and of monetary phenomena is integrated, thus, in the assumption that objective functions inheres in them, corresponding to respective historical conjuncture. The obvious outcome is that each historical period accentuates the different economic concepts—and their philosophical representation or their synthesis—according to the existing stage of the market's evolution. In this methodological framework, in the first part will be examined the variable historical phases in the process of monetary integration, as far as the different characteristics of monetary globalization—in historical perspective—are specified. It is then useless to state that the "global" concept is referred not only to an interdisciplinary approach of money but equally to the diversified levels of globalization, the latest perceived as historical phases in market's evolution. The past experience of monetary "integration" being briefly presented, in the second part of the article are depicted Aristotle's notions on institutional characteristics and social/symbolic functions of money. Secondly, Plato's Politeia offers to the research a systemic differentiation on parallel monetary units, i.e. the simultaneous function of local and global monetary systems. The paper investigates the question if the platonic perception of local and global currency reflects an historical reality in Athens of classic times. Although, the purpose for the use of philosophical perceptions on money is not to depict the Aristotelian and Platonic economic ideas, but to enlarge the historical concepts as regards money's qualities.

Keywords: money; sociology of money; cultural history of money; classical political philosophy; Aristotle; Plato; Ancient Greek monetary history; political ontology.

Аристотель о деньгах и об экономике: предварительные заметки

Катерине БРЕГИАННИ

доктор исторических наук, директор по исследованиям

Исследовательский центр по современной греческой истории, Эллинская Академии наук (Академия Афин)

Accoциированный член (внешний) Bibliothèque du Laboratoire de Démographie et d'Histoire Sociale — Centre de recherches historiques — LaDéHiS-CRH cbregiann@academyofathens.gr

Аннотация. Настоящая статья (являющаяся частью исследований по выработке концептуальных основ понятий денег, монетарных и экономических кризисов) посвящена институциональному аспекту и символической функции денег как их диахронических качеств. Такое общее понимание денег и монетарных явлений объединяется в предпосылке наличия объективных функций имманентно им присущих и отвечающих соответствующей исторической обстановке. В результате

каждый исторический период формирует соответствующие ему понятия, а также их философский вид или их синтез в соответствии с существующим уровнем развития рынка. В рамках такого методологического подхода в первой части статьи проанализированы различные фазы в процессе монетарной интеграции в меру как — в исторической перспективе — будут определены различные характеристики монетарной глобализации. Лишним будет, стало быть, подчеркивать, что такое «глобальное» понимание соотносится не только с междисциплинарным подходом к вопросу денег, но и в равной степени с различными уровнями глобализации, понимаемыми здесь как исторические фазы развития рынка. Во второй части статьи представлена краткая характеристика последнего опыта монетарной «интеграции» на фоне замечаний Аристотеля по вопросу институциональных характеристик и социально-символических функций денег. Во-вторых, Полития Платона представляет исследователям систематическую дифференциацию параллельных денежных единиц, одновременно функционирующих локальных и глобальных денежных систем. В статье проанализировано, насколько восприятие Платона локальных и глобальных денежных систем отражает историческую реальность в Афинах классического периода. Однако использование философского понимания денег не служит отображению экономических взглядов Аристотеля и Платона, скорее расширяет исторические перспективы относительно характеристик денег. Ключевые слова: деньги; социология денег; культурная история денег; классическая политическая философия; Аристотель; Платон; история денежного обращения древней Греции; политическая онтология.

I. A PRELIMINARY ONTOLOGY OF MONEY IN ARISTOTELIAN TEXTS [NICOMACHEIAN ETHICS, POLITICS, ATHENIAN CONSTITUTION]: MONEY'S SUBJECTIVE AND OBJECTIVE QUALITIES

This presentation is an in situ methodological approach concerning money as an institutional being and as a social symbol. The theoretical bases on diachronic function of global money and research concerning the ontological nature of money in ancient philosophy are incorporated to my relative project that it is in process. First results are presented in this paper, focusing on money's qualities as perceived by Aristotle, mostly in his works related to the function of the City-State. It is obvious that references to Aristotelian texts are not indenting to describe the economic ideas of the philosopher, a work already done and furthermore revisited in the very recent literature.2 On the contrast, my purpose is to contextualize the analysis on money and on global monetary phenomena outlined by epistemological principles: monetary mechanisms are considered of course as historical experiences, located in specific geographical areas and in specific historical periods. This former element means that there is some conjectural factors interrelated to monetary phenomena, factors connected to the evolution of the human history and of course to the different stages as regards the evolution of the market. But in the same time, to objective factors related to monetary mechanisms occurs money's subjectivity, as Aristotle pointed out since 4th century BC. It is then important to note from the starting point of this paper, that Aristotelian explorations on money's nature don't accentuate philosopher's efforts for an historical retrospection of monetary mechanisms; on the contrary, he attempts to conceptualize them.³ His perception on money is then integrated to his dialectical method, meaning that in order to found his concepts gives—if necessary—"historical" information, mainly as regards the classical Athenian monetary system. For these reasons, in the Aristotelian texts the term "νόμισμα" is to be read as money and not as currency.

In *Nikomacheina Ethics* [Ηθικά Νικομάχεια] Aristotle defines currency as a measure of exchange value and as means of exchange. Being itself a mean of exchange, money does not exist in nature but only by law: ου φύσει αλλα νόμω εστί. ⁴ It is then related to the State that guaranties its authority. Money is at that point considered as an institution, associated to State's power: ⁵ from epistemological point of view, this Aristotelian element is a timeless and scientifically timely argument, integrated to the actual debate

concerning the effectiveness of parallel non institutionalized currencies. As it is observed by the above mentioned, Aristotle points out that money need to be retained by its institutional form as a result of its subjective character; its institutionalization is then considered being a presupposition for money's function.

On the other hand, the linguistic sign, which is a social sign, valorizes the subjectivity in money's nature. "Νόμισμα [money]" and "Νόμος [the law]" originates both in ancient and modern Greek by the verb "νομίζω" defined as I believe, I suppose; according to Aristotle's definition "νόμος συνθήκη, και εγγυητή" αλλήλοις των δικαίων [and the law is a covenant or, ... a guarantee of men's just claims on one another], consequently the value of money is guaranteed because people are confident in it, as the State institutionalizes money's value. Money's institutional function excludes for Aristotle the use of parallel unregulated currencies, in so far as State's authority is the only guarantee for money's value. 7

This aspect of money's subjectivity was already explored by research on economical and sociological field, while diachronic axes of the research are the psychological mechanisms related to money's demand but also money's fetishization. Specifically, the fetishist feature represents a social quality of money, as it is—in the same time—perceived and unperceived by our senses, it has then tangible and intangible qualities. Concluding on money's subjectivity it is then pointed out that it symbolizes collective practices and social stereotypes.

On the other hand, Aristotle in Nikomacheian Ethics and in Politics underlines some objective factors of money related to its essential contribution to the City-State's welfare but also to its significance in the individual life of people. As an objective factor can be seen the Aristotelian approach to the correlation between the higher social status and wealth's possession. He also defines that one of the qualities of lord's class, it's their ability to cope with money. If this element would be extended as regards the historical study of monetary zones it is then concluded that in the framework of a supranational monetary organization the reasonable outcome is the cession of suzerainty for the existing national entities. 10 On the other hand, if one assigns the same element concerning the identification of social elites to

ownership— on behalf of the individual, this approach is correlated to the pleasure's experiences, the latest being for Aristotle a central nucleus of human existence: in so far as pleasures does not result from acquiring our faculties, but from their exercise. The need of wealth is then pointed out, as money it is the mean for every human being to obtain pleasure; Aristotle arguments that in this case the canon of moderation, the prevailing principle of his philosophy, it is difficult to be applied as people would accumulate money so as to have access in more pleasures, according to their natural tendency.

Moreover, objective factors are related to the concept of crisis in Aristotelian philosophical thought, as a crisis period is primarily understood and explained by means of a structural transformation. In Athenian Constitution, the Aristotelian analysis focuses on the political change as the principal appearance of the Athenian crisis at the beginning of the 6 century BC, during the Solonian reform. But according to Aristotle the causes of this political dystopia are mainly financial. 12 For this reason, Athenian Constitution includes an extended reference to the public and private's debt discharge that Solon applied in 594 BC.¹³ Aristotle correlates thus directly the political crisis and the anarchy in Athens with the financial and monetary reform that Solon implemented, an analysis which valorizes the connection between economic reforms and political structures. In the basis of this specific example, Aristotle draws conclusions on crisis general nature; it is to be mentioned the psychological effects that he delivers to crisis function, as regards human individuality, in obligatory correlation to civil collectivity: "And they [i.e. the Athenians during the crisis] continued in a state of general internal disorder."14

Concluding, money as an actor of the conjuncture it is not socially neutral for the Aristotelian approach, meaning that money cannot create the crisis by itself. In addition, his analysis on social classes in relation to wealth possession, 15 but also his reference to the management of wealth's making, insinuates that money represents overall economic and social relations. In this basis, in his study *Politics* he correlates market's formation to commercial activity and to the accumulated profit: commodities importation and surplus export are both necessary for the city-state, as

long as the state ought to engage in commerce for its own interest. 16

From the above mentioned is resulting that Aristotle applies an evolutionary model, demonstrating the direct relation between politics and economy in the context of the City-State: for these reason in *Politics* is sited the major part of the Aristotelian analysis on economy and on money's qualities, both considered as elements of governmental science.

II. MONEY'S USAGE AND FUNCTION

In general, Aristotelian thought on money and on economy, clarifies the conceptual context but also the limits placed on economic activity by the relevant historical conjuncture. It is then appropriate to point out that in ancient philosophy the private economic activity targeting to the individual prosperity is comprehended in relation to city-state's welfare:¹⁷ in Aristotle and apparently in Plato's *Republic* the city-state's moral, social and economic functions are gathered.¹⁸

The idea of the interconnection between the economic and political structure of the city-state is expressed in details in Aristotle Politics, as far as the economic organization of the citystate is the basis for its political adjustment. In Nikomahian Ethics Aristotle determines the political science as a superior knowledge, but this should be supported by economic art: thus, in his philosophical system the interpretation of the city-state's economic basis is related to the concept of economic progress during antiquity. The predominant idea in economic history nowadays is that classical period didn't experienced economy as a science neither understood the idea of economic development. But, in the first place it is to be pointed out that the notion of national economic development—in quantitative terms—was not set as a target of the nationsstates sooner than the interwar period, via the official acts of international institutions, while during 19th century progress and State's welfare were mostly connected to the educational level of the citizens and to the expansion of educational mechanisms.

On the other hand, as already is said, Aristotle at first in *Nicomachean Ethics* describes economy as an "art" targeting to wealth's accumulation.¹⁹

But in the follow-up of the same text, he classifies economic studies to "applied" sciences. ²⁰ On the other hand, as Plato does, Aristotle believes that the wealth of a nation-state is not sufficient for the welfare of the collectivity, if this very same wealth is not completed by the moral dimension of the city-state. ²¹ It is not irrelevant to this annotation the Aristotelian reference to imperialist objectives of some city-states of his era, objectives having a military and economic context. According to Aristotle, these city-states are attempting to overcome their neighbors by despotic and authoritarian means. ²²

By the means of the above mentioned dialectical approach as regards economic activity, Aristotle in his *Politics* draws a clear distinction between applied economy and financial activity: for better understanding of the Aristotelian thought, it should be mentioned that in ancient Greek the word economy [=οικονομία] is defined as the administration of the house [=οίκος]. Consequently, for Aristotle, the concept of applied economic activity is compatible to nature, as regards both house managing and cybernetics, since it is connected to the use of thinks: "Therefore that there is a certain art of acquisition belonging in the order of nature to householders and to statesmen, and for what reason this is so, is clear."23

On the other hand, financial activity is comprehended as wealth's accumulation: "But there is another kind of acquisition that is specially called wealth-getting... "24 The financial activity is against nature because it is carried on by acquired skill or by experience.25 Thus, commodities have utilitarian value but also a commercial value, they are means of exchange. For Aristotle then the use of money was born by necessity as, obviously, it was impossible than all exchanges be carried out by payment in kind²⁶ it is then concluded that for the philosopher, money itself it is not at stake, but it represents the value amid exchanges. Furthermore, in Nicomachean Ethics he counts in the value of commodities the labor needed for their fabrication.²⁷

Aristotle is formulating some elements of the value theory but also he is emphasizing on the commercial transactions: in that way, he initially introduces concepts that we are going to find in modern times in the approaches of Marx and of Adam Smith, ideas integrated in the dialectic

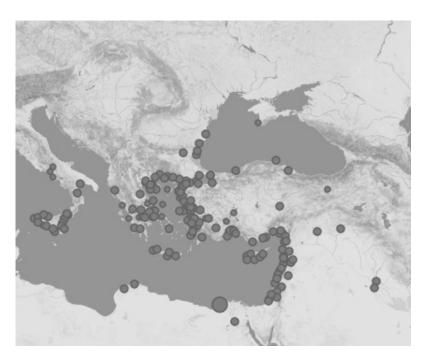


Figure 1. Map of global circulation of Athenian tetradrachm during the period of Athenian hegemony

and evolutionary epistemological universe of the 19th century. Especially as concerns the Marxian approach, it coincides to Aristotle's principles vis-a-vis commodities' value definition by labor's factor.²⁸ On the other hand, in *Nikomachean Ethics* individual freedom is identified to freedom in transactions and especially in monetary transactions:²⁹ as precondition is thus set the moderate economic activity, its excess been considered as prodigality and the lack of exchanges slavery or oppression of human freedom.³⁰

But let us return to money as it is analyzed in *Politics*, in relation to cybernetics. The term is used by the author as a synonym to political science. For Aristotle, money has an intrinsic value –i.e. the value of the medal. But also it has an institutionalized value, as its use implies that the parties involved in a transaction they accept a stable currency value.31 This Aristotelian concept can be considered as the basis for the medieval use of money; during medieval times currency was itself wealth for its intrinsic value and its quality in precious metal (gold or silver), but also it produced wealth via transactions. 32 On the other hand, as it is further known in monetary history, global monetary standards until WWII were based in precious metals, in bimetallic or monometallic monetary systems.

Furthermore for Aristotle institutional and thus artificial being of money has as consequence the possibility of its devaluation, its withdrawn from circulation and its falsification or forgery. This quality is connected to the subjectivity of monetary mechanisms; on the other hand, Aristotle defines as objectivity the demand which determinates the commodities prices: "It is therefore necessary that all commodities shall be measured by some one standard ... And this standard is in reality demand, which is what holds everything together..." On the other hand, in its institutional form, money it is the measure of exchanges "it is the measure of all things," 54 so it resumes objective and subjective qualities.

Concerning money's social function Aristotle has an ambivalent approach. According to it, for the household affairs, this is necessary to be managed in a rational and exhaustive way. On the contrary, the financial transactions are reprehensible since there are not existing as such in nature. Specifically, usury is disgraceful and odious as based in the possession of money itself and not targeted to the benefits deriving by money's usage. In usurious practices, the interest becomes "money created by money." It is of course an idea which became the nucleus of economic activity in medieval times, through the doctrine of Thomas Aguinas and the deriving designation of usury as a superior sin by the Catholic Church.³⁵ Nevertheless, resuming the Aristotelian thought on money as a social symbol is crucial to note that global economic and social relations are represented



Figure 2. Athenian tetradrachm, 5th BC. Costas Kolokythas private collection, Athens

by money as an epiphenomenon or as a mean of more complicated relations.

On the other hand, Aristotle considers the formation of a standard monetary system as a precondition for the city-state's existence. Absolutely necessary are also considered the financial transactions since they create a monetary reserve for the city-state. In relation to this financial requirement for the function of the State, it is relevant to juxtapose the Aristotelian point of view for autarchy, a concept that should be understood in economic but also in psychological terms: it can be then a collective but also an individual life practice. For Aristotle, autarchy it is an alternative for guiding our existence — both, as civil collectivities and as individuals. In case that we are choosing for the autarchy's option we need to keep low expectations for our own progress, to stay away from furious disputes, to maintain a standard monetary reserve that could help us to survive. As it concerns the city-state, the choice of a self-sufficiency policy requires not only State's monetary reserves, but also requires an internal policy promoting manufactures, organizing an army, an hierarchical clergy, and a system of justice.36

In fact, the Aristotelian concepts on money, and especially the philosopher's reference in his *Athenian Constitution*,³⁷ to the monetary reform applied by Solon in Athens at the beginning of the 6th century BC,³⁸ are related to the monetary history of the classical Greek world; this topic is already analyzed,³⁹ but it should be mentioned here the global circulation of Athenian tetradrachm during the period of Athenian hegemony, which for some historians was the first global money in History because of its circulation in all the known then world, and especially in the eastern Mediterranean.⁴⁰

III. RESEARCH'S PERSPECTIVES

In brief, the monetary circulation of the Athenian tetradrachm during Athens hegemony in the 5th century BC it is an objective factor in Aristotle's conceptual system concerning currency. In general terms Aristotle applies a dialectical method based in materialism and the deriving social relations. An objective aspect of Aristotelian analysis is also his perception for the social structure in the *Republic*, a stratification based in wealth's procession. Knowledge is considered by Aristotle as a factor for social ascension, as the savoir-faire of the individual to create wealth gives to the human being access not only to social power but also to pleasure. The objectivity that Aristotle attaches to material forms of reality created an epistemological framework, as far as Marx's concept on the uses of money can be traced on Aristotelian works.

On the other hand, from the idealistic perspective of Plato, who also perceives his ideal Republic as an established social classification, knowledge is the instrument for social accession. The institutionalized process in order to obtain knowledge permits to the slave so as to get on an upper social category and to escape from the condition of slavery. As a result, knowledge is a precondition for the dependent classes, in the same time that the rulers of the Republic they don't need to know.41 Plato also accentuates knowledge's illusion as a mean of political dominion, an idea represented to the platonic cave's myth.⁴² It is to be observed that idealistic features in Plato's philosophical universe overcome to the uses of material components that characterize reality, it is then in that framework that philosopher's proposition for a double monetary system of the Republic must be examined.⁴³

- 1. This paper is an edited version of my presentation in the Conference "What is money? What is currency?", Financial University of Moscow, 14–15 November 2016. The present paper consists further elaboration of selected research's axes first published in C. Brégianni, "From the local to the global and vice versa: money's being and not being as an historical and philosophical narrative", Philosofia, 46, 2016, pp. 49–72, in Greek. For this version, I used the LOEB editions of Aristotelian works, but the references are following the standard I. Bekker's edition. I would like to thank R. Martin de Sousa, M. Marneli Protopapas for their comments, Anna Tatsi for her help so as to standardize the references' model, and last but not least Ekaterina Svirina for her support and good-willing in our cooperation.
- 2. For example, Alain Bresson, The making of the Ancient Greek economy: institutions, markets, and growth in the City-States, trad. S. Rendall, Princeton & Oxford, 2016, p. 421.
 - $3.\,See, D.M.\,Shaps, The\,invention\,of\,coinage\,and\,the\,monetization\,of\,ancient\,Greece, The\,University\,of\,Michigan\,Press, 2007, p.\,7.$
 - 4. Aristotle, The Nicomachean ethics, The LOEB Classical Library, μτφ. H. Rackham, Harvard University Press, 1956, E1133a 30.
- 5. For the money's concept as an institution, from the political point of view, see Stephan Eich, "The currency of justice: Aristotle on the politics of monetary reciprocity", http://www.stefaneich.com/academic/wp-content/uploads/2016/09/Eich-Aristotle-on-the-Politics-of-Monetary-Reciprocity.pdf, attended 21–11–2016.
 - 6. Aristotle, Politics, The LOEB Classical Library, trans. H. Rackham, Harvard University Press, 41959, Γ, 1280 β 10–11.
- 7. For a differing point of view, see L. Fantazzi, "Complementary currencies: a prospect on money from a retrospect on premodern practices", Financial Historical Review, 1 (2005), pp. 43–61.
- 8. See K. Marx, Le capital. Critique de l'économie politique, livre premier, Le développement de la production capitaliste, trad. J. Roy, Paris, éditions sociales, 1959, reprint of the first edition (1872), pp. 83–84.
 - 9. See E. Moutsopoulos, "Aristotle on moral and economic crises", Philosophia, 45, 2015, pp. 182-194.
 - 10. For further analysis of this topic, see Brégianni, "From the local to the global and vice versa", op. cit., pp. 51–58.
 - 11. Nicomachean Ethics, H 1153 a 10.
- 12. Aristotle, The Athenian Constitution. The Eudemian Ethics. On virtues and vices, London/Cambridge, Harvard University Press, 41961, Athenian Constitution, XIII 1–3.
 - 13. Athenian Constitution, X 1.
 - 14. Athenian Constitution, XIII 3.
- 15. Aristotle, Politics, The LOEB Classical Library, $\mu\tau\phi$. H. Rackham, Harvard University Press, 41959, Δ , 1289 b 30. In more details, Aristotle describes the households of the city as some of them necessarily rich, some of them necessarily poor and some of them between the two conditions.
 - 16. Politics, H, 1327 a 25.
- 17. Chris Bobonich, "Plato and the birth of classical political philosophy", in F. Lisi (ed.), Plato and the birth of classical political philosophy, Sankt Augustin, Academia Verlag, σ. 95.
- 18. V. Patronis, "Economic ideas of ancient Greek philosophers: assessing their impact on the formation of the world economic thought", in Br. Alekseyeva, O. Lāms, I. Rumniece, Hellenic Dimension, Riga 3rd International Conference on Hellenic Studies, Riga, University of Latvia, 2012, p. 12–21.
 - 19. Nikomachean Ethics, A, 1094a 10.
 - 20. Nikomachean Ethics, A, 1094a 15.
 - 21. Politics, H, 1324a 5-20.
 - 22. Politics, H, 1324b 5.
 - 23. Politics, A, 1256b 35.
 - 24. Politics, A, 1257a 10.
 - 25. Ibid.
 - 26. Politics, A 1257a, 5.
 - 27. Nicomachean Ethics, E, 1133a 10, and sqqs.
 - $28. \, \text{See as regards the labor factor in the commodities value, Marx, Le capital} \ldots \text{op.cit}, p. \, 84.$
 - 29. E. Moutsopoulos, M. Protopapas-A. Marneli, Necessity-Change-Freedom, Athens, Academy of Athens, 2007, p. 30–31.
- 30. Nicomachean Ethics, B1107 b 10. In addition, Aristotle in his Rhetoric attributes economic context to the individual freedom, meaning that as illiberal is considered not only the slave but also anyone who exercises wage labor. Cited in Moses I. Finley, The Ancient Economy, Berkley and Los Angeles, University of California Press, 1973, p. 41.
 - 31. Politics, A 1257a 35.
 - 32. See M. Foucault, les mots et les choses. Une archéologie des sciences humaines, Paris, Gallimard, 1966, p. 185.

- 33. Nicomachean Ethics, E1133 a 25.
- 34. Nicomachean Ethics, E1133 a 20.
- 35. For further elaboration of this topic see, J. Le Goff, La bourse et la vie: économie et réligion au Moyen Age, Paris, Hachette, new ed., 2011.
 - 36. Politics, H, 1328 b 10.
 - 37. Athenian Constitution, X 1−2.
- 38. As regards Solon's monetary politics in correlation to the reform of Athenian private debt, see Will Slatyer, Life/death rhythms of Ancient Empires. Climatic cycles influence rule of dynasties, Partridge, 2014, p. 59–60.
- 39. See Brégianni, "From the local to the global and vice versa: money's being and not being as an historical and philosophical narrative", op. cit.
- 40. Among others, on the market formation during antiquity see K. Polanyi, Trade and markets in the early Empires: economies in history and theory, Free Press, 1967.
 - 41. Acording to a Lacan's remark.
 - 42. Alain Badiou, "Qu'est-ce qu'une idée? (502c-521c)", in La République de Platon, Paris, Fayard, 2012, pp. 244-245.
- 43. For a further elaboration of these topics, see C. Brégianni, "From the global to the local and vice versa; institutional forms of money", paper presented in the Conference The quality of money, Paris, INRA/Tokyo University, 13 December 2013.

REFERENCES

- 1. Aristotle, *The Nicomachean ethics*. The LOEB Classical Library, trans. H. Rackham, London, Cambridge, Massachusetts, Harvard University Press, ⁶1956.
- 2. Aristotle, *Politics*. The LOEB Classical Library, trans. H. Rackham, London, Cambridge, Massachusetts, Harvard University Press, ⁴1959.
- 3. Aristotle, *The Athenian Constitution. The Eudemian Ethics. On virtues and vices*, trans. H. Rackham, London/Cambridge, Massachusetts, Harvard University Press, ⁴1961.
- 4. Badiou, Alain, *La République de Platon*. Paris, Fayard, 2012.
- 5. Bobonich, Chris, "Plato and the Birth of Classical Political Philosophy", in *Plato's Laws and its Historical Significance; Selected papers of the I International Congress on Ancient thought*, ed. Francisco L. Lisi, Sankt Augustin, Academia Verlag, 2001, pp. 95–106.
- 6. Brégianni, C., "From the local to the global and vice versa: money's being and not being as an historical and philosophical narrative", *Philosofia*, 46, 2016, pp. 49–72, in Greek.
- 7. ——, "From the global to the local and vice versa; institutional forms of money", paper presented in the Conference *The quality of money*, Paris, INRA/Tokyo University, 13, December 2013.
- 8. Bresson, Alain. *The making of the Ancient Greek economy: institutions, markets, and growth in the City-States*, trans. S. Rendall, Princeton & Oxford, 2016.
- 9. Despotopoulos, C., *The Political Philosophy of Plato*, Athens, Seferlis, 1957, in Greek.
- 10. Eich, Stephan, "The currency of justice: Aristotle on the politics of monetary reciprocity", [http://www.stefaneich.com/academic/wp-ontent/uploads/2016/09/Eich-Aristotle-on-the-Politics-of-Monetary-Reciprocity.pdf].
- 11. Fantazzi, L., "Complementary currencies: a prospect on money from a retrospect on premodern practices", *Financial Historical Review*, 1 (2005), pp. 43–61.
- 12. Finley, Moses I., The Ancient Economy, Berkley and Los Angeles, University of California Press, 1973.
- 13. Foucault, M., Les mots et les choses. Une archéologie des sciences humaines. Paris, Gallimard, 1966.
- 14. Le Goff, J., La bourse et la vie: économie et réligion au Moyen Age, Paris, Hachette, new ed. 2011.
- 15. Marx, K., *Le capital. Critique de l'économie politique*, livre premier, *Le développement de la production capitaliste, trad. J. Roy*, Paris, éditions sociales, 1959, reprint of the first edition (1872).
- 16. Moutsopoulos, E., "Aristotle on moral and economic crises", Philosophia, 45, 2015, pp. 182-194.
- 17. Moutsopoulos, E., M. Protopapas, A. Marneli (eds.). *Necessity-Change-Freedom*. Athens, Academy of Athens, 2007.
- 18. Patronis, V., "Economic ideas of ancient Greek philosophers: assessing their impact on the formation of the world economic thought", in B. Alekseyeva, O. Lāms, I. Rumniece, *Hellenic Dimension, Riga 3rd International Conference on Hellenic Studies*, Riga, University of Latvia, 2012, pp. 12–21.
- 19. Shaps, D. M., *The invention of coinage and the monetization of ancient Greece*. The University of Michigan Press, 2007.
- 20. Slatyer, Will., Life/death rhythms of Ancient Empires. Climatic cycles influence rule of dynasties, Partridge, 2014.