

Hesiod's *Works and Days* as an Economics Textbook

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The aim of this paper is to examine the whereabouts of Hesiod's life (days) and the most of his important works which is entitled, "Works and Days". The first part of the paper examines Hesiod's life and education. It is claimed that he was educated by his father who knew the Aeolian dialect as he migrated from Aeolia of Asia Minor to Boeotia of Central Eastern Greece. The second part of the paper is devoted to Hesiod's masterpiece, "Works and Days". I have claimed elsewhere (Papanikos 2022a) that Hesiod was the first known economist who wrote using a poetic form instead of prose because this was the means to satisfy the need of memorizing the whole text. The "Work and Days" apart from its literary value, has a very practical (didactic), unparalleled value which makes it the first economics textbook ever known in history. The book is then presented as being organized into twenty chapters to emphasize that it could have been used as an introductory economics didactic text.

Keywords: Hesiod, Askra, Works and Days, Economics

Introduction

Hesiod's books, life, birthplace and education are very controversial. In many cases, myths are inseparable from reality. The only contemporary information comes from Hesiod himself, especially from his book, *Works and Days*. As I have already mentioned in Papanikos (2022a), these controversies have their historical merit, but in no way affect the analysis of his book. Hesiod did not provide an autobiography. Whatever he wrote about himself and his family were like case studies to support some of his arguments.

Those who wrote about Hesiod's life or social, political and economic conditions were not contemporary. The first reference about Hesiod's life is made by Herodotus approximately four-hundred years after Hesiod's death. Many contemporary scholars may not realize that today the difference of four centuries is very small compared with Herodotus' four-hundred-year difference with Hesiod. Today we have many sources over the last four-hundred years, which was not the case in Hesiod's and Herodotus' times.

Thus, it is really very difficult to say anything about Hesiod's life and whereabouts without some use of imagination and good common sense. Within this spirit, the purpose of this paper is twofold. Firstly, I present whatever information is available on Hesiod's days (life), which includes place of birth and death, dates of his lifespan, family, conditions of his place of living (village), and, of course, his education. I use the myths and whatever appears to be real, but, most importantly, I utilize my own common sense to critically analyze some writings

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about these issues considered far from truth. Secondly, I briefly list all publications which in the past were allegedly associated with his name, but I extensively present only one, which is of my interest here: Hesiod's book of *Works and Days*.

There are many ways to present *Works and Days*. Researchers of Hesiod's *Works and Days* have concentrated on a few verses, upon which wrote entire papers or even books. These works contain information about his life as well as his village. What is of interest in this work here is that economic historians and historians of economic thought have cited Hesiod's *Works and Days*. Those considered as most important were critically reviewed by Papanikos (2022a).

In addition, many scholars have analyzed *Works and Days* as a whole from many perspectives such as philosophy, political science, literature, linguistics, education, etc. However, I do not know any economist who presented the entire book as an economics textbook. My approach here considers the entire manuscript as an economics textbook. I have organized *Works and Days* into twenty chapters, which I think will make sense to an economist. This method keeps the flow of the book (lines), the same as in the original. I briefly present each "chapter" by making specific references to contemporary economic analyses if needed. This is not the best way of presenting Hesiod's important contributions to economic analyses. A better method could be used, which would consist of re-organizing the material of the book according to specific themes which are relevant to what contemporary economists can feel familiar and comfortable with. This latter method is not applied here.

As mentioned above, my approach here is to use all available information, but most importantly to use an economist's common sense which might not be the same as the one which has been employed by classicists and even by some economic historians of the ancient world. To explain what I mean, many writers have presented Hesiod as being a poor farmer and shepherd living in a barren village of Boeotia and the Muses inculcated him to start writing about the *Works and Days*. A cursory reading of the *Works and Days* and knowing the geography of Hesiod's village and the number of people he employed in his farm (if what he describes as a farm business is his own, which most probably is the one that led to the quarrel with his brother), then common sense tells us that: (a) Hesiod's village was and is very productive; (b) his property was very large, and would still be considered very large even with today's standards of land ownership in the area; and (c) Hesiod was very well educated. These are some of the stylized facts which this paper aims at explaining, using the information derived primarily from *Works and Days*, my own common sense, and in some cases, my own experiences even though it sounds awkward, but I think it is not.

The paper is organized into seven sections, including this introduction. The next section looks at Hesiod's scatter information on his life. Section three speculates on Hesiod's education. Section four examines Hesiod's village economy of the eighth century BCE or even earlier. Section five briefly presents what has been allegedly said that Hesiod wrote and section six presents his masterpiece on *Works and Days* in twenty different parts called "chapters," which is consistent with the economic ideas discussed in each one of them. Conclusions are given in the last section.

Hesiod's Life

Hesiod lived almost three thousand years ago from a time that no other work has survived that could have provided some evidence on Hesiod's life and/or the economic, social and political conditions in his area. The only other written work of the period is Homer's *Iliad* and *Odyssey*¹. Therefore, we know nothing about Hesiod from any contemporary source apart from his own autobiographical notes in the *Works and Days*. Thus, all writers of Hesiod's life including his place of origin have relied on Hesiod himself or from writers who wrote about him a few centuries, or even more than a millennium, later. In this section, I will talk about a number of issues which have created their own literature on Hesiod. Specifically, I will talk about Hesiod's: (a) family migration; (b) birthplace; (c) lifespan and death; and (d) family. I devote a separate section of this paper to talk about Hesiod's village economy.

The Migration of Hesiod's Parents to Askra

The first controversy starts with Hesiod's father. Hesiod himself stated that his father (and most probably his mother) migrated from the town of Kyme in Asia Minor and settled in Askra², a small village in the area of Boeotia located in the central-eastern mainland of Greece, close to Athens. According to Hesiod himself in *Works and Days*, his father³,

came, some time ago, here, through a long sea-trip,
leaving behind the Aeolic Kyme, in a black ship,
not to avoid richness and wealth,
but the dreadful poverty, which Zeus gives to men
and next to Helikonos, in a deplorable town, settled,
Askra, bad in the winter, terrible in the summer, never
good.

ὅς ποτε καὶ τῆδ' ἦλθε, πολλὸν διὰ πόντον ἀνύσσας,
Κύμην Αἰολίδα προλιπόν, ἐν νηὶ μελαίνῃ
οὐκ ἄφενος φεύγων οὐδὲ πλοῦτόν τε καὶ ὄλβον,
ἀλλὰ κακὴν πενίην, τὴν Ζεὺς ἀνδρεσσι δίδωσιν·
νάσσατο δ' ἄγχ' Ἐλικῶνος οἰζυρῆ ἐνὶ κόμῃ,
Ἄσκρι, χεῖμα κακῆ, θέρει ἀργαλέῃ, οὐδέ ποτ' ἐσθλῆ.
[635-640]

Proclus, a Neo-Platonist philosopher of the fifth century CE, gave a reason of the family migration: their debt. It is not clear though whether he left to avoid the debt payment and/or to find a better place to repay the debt.

The reason that his father had chosen Askra is not known either and one can speculate that Hesiod's father had known the area from his previous seafaring as a merchant. The problem with this explanation is that Askra is relatively far away from the sea. It is quite possible that his father was the son of some old migrants who left central Greece in the ninth century BCE and settled in Asia Minor and therefore he knew the area or even he inherited some property. Alternatively, he found a piece of land to buy and then through hard work increased the size of it so

¹I have examined in Papanikos (2021a, 2021b) some issues which relate to these two great ancient works.

²According to the Lexicon (p. 140) by Hesychius from the fifth century CE, Askra means fruitless oak (see <https://bit.ly/3z30E61>), which might be the reason why many scholars considered Hesiod's village as being very poor. The truth is that the oak trees in Askra were and are very productive. For the only thing that we are sure today is whether Hesiod's description of his village was really true or was an overdramatization of the scarcity problem as explained in Papanikos (2022c).

³I translated into English all quotes from ancient Greek texts cited in this paper.

much so as to divide it into two pieces and leave them as inheritance to two of his sons. The area is not as infertile as Hesiod depicted in his book as this is further discussed below. In other words, Hesiod's father returned to his ancestors' homeland. Nothing is known about his mother.

In the *Works and Days* there is a reference to his ancestors as coming from an aristocratic family: *δῖον γένος* [299] which can be another reason why his father decided to migrate from Aeolia once he went bankrupt. The family might have felt ashamed from the forced lower status. This is reinforced by Hesiod's statement mentioned above that his father left because he was not rich and lacked wealth. This also supports all those who consider wealth (profits) as determining class structure and is contrary to what many (economic) sociologists, like Max Weber and Karl Polanyi, have argued: that status was affected by non-economic characteristics and it was an objective by itself. By the way, fair wealth accumulation as a human objective is an integral part of the *Works and Days*. Self-sufficiency and avoiding famine are the minimum objectives of any family contemporary to Hesiod.

Birthplace

Hesiod does not mention whether he was born in Askra or migrated with his family from Asia Minor. In *Souda*, a lexicon-encyclopedia of the tenth century CE, there is a reference to Hesiod that he was born in the city of Kyme in Asia Minor and migrated with his father and mother to Askra in his youth.

One might assume that Hesiod was born in Asia Minor because he did not like his village at all; probably because he was comparing it with his childhood years in Asia Minor before the family's bankruptcy. This is a common-sense sentiment for any child. However, this presupposes that he left at an age that he could remember his years in Kyme (five and older). Then, if he could remember, he would have definitely recalled the long sea trip that brought him from Asia Minor to Boeotia, and therefore his trip to Euboea would not have been the first one. If he was old enough to remember his life in Kyme, he might have said something in his writings.

I conclude, therefore, that Hesiod, most probably, was born in Askra or he was brought to Boeotia as an infant. Thus, his dislike of Askra must be related to his family influence and nostalgia which left a better place (Kyme) to come to what Hesiod considered a very poor and backward village (Askra). When I lived in New York in the late 1970s, I met many people from my village⁴, which up to 1960s, looked very much like Hesiod's village. Greeks from that area had migrated in the 1950s or earlier to New York because they were very poor in Greece. Their children, about my age in the 1970s, were born and lived all their lives in New York. They disliked New York. They compared it with their parents' village, which they very rarely, if ever, visited. I was surprised by this reaction, but then I found out that they were raised with their parents' nostalgia for their village.

⁴I will use Hesiod's approach of giving elements of my autobiography to support my interpretations of Hesiod's writings because I consider them very relevant.

However, very few who attempted to permanently return to their parents' villages had failed miserably. This is a different story, but an interesting one on its own.

Lifespan and Death

According to Hesiod, he lived all his life in that small village. He never travelled by the sea, with only once exception to the nearby island of Euboea⁵. In his own words:

I never travelled on a boat in the wider sea,
but only once when I went to Euboea from Avlida

ποτε νηί γ' ἐπέπλων εὐρέα πόντον,
εἰ μὴ ἐς Εὐβοίαν ἐξ Αὐλίδος,
[650-651]

This is not to be interpreted that Hesiod did not travel at all. Most probably Hesiod travelled a lot in the nearby Greek mainland. He should have been a frequent visitor of the nearby important cities of Boeotia, including the nearby city of Thespieae, which was the closest city to his village. Thespieae was also the home of the basileis (kings and judges). Hesiod mentioned basileis so many times in his *Works and Days*. In Thespieae many festivities, artistic and athletic contests took place, of which is referred to by Pausanias. One may then assume that Hesiod participated as a contestant as well as a spectator.

The lifespan of Hesiod's life is also controversial. Most probably, he was born in the latter part of the eighth century BCE and died in the middle of the seventh century BCE. Aristophanes in *frogs* put in Aeschylus' mouth the contributions of the four well known poets in ancient times:

Because people got education from poets
Because from the beginning useful the brave
poets have become.
Orpheus favored festivities and refrain from
killing.
Mousaios taught us about illnesses and
oracles, Hesiod the works on land, the time of
the fruits, the farming; the divine Homer
who knows where he owns his fame and
honor, taught how to set up armed men.

ταῦτα γὰρ ἄνδρας χρηὴ ποιητὰς ἀσκεῖν. σκέψαι γὰρ ἀπ' ἀρχῆς
ὡς ὠφέλιμοι τῶν ποιητῶν οἱ γενναῖοι γεγένηται.
Ὅρφευς μὲν γὰρ τελετὰς θ' ἡμῖν κατέδειξε φόνων τ' ἀπέχεσθαι,
Μουσαῖος δ' ἐξακέσεις τε νόσων καὶ χρησιμούς, Ἡσίοδος δὲ
γῆς ἐργασίας, καρπῶν ὥρας, ἀρότους· ὁ δὲ θεῖος Ὅμηρος
ἀπὸ τοῦ τιμῆν καὶ κλέος ἔσχεν πλὴν τοῦδ' ὅτι χρήστ' ἐδίδαξεν,
τάξεις ἀρετὰς ὀπλίσεις ἀνδρῶν.
[Aristophanes, *Frogs*, 1030-1036]

If the order of the names is an indication of their chronology, then Orpheus was the oldest. Mousaios is next who some considered as either a student and/or son of Orpheus. Aristophanes then mentioned Hesiod which makes him older than Homer. Herodotus dates Hesiod 400 years before his time, or about late ninth century BCE, and a contemporary of Homer. In his *Histories* (II, 53), Herodotus stated:

I think that Hesiod and Homer existed 400 years
before me and no more

Ἡσίοδον γὰρ καὶ Ὅμηρον ἡλικίην τετρακοσίοισι
ἔτεσι δοκέω μευ πρεσβυτέρους γενέσθαι καὶ οὐ
πλέοσι

⁵Hesiod himself stated in the *Works and Days* that the reason of his trip was to participate in a poetry contest where he won the first prize. Pausanias in the second century CE made a reference that this Prize was at display in the mountain of Helicon.

The emphasis of no more, *οὐ πλέον*, might set the earlier limit and leaves it open, even for Herodotus, that both or one of them lived in a later period. As some authors have claimed⁶, Hesiod outperformed Homer in a poetry contest, which allegedly took place during Hesiod's times on the island of Euboea. As stated above, Hesiod mentioned that this was his first and only sea trip, but he does not mention Homer as his competitor in the contest. Alcidas, a fourth century BCE sophist, is cited as the first who mentioned that the contest was between Hesiod and Homer.

There are many stories to his death, but all of these come much later. In the fifth century BCE, Thucydides (3, 96) wrote in a passage that:

Inside the temple of the Nemean Zeus, where as it is said the poet Hesiod died in this city, as it was foretold by the oracle that in Nemea this will happen to him

ἐν τοῦ Διὸς τοῦ Νεμείου τῷ ἱερῷ, ἐν ᾧ Ἡσίοδος ὁ ποιητὴς λέγεται ὑπὸ τῶν ταύτη ἀποθανεῖν, χρησθέν αὐτῷ ἐν Νεμέᾳ τοῦτο παθεῖν,

Thucydides mentioned as “it is said” (*λέγεται*) which can be interpreted that he himself questioned the whole story because he gave no source. Thucydides was committed to write history (truth), not myths and stories that provide pleasure to the masses, but useful knowledge to be used by future generations⁷.

After his death and given his popularity, it was natural that many stories existed about his death. One famous one, for the “masses” of people, was that two brothers killed Hesiod because he corrupted their sister. Pausanias rejects this story because it is against what he believed and stated in his writings.

There were two cities which claimed that Hesiod had been buried. The story that Thucydides mentioned was well known in ancient times. Hesiod was warned by the Delphi Oracle not to visit Nemea in the Peloponnesus because it would be there that he would die. However, as was always with the Delphi Oracle, their verdicts had always more than one interpretation. Hesiod's death occurred in Oenoe of Locris, an area in central Greece where there was a Temple of Nemean Zeus mentioned by Thucydides.

Hesiod's Family

As mentioned above, Hesiod revealed the origin of his family as coming from *δῖον γένος* [299]. This has many interpretations which relate to the genealogy of his family. In the Souda Lexicon of the tenth century CE, there is a reference to Hesiod's family from unknown sources. It is stated that,

Hesiod, from Kyme, young, he was brought up by his father Diou and his mother Pycimedes in Boeotian Askra. It is said in genealogies to be the son of Dios, the son of Apelles, the son of Melanopous, who some say is the grandfather of Homer the founding father, making Hesiod and Homer first cousins and each a descendant of Atlas.

Ἡσίοδος Κυμαῖος νέος δὲ κομισθεὶς ὑπὸ τοῦ πατρὸς Δίου καὶ μητρὸς Πυκιμήδης ἐν Ἄσκρι τῆς Βοιωτίας. γενεαλογεῖται δὲ εἶναι τοῦ Δίου, τοῦ Ἀπελλίδος, τοῦ Μελανώπου, ὃν φασὶ τινες τοῦ Ὀμήρου προπάτορος εἶναι πάππον, ὡς ἀνεμιαδοῦν εἶναι Ἡσιόδου τὸν Ὀμηρον, ἐκάτερον δὲ ἀπὸ τοῦ Ἄτλαντος κατάγεσθαι.

⁶See West (1967) and Uden (2010).

⁷This applied to pandemics as well which Thucydides provided an excellent narrative as I explained in Papanikos (2020) and compared it with the current pandemic of COVID-19.

I have already mentioned that there are many views about Hesiod's birthplace and of his migration to Askra. The above quote traces Hesiod's family origins to the mythical Titans, giving even more kudos to his genealogy, which is reinforced by his alleged relation to Homer.

It can be inferred from Hesiod's writings that his family, once in Askra, was rich with a lot of property because there would be no reason to quarrel with his brother over their inheritance. Hesiod said that he had one brother, but there is no specific reference to other brothers and/or sisters. Most probably he mentioned Perses only because he had the quarrel over their inherited property.

Hesiod never made a clear indication of his own wife and children. Most probably he did have a family, otherwise he would never have preached for a family if he did not have one. He did make a reference to a son in the *Works and Days* [271], but possibly this was a general aphorism about justice and injustice. Hesiod did state the optimal age for a man (around thirty) and woman (four years after puberty) and that the man has the responsibility to teach his wife the proper means of living.

Concluding this section, it is important to state that the many myths which surround Hesiod's life and whereabouts is of great interest to historians and all those who like such stories. However, the most important issue is his education. Hesiod was the first known scholar who wrote a book about three thousand years ago which can be considered as the first didactic economics book. The depth of the concepts developed in the *Works and Days* and the richness of his Greek vocabulary suggest that Hesiod received a very good education along with his indisputable superb talent. His education is examined in the following section of this paper.

Education

Professor Frederick John Teggart (1947, p. 45), whose work was an inspiration for Arnold J. Toynbee, noted that, "Hesiod is the first of European authors: the first poet, the first writer on religious subjects, the first moralist, the first authority on the practice of agriculture"⁸.

I have argued in Papanikos (2022a) that Hesiod should also be considered as the first economist and the first author of an economics textbook. This assumes that he had received a very good education before he started writing his books.

On education, Hesiod made a note that there are three types of people: (a) talented who learn by themselves; (b) good learners who learn from others; and (c) useless who do not learn from anybody. Nobody today will ever dispute the diachronic truth of this motivation to learn. I am sure he believed that he belonged to the first type of learners, but benefited from learning from others.

As is the case with all other aspects of Hesiod's life, little is known about his education. Many scholars of the Hesiodic works refer to him as a poor peasant and

⁸Teggart did not consider Homer a European writer because he was born in Asia Minor. As mentioned, Hesiod might have been born in Asia Minor as well. In this case, even Hesiod cannot be considered a European scholar. However, both can be considered as first world scholars.

shepherd who unexpectedly, daydreaming perhaps, received a message from the nine Muses of Knowledge that he was on a mission to write a cosmogony and his "Erga" (*Works and Days*). However, as Rand (1911, p. 137) rightly wondered more than a century ago, "Indeed, by what right do we call Hesiod a peasant at all? He is at least a cultivated peasant, master of Aeschylean theology and of a highly artificial vocabulary, which I question if Boeotian peasants understood. In the present poem, he is to all appearances, a land-owner, a gentleman farmer. He ploughed, but so did a certain noble in early Roman history. He also wrote poetry, as Cincinnatus did not do."

This solves another riddle of whether he was indeed the author of the *Works and Days*, or he simply put down in writing a long oral tradition of his time. No oral tradition can produce such a masterpiece of using such a rich Greek vocabulary⁹.

Hesiod's invocation to the muses in the beginning of his *Works and Days* can have many interpretations, but one I prefer is the following. Muses were the protectors of educated people, i.e., the protectors of arts and sciences. Education at the time required good memory and the Muses were the daughters of the goddess of Mnemosyne (memory). Reading Hesiod, it becomes very clear that these poems cannot be written or orally produced by someone who is illiterate. It is evident that Hesiod had a very good command of the Greek language and therefore a very good education. Of course, he definitely must have had a very good memory along with a superb imagination to remember or invent so many parables, myths and stories.

Where did he receive such an excellent education? I risk saying that most probably he received his education from his father. Cook (1989, p. 171) was wrong when he stated that, "It may be objected that, if Hesiod had learnt *aoide* from his father, he would have said so; but it would hardly have been relevant information or even perhaps proper, since it is the Muses he credits with his teaching".

Firstly, Hesiod credits the Muses for his talent as is common practice with many people who owe to God whatever talent with which they were born. Secondly, Hesiod would never have mentioned something that is so trivial even for contemporary Greek and many other cultures: families spend time and money for their children's education. It is considered self-evident that the parents provide food, shelter, clothes and teach their children how to speak which Hesiod never mentioned, but he did mention the respect children ought to give their parents. Why? Undoubtedly, because they had raised them and this includes their education. In writing this paper, I owe many things to my mother and father, but I would have never mentioned here if I did not want to make this point. I never put

⁹This reminds me of a personal story. When I held a senior policy making position, I was hiring young excellent students from the best Greek universities to assist us in writing policy-making reports. Of course, there were many reactions as is always the case of any initiative, small or big. In one case, someone accused me that I wrote up the report myself to prove that the young scholars are valuable. Then one of his "colleagues" told him that this was not the case because the Greek in the report were excellent, and that I myself could never write such elegant Greek. He was right. Not anybody could write the *Works and Days*, but someone who was a superb master of the Greek language. Hesiod most probably was such a scholar.

in my acknowledgements thanks to my parents because it is so self-evident. They are always there even if I do not mention them.

Hesiod was living in a small village; therefore, it was unlikely that good pedagogues could be available to teach the young Hesiod to read. I assume that his family had the money to pay for his education because they were (very) rich for the standards of his time, otherwise Hesiod and his brother Perses would never have fought over an inherited property. Even by today's Greek standards, a farmer from Boeotia would be considered rich, actually very rich, if he could employ the labor and capital that Hesiod used in his family business estate at the time. Unlike Solon, born more than a century later in Athens, we learned from Hesiod himself that he never travelled outside of his own little village or area. Solon got his education from travelling, even though his prime motivation was commerce and not so much education. Solon of course was living in cosmopolitan Athens in the 6th Century BCE and not in a remote village of the 8th Century BCE. Even today this distance creates inequalities in education. The question, "who educated Hesiod?" is then easily answered: his father was his teacher, who most probably spoke the Aeolian Greek dialect.

This also solves the puzzle of why in the *Works and Days* some words can be traced to the Aeolian Greek dialect and not in the local Boeotian Greek dialect. Where did he learn the Aeolian words from? Most probably he learned them from his parents. For example, he mentioned the month of January-February not with the Boeotian name, but with the Ionian one, "Μῆνα δὲ Ληναῖωνα" [504]. Only his father could have taught him these words and/or dialect in Askra¹⁰. If his father was coming from a rich/aristocratic family and he travelled for trade purposes, pretty much like Solon had done two centuries later, Hesiod's father would have obtained a good education for the eighth century BCE standards. Being in Askra and having plenty of time in off-season periods, he could teach the young Hesiod everything he knew. And that education was sufficient for such a talented student like Hesiod.

Hesiod's Village Economy

This section provides a descriptive overview and the specific characteristics of Hesiod's village¹¹. Hesiod used the economy of his village as a testing ground of

¹⁰Following my personal New York story already mentioned, I was impressed by the second-generation youngsters whose parents came from my Greek village who used words which are used locally in my area and how well they kept our local village dialect which includes a characteristic accent, i.e., all central mountainous Greeks still today speak with an accent which does not pronounce the vowels between two consonants. From the accent, even today, you can tell which area of Greece someone is coming from. Of course, this is true for any part of the world that speaks the same language, but with a different accent or even words, which is what defines a dialect.

¹¹Many compare Hesiod's economy with any contemporary economy and conclude either that the ancient economy was similar or different in which case a different model is not needed. However, the comparison must be made between Hesiod's economy and today's economy of his village, or at least of the economy of the mid-twentieth century CE. I have discussed this issue in Papanikos (2022a).

his economic theories. A brief introductory outline of this economy is provided here.

The geography of Askra is very important. It belongs to the prefecture of Boeotia and even today has less than one thousand people. It is located in the south slope of the mountain Helicon in the Valley of Muses to which Hesiod refers. The village has its own myth which is eloquently presented by the second century CE traveler Pausanias. The eighth of his ten travel reports of Greece are devoted to Boeotia where he explicitly mentions Hesiod's village Askra. The village was well known due to Hesiod's legacy even though one millennium had passed. Contrary to what Hesiod described in his *Works and Days*, Pausanias described the area as being very fertile with trees and bushes which were excellent to feed goats.

From all Greek mountains, Helicon is the most fertile full of fruitfully trees; and the bushes of *andraxnou* provide the goats with the sweetest fruit

ὁ δὲ Ἑλικὸν ὄρων τῶν ἐν τῇ Ἑλλάδι ἐν τοῖς μάλιστα
ἐστὶν εὐγεῶς καὶ δένδρων ἡμέρων ἀνάπλεως· καὶ οἱ
τῆς ἀνδράχου θάμνοι παρέχονται τῶν πανταχοῦ
καρπὸν αἰζῖν ἥδιστον
[Pausanias, *Boiotika*, 28.1]

Given that the same location is still fertile and produces many agricultural products, I agree with Pausanias' description that the area was rich and the land fertile which now makes perfect economic sense why Hesiod's father had chosen the area. In Pausanias words, "from all Greek mountains," Hesiod's father chose to invest in the most productive and not barren land. This makes perfect economic sense and most probably the land was not, relatively speaking, cheap. Following this note, Pausanias gives the story (myth) about Askra and its relation to the Muses. Also, he makes a note that at the time he visited the village, second century CE, there was a castle and nothing else worth mentioning.

In Askra there was a castle I saw and nothing else important that I can bring in my mind

Ἄσκρις μὲν δὴ πύργος εἶς ἐπ' ἐμοῦ καὶ ἄλλο οὐδὲν
ἐλείπετο ἐς μνήμην
[Pausanias, *Boiotika*, 29.2]

Of course, there were other archaic villages and cities that were much richer than Askra. No population statistics exist and Hesiod gave no numbers. Things became worse for the historian because the town was destroyed by a war and the surviving people were forced to move to the nearby city of Orchomenos. Archaeological evidence is limited and does not provide any significant evidence. I guess that the people of Askra were no more than two thousand at the maximum, a typical population for a mountainous Greek village even in modern times.

The transportation and communication infrastructure were not well developed and remained like this up to the mid of the last century. It is common sense to assume that the transportation and communication infrastructure of the eighth century BCE was no better than the ninth century CE infrastructure. An assumption I make is that it remained the same because people used the same transportation and communication means as that of Hesiod. They also used the same tools for cultivating the land.

The life of Hesiod extends over the beginning of the archaic years; between eighth and seventh centuries BCE. If it is assumed that he was born in the eighth

century BCE, then definitely, within this period, Hesiod had lived and had co-existed with other people from whom he learned the living condition of the ninth century BCE, which is the period coinciding with the end of the Dark Ages in Greece¹². Thus, Hesiod knew because he could have heard much of the ninth century BCE from his fellow villagers. This is important because Hesiod most probably lived in a transition period from a self-sufficient economy of the early ninth century BCE to the beginning of a new era of greater division of labor and seafaring. This greater division of labor was depicted in Table 1 of Papanikos (2022a).

For the population size and the transportation infrastructure of this small village, there was a surprisingly large division of labor and diversification of production. Askra's economy depended upon agriculture (wheat, grapes-raisins, honey, etc.), forestry (timber for building houses and ships), stockraising (sheep, goats, oxen and donkeys), many artisans, but especially coppersmiths who had their own shops which were also used as gathering places like the modern café in Greek villages, or the barbershops in classical Athens, a textile and apparel production (clothes and shoes), and artists (singers, instrument players and various performers). Most probably Hesiod himself was making money as a rhapsodist, but he never mentioned this.

As in many Greek villages today¹³, people were most likely holding many jobs, and to a certain extent, they were making their own clothes and food which characterize a self-sufficient economy at the level of the family business or estate like the one described in *Works and Days* and not at the level of each individual. Production took place using various types of labor and servants, different types of capital and equipment, and of course land and storage rooms.

In sum, Hesiod's village was a typical village of the entire Greek mountainous mainland, which is located far from the sea. The economic life is clearly described by Hesiod's *Works and Days* which does not differ much from similar villages up to the mid-twentieth century CE.

During my youth, we did not have electricity in my village and our household was living close to a subsistence level. The old people of my villages were telling stories about their economic situations similar to what Hesiod described in his *Works and Days*. Thus, we can make a strong assumption that Hesiod's economic analysis is based on fundamental facts he observed in his village economy.

Hesiod had the talent of a great economist; he developed good economic analyses and then tested the derived hypotheses (conclusions), using the data generation process which was at his fingertips: the economic reality of his village. I believe that Hesiod developed a general theoretical conceptual framework, which included important axioms of human behavior which were excellently decorated (masked) by metaphysical reasoning such as his cosmogony, which in *Works and Days*, takes the concrete shape of a theoretical economic analysis. Hesiod does not provide an economic analysis for his village economy, but for the economies of all

¹²In my village of the mid-twentieth century CE there were people who remembered stories from their grandfathers of the 1821 Greek War of Independence. These people were wearing the same clothes: fustanella, as the 19th century Greeks did in small villages.

¹³In Papadopoulos and Papanikos (2005), the employment alternatives of vinegrowers were examined.

villages and cities. Most probably he considered his village a typical one that permitted him to make generalizations for the entire humanity and societies.

Hesiod's Writings

Works and Days is considered as the most authentic book from all Hesiod's writings even though many consider that some verses were added by others in the long history of the text. Pausanias' work on *Boiotika*, written in the latter part of the second century CE, wrote:

Boeotians who live close to Helicon refer to the tradition that Hesiod did not write anything else, but the *Works and Days* and from this they removed the preamble about the muses claiming that the poem started with the Strives; they showed me the poem written on a lead, close to the area of the spring, but they were worn out because of time.

Βοιωτῶν δὲ οἱ περὶ τὸν Ἑλικῶνα οἰκοῦντες
παρειλημμένα δόξη λέγουσιν ὡς ἄλλο Ἡσίοδος
ποιήσειεν οὐδὲν ἢ τὰ Ἔργα: καὶ τούτων δὲ τὸ ἐς τὰς
Μούσας ἀφαιροῦσι προοίμιον, ἀρχὴν τῆς ποιήσεως
εἶναι τὸ ἐς τὰς Ἐριδας λέγοντες: καὶ μοι μολυβδὸν
ἐδείκνυσαν, ἐνθα ἢ πηγῇ, τὰ πολλὰ ὑπὸ τοῦ χρόνου
λελυμασμένον.

[Pausanias, *Boiotika*, 31.4]

However, even Pausanias himself stated that there is another opinion that Hesiod wrote many other books. The tenth century CE Souda lexicon mentioned a number of books written by Hesiod.

Theogony, Works and Days, Shield, Catalogue of Female Heroines in five books, Dirge for a certain Batrachus, his lover, Concerning the Idaean Dactyls, and many others.

Θεογονία, Ἔργα καὶ Ἡμέραι, Ἀσπίς, Γυναικῶν
ἡρωϊνῶν κατάλογος ἐν βιβλίῳ ε', Ἐπικήδειον εἰς
Βάτραχόν τινα, ἐρώμενον αὐτοῦ, περὶ τῶν Ἰδαίων
Δακτύλων, καὶ ἄλλα πολλά.

Many controversies exist about the authorship of these books. What is important for my work here is not who wrote the books, but the fact that one of them is an economics textbook written close to 3,000 years ago. Hesiod has been credited as the author of many books; more than ten. However, the most important ones are *Works and Days* and *Theogony*. Hesiod's cosmogony, the creation of the world, is outlined in *Theogony*, but is of little interest for my economic analysis of Hesiod's work, even though I use it. *Works and Days* is the grand work which is the focus of this paper here. I present the structure of this book in detail in the next section, but one should always keep in mind, as I have already mentioned many times above, that all the controversies surrounding Hesiod's works are irrelevant to my arguments here. However, in what it follows, I mention some of them.

In the relevant literature of the *Works and Days* the date can be established with some certainty. If the poem was continuously revised, as might have been the case within the long oral tradition, then one might argue that the poem's time coincided with the adult life of Hesiod. Even the story of the prize won in Euboea might be a late addition by Hesiod himself. Thus, one cannot say with certainty that Hesiod did not recite some early versions of *Works and Days* itself and then added new verses to show that he won the prize. In other words, the argument that he recited verses from *Theogony* may not be so strong even though it still is quite probable.

The great majority of researchers of Hesiod's works consider him as contributing to many disciplines, but very few to economics literature, albeit, as shown in Papanikos (2022a), some economic historians and historians of economic thought did mention him as one of the contributors. For example, some have observed in Hesiod's works elements of political philosophy (Bartlett [2006]); religion (Beall [2004]); morality and justice (Claus [1977]); Teggart [1947]); didactic poetry (Heath [1985]); education (Papastephanou [2008]) and an agricultural manual (Nelson [1996]).

In my work here, I consider *Works and Days* as being an economics textbook. In the next section of this paper, I present the structure of the *Works and Days* as an economics textbook.

Works and Days: An Economics Textbook

The debate over the authorship of *Works and Days* is irrelevant to our discussion here. *Work and Days* exists and has been used to teach (educate) students throughout the centuries. This will not change if Hesiod (a) wrote the book or not; (b) copied an oral tradition or was an original work of his own; (c) his brother or even himself existed or not; (d) lived in the ninth, eighth or seventh century BCE; (e) born and died in a specific place.

All these have a great historical interest and justifies why so many papers and books have been written on these subjects, but themselves have little or no economic interest. Actually, the economics textbook argument made here is reinforced if the *Works and Days* was the received economics view of the eighth century BCE, which someone had put down in a written form. This is exactly what a good textbook should do and *Work and Days* is a very good textbook of economics.

Works and Days is written as a poem of 828 verses or about 6,000 words, a relatively small book. If it was written today in prose, it would have been a very good academic paper or concise student notes of a thirteen-week lectures. At the time, it was used for teaching. This is the reason Hesiod's work is called didactic poetry. It is a masterpiece in the world of literature, but also a masterpiece in the world's economics literature and first known textbook of economics. The influence of the book was tremendous and its legacy survived into our modern world. Even comic writers like Aristophanes summarized Hesiod's book very precisely in one-and-a-half verses by emphasizing its economic (productive) aspect:

Hesiod though
the works on land, the best season for fruits, and
farming

Ἡσίοδος δὲ
γῆς ἐργασίας, καρπῶν ὥρας, ἀρότους
[Aristophanes, *Frogs*, 1033-1034]

The knowledge extracted from the *Works and Days* can be classified as an economic analysis at a textbook level. Contemporary economic textbooks use axioms, theories, metaphors and parables to teach the principles of economic analysis. This paper argues that Hesiod's book was the first to use the same

didactic tools and methods to teach applied economics and business analysis. Given that the basic economic problems are diachronic, the same issues were analyzed in Hesiod's work as in contemporary, introductory economic textbooks.

Another way of viewing Hesiod's *Works and Days* is as an eloquent study of an annual and monthly time allocation of human economic activities constrained by natural (includes geography and climate) and ethical principles. In economic jargon, Hesiod's book looks at the allocation of scarce human resources to maximize a utility function which has many elements, but the most important one is the accumulation of wealth (profits) subject to the constraints imposed by nature and social values (ethics).

In this section, I present the structure of the book as has been preserved for almost three millenniums. My suggested structure here will make the book more attractive to my fellow economists even though it is not the best way of presenting the book from an economist's point of view. This should be considered as the first step of presenting *Works and Days* for the benefit of economists.

In this section, I organize *Works and Days* into twenty chapters, keeping the sequence of the text as in the original. All the chapters have an important economic meaning or concept as indicated by the titles I gave to them. Lekatsas' adaptation of the *Works and Days* to contemporary Greek language has organized the work into eleven chapters or sections which is a very useful way of presenting the material of the text, but it was not an economic one. West's English translation in 1988 of the *Works and Days* is done in prose without any segmentation, following a similar approach by Mair's translation of *Works and Days* in 1908.

I have divided *Work and Days* into twenty "chapters" and titled each one of them according to their economic meaning and included concepts. These chapters are the following:

1. Introduction [1-2]
2. The Uncertainty of Life [3-10]
3. Fair and Unfair Economic Competition [11-33]
4. The Economic Corruption of the Executive and Judiciary [33-41]
5. Scarcity [42-46]
6. The Metaphysical Explanation of Scarcity [47-53]
7. A Theory of Economic History [105-201]
8. Justice, Peace and Economic Growth [202-285]
9. Work and Individual Economic Prosperity [286-320]
10. Wealth Creation (Accumulation) and Ethics [321-341]
11. The Micro-Environment of Family Business [342-375]
12. Family Business and Inheritance [376-380]
13. The Annual Production Process of the Family Farm Business I [381-535]
14. The Production of Clothes [536-563]
15. The Annual Production Process of the Family Farm Business II [564-581]
16. Leisure Time [582-596]
17. The Annual Production Process of the Family Farm Business III [597-617]
18. The Economics of Seafaring [618-694]
19. The Economics of Family, Friendship and Social Behavior [695-764]

20. A Monthly Economic Calendar of Works and Social Activities [765-828]

The rest of this section provides a summary of the twenty chapters of Hesiod's works. For brevity, and to avoid unnecessary repetitions, I do not cite the exact verses of Hesiod's textbook.

My approach here is to make some indicative comparisons of Hesiod's chapters with contemporary textbook approaches to economics. I refrain from citing the obvious textbook correspondence between Hesiod and any microeconomics or macroeconomics textbook. I use economic jargon because this is the only language most economists understand. Unfortunately, many economists not only do not speak other than their mother tongue, but they do not understand their own language vocabulary if it is not written using words from their own economic jargon. To make it appealing to the "masses" of economists, I ornate it with stories and thoughts that relate to well-known economists and my own personal interpretations in reading them.

Introduction [1-2]

The introduction of *Works and Days* is only two verses or 0.2415% of the total 828 verses of Hesiod's book. It is less than 0.2% if we count only words. Just as a comparison, John Maynard Keynes' introduction to his *General Theory* was 0.25% of his total book pages. Hesiod, made an invocation to Muses (knowledge) in his introduction, which is similar to Keynes who made an invocation to the received view of economic knowledge; the so-called classical economics which, according to Keynes, included economists' "muses" of Adam Smith, David Ricardo, James Mill, John Stuart Mill, Alfred Marshall, Francis Ysidro Edgeworth and Arthur Cecil Pigou. If he had added two more, we would have the nine Muses cited by Hesiod.

Luckily for all of us, Keynes left the list open because these names were given as notable examples of the economic "Muses" of his time. I am sure he could add a couple more, if he had the divine providence and the knowledge(?) of its similarity with Hesiod's work. Of course, if I was forced to choose, I would have preferred Hesiod's Muses, but this is a matter of semantics and aesthetics; both characteristics, however, do not enter into the economists' decision-making process or choices of theories. Definitely, Keynes' aesthetics of beauty differ from mine, but who am I to compare with anything that Keynes preferred? I met many economists to whom Keynes was the modern titan of economic theory and policy, and it was almost a sin to question the dictums of the master. Of course, nothing compared with the followers of Marx's "religion".

Hesiod was well aware that the Muses were not always telling the truth and begged for their help because he knew that they could deceive him. On the other hand, Keynes did not have such a problem. He was confident that his "Muses" were not telling the truth and it was his destiny to reveal the truth. There is a difference though: Hesiod's Muses knew the truth, but they could choose to deceive humans. Keynes' Muses were innocent and not deceitful; they thought they were telling the economic truth. Thus, it was left up to Keynes to reveal to

them and to all of us how naïve they were in believing in a “classical”¹⁴ world. The fact that very few economists at the time believed in what Keynes wrote that they believed is not of great importance.

As for myself, I feel very comfortable with both: the Hesiodic and the Keynesian myths, but Hesiod's is much more interesting. After all, to deal with nine beautiful, knowledgeable and ageless (immortal) women is much better for me than to deal with the classical and non-classical all-male economists. Again, it is a matter of individual preferences and as an economist I exercise my right (privilege) of the “freedom to choose”.

The Uncertainty of Life [3-10]

Hesiod's next eight lines show the uncertainty of life. Keynes was aware of that especially when he used such categories as the “animal spirits” of investors, but it was Knight (1921) who offered one of the best economic analyses which linked risk, uncertainty and profits. In his 1957 introduction on the occasion of the reprint of the book he wrote, “In particular, no more elaborate theory of uncertainty would be offered. That would require a treatise on science and epistemology. It is still my conviction that contingency or ‘chance’ is an unanalyzable fact of nature” (p. lx). And on page 368 he wrote that, “Clearly there are limits to the terms on which the members of society are to be allowed to take chances.” Once something becomes “unanalyzable,” we can only rely on metaphysics. Hesiod provided a good one: Gods make the contingencies or “chances” of humans. Hesiod analyzed the “unanalyzable fact of nature”. Knight would have benefited if he used Hesiod's work, and as a result all of us would have been much better off in economic analyses.

In the second chapter of his book, Hesiod sets the contingencies of the human being described by Knight. We do not know the chances and we are facing uncertainty, but we do know that as the great Albert Einstein once said, “God does not play dice with the universe,” which I interpret to mean that despite that there is uncertainty, it is up to us to discover the laws of nature as Hesiod explained in chapter seven of his book, *Works and Days*. I think Knight would have been better off if he had adopted Hesiod's metaphysical explanation of only eight lines instead of writing so many pages explaining the nature of uncertainty and the limitations of human knowledge—especially from Knight's chapter seven when he discusses the meaning of risk and uncertainty, Hesiod did it better.

Hesiod was the first to offer the much-needed metaphysical explanation of uncertainty and the role of chance. Gods may decide who is going to be rich or poor; who is going to be happy or miserable; who is going to be sick or healthy. However, Gods do not operate in a vacuum. All the good things in life can be achieved and all the bad things can be avoided if human beings work because this is what Gods want them to do, or at least this is how Hesiod wanted Gods to behave. Hesiod emphasized that all humans are mortal (βροτοί), important (φρατοί)

¹⁴It is so unfortunate that Keynes chose this word to describe the model that was against it and so eloquently discussed in chapter two of his *General Theory*. Most probably he did so out of respect and generosity that some Englishmen have, especially whenever it is convenient for them.

and unimportant (ἄφατοί), famous (ῥητοί) and unknown (ἄρητοί) because this is what the great Zeus has decided. It is Gods that empower (βριάζει) someone and easily the powerful (βριάζοντα) destroys; easily the eminent (ἀρίζηλον) diminishes and the obscure (ἄδηλον) pushes up; easily corrects any unfairness (ἰθύνει σκολιὸν) and abases the snob (ἀγήνορα).

However, there is a very serious epistemological problem with this excellent metaphysical Hesiodic analysis which leads to a number of important verifiable (testable) hypotheses. For example, if someone is important or not important, can we infer that this is the Gods' will? Or maybe the Gods do not always do it right. It seems to me that Hesiod had some doubts that Zeus will do his job in his economic difference with his brother, Perses. This is the reason Hesiod called on Zeus to show the necessary care (perhaps sometimes Zeus was careless) so that he would receive a fair trial. Somehow, he thought that there was a human-created (non-divine) chance. Hesiod emphasized the uncertainty of life as being determined by chance (Gods) and offered this as a warning to his brother Perses and to basileis (kings and judges). His doubts about Zeus have a very sound economic foundation. Zeus is the one who had made the bad and good; in particular, the economic quarrel between men. Thus, as a good practical businessman, Hesiod wrote up the *Works and Days* to show to basileis and Perses that they have a personal interest to engage in fair competition in pursuing material goods¹⁵. This is the subject of his next chapter.

Fair and Unfair Economic Competition [11-26]

Any (micro) economics textbook has a theory of competition. No economist can avoid the long lectures on perfect competition, monopolistic competition, oligopolistic competition and monopolies. Hesiod's economic book is no exception. Hesiod makes it known from the beginning of his third chapter that there are two types of competition, he calls them strives¹⁶—one is bad and the other good, but both co-existed. Today's economists discuss the issue of bad strive (e.g., government intervention, economic rents, bribery, etc.) and the good strive under the label of perfect competition and free markets under the protection of good institutions (meaning ruling and judging), similar to what Hesiod was arguing 3,000 years ago.

Fair competition is exactly what any economics textbook analyzes, mainly under the chapters on perfect competition. In Hesiod's times there are no legal business companies, but individual producers who compete between each other. Most probably the market looks very much like the perfect competitive model

¹⁵A shrewd economist will notice that this phraseology looks very much like Adam Smith's *Wealth of Nations* and his famous butcher story. Actually, it is. Hesiod, in his *Works and Days*, uses morality and ethics (like Adam Smith, he can be considered a moral philosopher), but at the same time he knows that this is not sufficient and therefore he developed his economic argument of self-interest throughout his book.

¹⁶Baumol et al. (1982) called them a "contestable" market which is a subcategory of the general idea of competitive markets. I prefer Hesiod's phraseology, but this is a matter of personal preference, and of course the knowledge that some things can be called by many different names. Economists are lost if "marginal" is substituted by the word "additional" or Hesiod's beautiful word, ἐπιθήκη.

with very few adaptations; prices were determined by demand and supply, which might be what Hesiod called fair price.

In this chapter, Hesiod gave examples of good competition between the various economic professions of his time including his own of rhapsodists (ᾠοῖδοι). Hesiod considered this competition good for the society as long as justice and peace prevails. However, this cannot be achieved when the archons (kings and judges) and members of his and his brother Perses' upper-class are corrupted. This is discussed in the next chapter of his book.

Contemporary economists, starting with Adam Smith, use exactly the same phraseology and distinctions. The historian of economic thought, who I mentioned in Papanikos (2022a), made a similar argument which is supported by Adam Smith's definition of perfect competition. Stigler (1957, p. 1), in his paper entitled *Perfect Competition, Historically Contemplated*, wrote, "'Competition' entered economics from a common discourse, and for long it connoted *only the independent rivalry of two or more persons*" (italics added).

This is exactly what Hesiod meant by fair competition of his time, i.e., the competition of two or more people that supply the same good (e.g., a builder) or services (e.g., a singer). In the 8th Century BCE, if not before, there were good and bad builders or good and bad singers as they exist today. Of course, they command a different price (wage).

Hesiod made another contribution by connecting the unfair competition to war. West, in his English translation of Hesiod's *Works and Days*, translates the Greek word "πόλεμον" as fight, but the correct one is "war". Hesiod himself used the same word to describe the war of the Seven against Thebes. If I interpret correctly what Hesiod stated in this chapter, then unfair competition leads to wars, and this does not exclude civil wars as Hesiod explained in his chapter of economic history. With the exception of very few economics textbooks, most fail to relate unfair competition to wars. For example, David Ricardo took wars as given and never related them to unfair competition. Ricardo (1817, p. 176) wrote that, "The commencement of war after a long peace, or of peace after a long war, generally produces considerable distress in trade."

However, many economists would reverse the causality. Distress in trade brings wars! Hesiod was the first to make this connection. Later Marx and Marxian economists considered wars as the natural outcome of the economic competition between imperialist countries instigated by their national capitalist classes. Hesiod, however, pointed out that this relation between war and competition seems to be a natural outcome of human (economic) behavior when justice does not prevail. I should add that there is not isopoliteia, even between democracies as I explained in Papanikos (2022d, 2022e). In any case, I will accept Hesiod's explanation.

Economic Corruption [33-41]

As I have demonstrated in Papanikos (2014, 2015), corruption is an economic issue which has been thoroughly analyzed in the contemporary economics literature; especially the economic growth literature. Even though the evidence is inconclusive, there is a wide acceptance that corruption is negatively related to economic growth—so also thought and argued Hesiod 3,000 years ago.

In Hesiod's times, *basileis* (kings and jurors) were the archons who controlled the executive and the judiciary powers. They were responsible to judge economic and other differences between citizens. Hesiod called them wise when he appealed to them to listen to his side of the difference with his brother, but he also characterized them with the beautiful noun, "gift-eaters" (*δωροφάγους*).

The literature on corruption is huge and I am not going to discuss it here. It seems to me that the same characterization applies to today's Greek politicians and judges¹⁷, as well as to many non-Greeks. Unfortunately, Hesiod's work has had no impact on them. They still remain gift-eaters (*δωροφάγοι*).

There are two types of corruption. Hesiod mentioned both: the economic corruption when members of the upper class, like Perses, think about stealing other people's property and valuables; and the ethical deterioration of values, of trust, of solidarity between people, especially those who live next to each other and those between relatives. These types of corruption are determined by formal institutions (judiciary) and by informal institutions such as culture and the level of civilization. Hesiod's views on this important subject can be found everywhere in his work.

Contemporary economic research has looked at the role of culture and formal institutions. In a survey of this literature, Alesina and Giuliano (2015) have looked at the relation between culture (values of people) and formal institutions. Many factors determine culture and formal institutions such as geography, technology, epidemics, wars and historical shocks. Hesiod's should be considered as a pioneer in emphasizing these factors and the role of culture and formal institutions on the economic progress of society.

In this chapter, Hesiod scorned his brother that his attitude (culture) towards going after his and other people's properties had no future. In nine lines he used so many economic words that are of great interest. He told his brother that he must first solve his own individual economic problem and when he reached what economists have called his "bliss point" (*κορεσσάμενος*), only then can he start debates for foreign property (*κτήμασ' ἐπ' ἄλλοτρίοις*). He would not have a second chance because, as explained below, he had a bad reputation of snatching other people's property by bribing the archons. If only he knew that an increase in such wealth does not bring happiness.

It is obvious and becomes clearer below, that in this chapter Hesiod, as contemporary economists do, paid great attention to the culture (values) of his brother and the corruption of formal institutions (judiciary).

¹⁷One economic aspect of corruption is tax evasion which is as old as the written history itself. Solon's tax reforms not only aimed at fairness, but to reduce corruption. I have discussed this issue in Papanikos (2015) and in more detail in my book Papanikos (2014).

Scarcity [42-46]

This important contribution of Hesiod on scarcity is examined in detail in Papanikos (2022c) and I will not discuss it here with the detail it deserves. I think this is the greatest contribution of Hesiod's economic analysis. He defined scarcity with a superb example. He stated that if scarcity did not exist, then one can work one day and satisfy the material needs of an entire year. Also, in other parts of Hesiod's works, we find the issue of scarcity to reappear many times.

Many economics textbooks start their justification of the need to "economize" (Hesiod used the word *φειδώ*), in other words a need for economic analysis. Hesiod was the first economist to define economics this way. However, he did not do only that, he did something more. No economics textbook provides an explanation why scarcity exists. Why, for example, can't one and only one apple tree produce all the apples, apple juice and apple pies that ten billion people would eat and feel fully satisfied, or as Hesiod would put it, "κορεσόμενοι"? Why?

No economics textbook has provided an answer, but they take it as given. Hesiod provided a metaphysical explanation of the unexplained phenomenon of scarcity, but his analysis can be used to distill an important dynamic (diachronic evolution) trend of the scarcity problem. Both are examined in detail in Papanikos (2022c), but a sketch is given below.

The Metaphysical Explanation of Scarcity [47-53]

Hesiod wrote a beautiful myth on the scarcity issue similar to Paradise, but with a much more interesting scenario. Contrary to the story of a lost Paradise, Hesiod's myth is an economic one. Hesiod's story is full of contradictions and logical gaps. Economists, however, are used to such analyses anyway¹⁸. Hesiod's story develops as follows.

Firstly, the human race was living in abundance. Secondly, and for some unexplained reason, Gods took away the technology of fire from the human race¹⁹. Next, Prometheus²⁰ stole the fire from Gods. Following this, the Gods got angry,

¹⁸I consider the story of perfect competition as the best of all stories told by economists. The problem is that many of them believe that it is not a yardstick, but it represents some reality. In my first year of studying economics, I was exposed to the perfect competition model: an excellent myth of how the economy should work. However, as in all good myths, I found some logical gaps. For example, I asked my teacher, since all firms are homogeneous and so many, when the price goes down which firms will drop out of the market since reducing quantities was not an option with the given cost structure. Or why profits generated in the short run when the $MC > AC$ goes to capital. All myths have contradictions and logical gaps.

¹⁹The explanation given in *Theogony* [535-560] is not sufficient because it presupposes that the human race was facing scarcity. For example, there would have been no need for Prometheus to cheat Zeus and save on the sacrificed meat if all goods were in abundance. This gap does not reduce the beauty of the myth. As an economist, I would say let us assume the gaps away and continue with the story because there is a moral (nice conclusion) at the end. It would not be the first nor the last to assume logical problems away from the nice myths, which economists have developed the last two-three centuries.

²⁰The etymology of the word "Prometheus" is of economic interest. It can be translated as "foreteller" or "foreseer", but the one I prefer is "forlearner", i.e., learn before you do something

very angry with Prometheus. However, for some unexplained reason, they decided not only to punish Prometheus, but the entire human race. After all, Plato (in his *Symposium* for example) was right to have his doubts about the morality and ethics of Hesiod's Gods. They looked too much like human beings to Plato. Sometimes, they behaved like "monsters" and "animals," not like Gods. The story continues with the Gods deciding to create a beautiful woman, and here the story becomes very salable (sexy) to the masses. Zeus asked all Gods to contribute with gifts "δῶρον" and all (παν in Greek) the Gods gave many gifts (δώρα), and for this reason she was named Pandora ("all-gifts"). Now these gifts included the beauty of appearance (to make men tremble with lust as Hesiod stated; I guess women's lust was left out until Sappho's time one century later). The wickedness of her soul was also a gift given by Gods to punish all men (I repeat: not women). Something that puzzled me in this myth is that Zeus asked the Goddess Athena to teach her various professions (I translate the word ἔργα as professions); particularly how to weave the loom. I could not find any logical interpretation of why a woman whose purpose was to play a role of a "bombshell" needed to know how to be productive. My only explanation is that Hesiod was a great economist and all his analysis had an economic justification. He wanted to give a productive role to women and this was in the production of textile and apparel. Pandora was then not sent to Prometheus, but to his brother, Epimetheus, i.e., the one who learned by making mistakes assuming that it was not too late. Epimetheus was so "stupid", as most men are when they see beautiful (sexy) women, that he had forgotten what his brother, Prometheus, told him which was not to accept any presents from Gods. Next, and so far so good, with Pandora came a jar (and not a box as Erasmus translated it) full of all possible sufferings: scarcity of goods, diseases and so many other things. However, the jar had a lid which Pandora opened and all the bad things hit the human race. However, Pandora was smart enough to put the lid back on and close the jar. I assume that the poor woman did not know what was inside the jar. Hope was left inside; the only good thing left for the human race. Hope relates to technology because the human race hopes to find solutions to its problems by inventing new technologies which will be brought by Prometheus, assuming that he is not bounded. Many political systems have sought to bound Prometheus throughout history.

Needless to say, the beauty of the myth attracted a global interest of artists and writers, which I am not going to review here. My favorite question is the following: Is it Pandora's fault or Epimetheus' stupidity that the human race is faced with scarcity and epidemics? Why would Pandora put the lid back and kept hope inside? Was it Gods' will or her own smartness (as a result she was forced to be one of the humans)?

My own interpretation is that scarcity cannot be explained by non-metaphysical means. Remember my curiosity of why an apple tree does not produce apples for 10 billion people but only for few, and only after applying very hard human labor. However, the myth of Prometheus shows how the human race

from "pro" and "metheus" which might be the root of "method" or "learn" (μαθαίνω). An interesting coincidence is that in Modern Greek the noun "prometheia" means, "when I buy food in advance", i.e., before my need to eat.

can revolutionize the means by which the scarcity problem is diminished and hope that technology one day will eliminate it. That day many good²¹ things will happen, including that there will be no need to learn economics. I guess the Nobel Prize for Economics will be abolished as well.

Hesiod himself was most likely not satisfied with this beautiful myth to explain scarcity and so he developed a new one by opening up a new chapter which is his theory of economic history.

A Theory of Economic History [105-201]

This chapter is the second largest of the book. Hesiod develops his theory of economic history. As many writers after him did (Marx was one of them), Hesiod looked at the historical human development (he calls them races) as going through different historical periods. These periods have economic characteristics and the use of metals and technology is the most important one. After scarcity, I consider Hesiod's theory of economic history or human development as his most important contribution to economic analysis, and I have examined it with all the deserved detail in Papanikos (2022b).

Justice, Peace and Economic Growth [202-285]

Economic analysis has expanded to analyze many issues which are not in the strict sense economics. I have already mentioned the institutions and culture. Many studies have related justice and peace to economic growth. So did Hesiod in chapter eight of *Works and Days*. The chapter opened up with a new parable, but this time the aim was at the archons (kings and judges). Hesiod considered justice and peace (stability and absence of wars that kills the youth) as the most important determinants of economic progress and growth. Justice makes the city prosper (τέθηλε πόλις) and its people to bloom (λαοὶ δ' ἀνθεῦσιν). Hesiod uses here two verbs that relate to production, and to make sure that this intention was understood, he made it explicit in this chapter in a few lines below.

According to Hesiod, in a city with peace and justice there is no starvation (λιμός) because there is high production (πολὸν βίον) such as wheat (ζείδωρος²²), meat (ῥίεζ), fleece (μαλλοῖς), honey (μελίσσας). Generally speaking, in this city the products grow forever (θάλλουσιν δ' ἀγαθοῖσι διαμπερές). Now economists are exhilarated in citing Amartya Sen's "proverb" that starvation, or to use his own word, famines, do not happen in democracy, assuming that in a democracy there is

²¹Many learned economists might relate this to another masterpiece written by Aristophanes in 408 BCE and then revised in 388 BCE, entitled "Wealth" or *Plutus* in Greek. Even this relates mostly to the distribution of wealth, as the story goes that the blind God Plutus finally sees and reconsiders where to go. All become rich, but this does not solve the problems of the human race. Some people's utilities are reduced. The equal distribution of Plutus did not result in a Pareto improvement. Some people became worse off including the old rich lady who received sexual pleasure from her young lover. The lover did it for money. Once Plutus touched him, he became wealthy and he did not have to sexually please old ladies for money. What unthinkable things happened in ancient Athens in the 5th-4th centuries BCE.

²²Actually, the word means "gifts of living", i.e., means of living.

justice and peace. I will not condemn Sen for plagiarism, but of ignorance of not knowing that Hesiod said that 3,000 years ago. Of course, Hesiod said it better by generalizing it. It is not democracy per se which does not produce a famine, but justice and peace. Many countries, which hardly can be considered democracies according to the five criteria of democracy as have been analyzed in Papanikos (2022d), have not faced famine, but there was peace and some sort of justice.

Many writers have claimed that in ancient times there was no concept of total economy and therefore economic growth. I think they should read Hesiod carefully. Hesiod talked about the economic growth of his city, which at the time was a state, the so-called city-state. He also defined economic growth as the continuing (uninterrupted) increase in aggregate domestic product (θάλλουσιν δ' ἀγαθοῖσι διαμπερές). Finally, when the economy is booming, so does the population. It increases and this of course brings happiness.

Let me further explain the meaning of the three words because not all are economic terms, but Hesiod used these terms for his economic analysis of growth. First the verb *θάλλουσιν* (*θάλλω*) means grow, either for tress or societies. In *Works and Days*, the word is used to describe humans (or cities as explicitly stated by Hesiod), who prosper, thrive and are happy. The meaning of the word *ἀγαθοῖσι* is the same in modern Greek and of course in English. It means “goods”—not in the abstract, but economic goods which are produced with hard labor (toil) as so eloquently described by Hesiod. The last word of *διαμπερές* is the most important one because it relates to economic cycles or to the idea of uninterrupted economic growth. It relates to a time period, like the word *diachronically*. The word *δια* has the same meaning as the word *dia*. On the other hand, *περές*, has the meaning “until the end”. However, the English translation is, “uninterrupted growth of goods,” which is achieved by justice and peace.

In conclusion, Hesiod had an explicit theory for economic growth. It took economists thousands of years to come up with the same definition of economic growth as the one Hesiod gave. However, Hesiod did not only explain total economic prosperity, but individual prosperity as well, which is discussed in the next chapter of his book.

Work and Individual Economic Prosperity [286-320]

In this chapter, Hesiod started with a very thoughtful comment which related to the different abilities of human beings. Firstly, there are those who understand things by themselves. Actually, he used a superb adjective to describe these people as the best of the best: “πανάριστος”. These are the genius people, the ones with brains. However, this is not by itself sufficient. The best of the best must first understand what is best and I guess education helps. The second type of people are those whom listen and learn (are persuaded) by others; I guess from the best of the best. Hesiod uses the adjective “ἔσθλός” to describe this second type which has a double meaning. It can mean good, but it can also mean economically (materially) rich. These people can become good or rich if they learn. I tend to adopt the latter meaning of the word because in this chapter Hesiod talked about individual economic prosperity. The third type of people Hesiod called useless men (ἀχρήσιος

ἀνὴρ) because they do not learn. Hesiod does not explain if this is due to their ability or to their willingness. My understanding of reading *Works and Days* again and again is that Hesiod meant the unwillingness of men to learn because ability or talent is given by Gods, as Hesiod is stating. Therefore, he could not blame the individual. Thus, he condemns those who have the ability to learn but they do not. Usually this is a description of a lazy man, whom Hesiod also condemns in this chapter which is devoted to work. Hard work is the only way that a man can solve the problem of scarcity. However, the argument of work and only work characterizes the entire book. Hesiod continues in his next chapter to explain how work and work alone can contribute to the individual prosperity and the accumulation of wealth.

Wealth Creation (Accumulation) and Ethics [321-345]

The most important contribution of this chapter is Hesiod's closing remarks that by working hard you can accumulate property. As is the case with many of Hesiod's theses on various economic matters, the wealth creation arguments are spread throughout his book.

However, in these verses the creation of individual wealth is related to Hesiod's moral philosophy of honest and hard work. Hesiod states that wealth should not be created by stealing or by deceiving using words, i.e., lies. He explicitly says that if profits (κέρδος) are made by unethical means, then in the long-run this wealth is not sustainable. Why? Because Gods will punish such a way of making material wealth (ὄλβος). Wealth can be created only with individual ethical behavior and hard work and in this way, Hesiod says you will buy other people's property and not other people buying yours.

The Micro-Environment of Family Business [345-360]

Hesiod in this eleventh chapter opened up a new discussion which looked at the micro-environment of households and family businesses. Hesiod so far has examined the macro-environment of peace (stability) and justice which can bring economic growth to the city. He also examined the individual role in creating wealth through hard individual work and the accumulation of property. Now, as a good business economist, Hesiod examines the role of neighborhoods, friendships, philanthropic donations, etc. All of these make up what can be called the microeconomic business environment.

As mentioned, the book is didactic as a textbook should be. Hesiod opens up this chapter by explaining who should be invited for dinner and who should not. Friends should be welcomed and enemies should be avoided. However, what is important is to invite your neighbors because if something bad happens to your land, then the neighbors run for help first and then the relatives. He prays for a good neighbor because then things and capital will not be lost.

However, in the following verses Hesiod makes an unexpected discussion of borrowing money using the good neighboring relations. He says that when you borrow money from your neighbor, you should return what was borrowed but also

adding something. This way whenever you are in need again you can count on help. Here, Hesiod implies a reputation effect. In my old days in my village which looked so much like the Hesiod's village, the local bank branch would use the same method to lend money. Borrowers were separated between those with good and bad reputations. Good borrowers were the ones who were returning the money on time. Hesiod then considers that one makes bad profits if they are made this way. Or, in his own beautiful words, "don't make bad profits; bad profits are equal to loss [μη̄ κακὰ κερδαίνειν· κακὰ κέρδεα ἴσ' ἀάτησιν (352)]. It is important to note here that Hesiod does not resort to a metaphysical explanation. He uses the fact of life which is called the reputation effect. This issue has been thoroughly examined at the microeconomic level.

A few verses follow which refer not to borrowing and lending, but to philanthropic giving. As I have explained in Papanikos (2022a), he was not at all against giving to those in need, but giving to those whom do not give even though they have the means (money) to give. He stigmatizes stinginess in these verses.

The Economics of Family Consumption and Inheritance [361-380]

This chapter is very difficult to separate from the previous one because Hesiod developed many ideas about the microeconomic environment of the household (verifiable or testable hypotheses economists would call them), which need further development. These ideas relate to the issues of utility, happiness and eudemonia.

Hesiod here talks about family business in general such hiring a worker and the wage which should be paid; family savings and how these can help in cases of a famine; scarcity at the household level and how this cannot be avoided, but can be mitigated with good household management; building trust among relatives and friends; the choice of a wife whose role is very important in increasing family wealth; the optimal family size which is related to the size of family business and what economists call today, marginal productivity of work.

From a microeconomic point of view all of these issues are extremely important, but I think they are lost by examining too many different things in very few verses. These issues come and go, particularly the family farm business. I was able to separate at least three such chapters which are examined below.

The Annual Production Process of the Family Farm Business I [381-535]

Next Hesiod opens up a lengthy discussion of the production process of the farm business which is the longest chapter of his book. Not only is this the longest, but it is one of the three chapters devoted to the same subject. Of great interest is the introduction of this chapter. Why do people want to start a business to produce goods and services? Any contemporary economist would respond by explaining that it is because the owner maximizes profits (or the present value of the firm). The accumulation of profits becomes personal wealth.

Hesiod starts this first chapter on production with a big "if". He stated that if someone wanted to maximize wealth, then he should organize his production

(business) as Hesiod advised. He uses a better word for maximize wealth: crave wealth, which reminds me Keynes' postulate of the "animal spirits" or Marx's "capitalist urge to accumulate".

Wealth here is clearly defined with the old and Modern Greek word of "πλούτος" known in English from the political system which is controlled by the rich (wealthy): plutocracy.

Hesiod has a microeconomic theory of labor. All wealth is produced by hard labor—one work after another, Hesiod advises (382).

However, Hesiod considers this part very important and therefore devotes many verses to outline a work plan for a farm owner, which supposedly is the advice that Hesiod gives to his brother Perses. The aim of the plan is to avoid poverty which forces people to beg for money. People help once, but they do not do a second time. Hesiod tells his brother (396-397) that he is not going to give him anything anymore. He advises him to work because this is what the Gods want the mortals to do.

This long passage of the book indicates something very important. Hesiod here does not talk about a small household, but for a relatively big family farm business. The owner of the business has what we may call today full-time workers and part-time (seasonal) skilled workers who help in the farm business.

The Production of Clothes [536-557]

Between the first and second chapter on the annual production process in agriculture, Hesiod talks about the production of clothes. Even though this might not look like a well-organized book structure (which is actually true), here, though, there is a good explanation for it. Hesiod followed the calendar (annual) approach to the production process and the production of clothes are mostly needed in winter. What is not clear here is who "manufactures these clothes". Each household, most likely, had its own production of clothes.

The Annual Production Process of the Family Farm Business II [558-581]

This chapter continues the discussion of the production process in agriculture of chapter thirteen above. Here Hesiod offers his description of the production process of a winery, which was the most important in the ancient Greek economy after the production of cereal and olive oil.

He also continues to talk about the production process of farming, but in this chapter, it is about the harvesting. The discussion of the production process in agriculture is interrupted for a second time with the inclusion of a chapter on leisure time. The reason is very simple: Hesiod follows the annual calendar and it is now the month of August.

Leisure Time [582-596]

As I explained above, Hesiod presented the annual production process in what we can call "real" time as opposed to a "logical" sequence of activities. This

sixteenth chapter deals with leisure time. Hesiod gives an excellent description of what people can do.

It is a perfect description of a picnic in ancient times with no difference at all from any picnic in any part of the western world that I know of. It included the consumption of food and wine. It also gave some hints about women's lust during this period. Hesiod uses the expression: *μαχλόταται δὲ γυναῖκες* (586), which means lustful are the women during this period. The adjective *μαχλός* means lustful and *μαχλόταται* is the superlative degree of the adjective in its plural number for females. The Greek language is very specific about these sexual things in order to avoid confusion and misunderstandings. It was very important, the separation of males from females, at least in Hesiod's times, because the same issue became very complicated a few centuries later as described in Plato's *Symposium*.

What has always stricken me with this description above is that nothing has changed, at least in Greece, after 3,000 years. Firstly, Hesiod did not mention the month by its name, but he described it: a flower that blossoms late in the summer, the cicada song is stronger and women are lustful. There is only one month that this happens in Greece which is the month of August. Secondly, as in Hesiod's times, most contemporary Greeks take their vacation in August. Thirdly, and with a lot of anecdotal and no so anecdotal evidence, men and women, Greeks and tourists, have much easier sexual relations during this month than any other month of the year. A short trip to any Greek beach during August is sufficient to persuade someone why Hesiod did state that in August women are at the peak of their annual lust.

Remember that Hesiod described human activities on a yearly calendar (chronological) basis and now he has reached the month of August in his analysis. Economists have come to recognize the importance of sex and have developed models to explain it. Hesiod was a pioneer in that in his textbook he related sex to works and days.

All of us we wish we had more such excellent "images" by Hesiod on the leisure time of his period. However, Hesiod's book emphasizes work and not so much pleasure. After all, his book was meant to be read and heard by the members of his own upper-class and the *basileis*. Most probably they were the lazy ones.

The Annual Production Process of the Family Farm Business III [597-617]

This is the third and last chapter of Hesiod's three chapters on the production process in agriculture. In this chapter, Hesiod provides the final activities of the production process, which includes the storage of all the products of the farm and their protection from thieves. Hesiod suggests the "hiring" of a watchdog with sharp teeth and suggests good payment in-kind, i.e., the dog's food should be plenty. These services are provided today by police and private security companies, which include technology, i.e., alarm systems. Despite all these, it seems that actual watch dogs are indispensable. It is difficult to find a farm today without at least one dog with sharp teeth.

The Economics of Seafaring [618-694]

Chapter eighteen deals with seafaring which is something that Hesiod disliked as an economic activity because it has many risks, including the loss of lives (hired sailors) and products. In this relatively long chapter, there are many economic ideas which relate to uncertainty, risk, profits, and economies of scale. These issues were discussed in previous chapters and now Hesiod applies them to commercial seafaring. What is certain though is that in this chapter Hesiod talked about seafaring as a commercial activity which should bring profits. Seafaring is still an important Greek economic activity.

The Economics of Family, Friendship and Social Behavior [695-764]

This chapter of Hesiod's work relates to chapter twelve above. The main issues here are the choice of a wife, the relations with friends and in general, social behavior. Of great interest is the conclusion of this chapter which Hesiod relates all these analyses to the importance of bad fame which never vanishes. This reputation effect was discussed in previous chapters as well as mentioned above.

A Monthly Economic Calendar of Works and Social Activities [765-828]

This is the part of Hesiod's book which deals with the "days", but includes many "works" as well. Many scholars of Hesiod have expressed doubts and different interpretations of what Hesiod really said in this chapter. Some have argued that this is part of another book Hesiod wrote on astrology (ornithomanteia) and expresses many superstitions that still exist today in many places of the world. Others have claimed that this does not belong to Hesiod.

There are many ways to read this last chapter of Hesiod's *Works and Days*. My reading is purely economic. Superstition or not, Hesiod presented a monthly plan of what to do. It is a monthly production function. Hesiod is an economist and a businessman. I am not sure if Hesiod believed in superstition, but it is not a bad thing if it helps to better an organization or a business without doing any harm.

To prove my point, I should emphasize what is the first of Hesiod's "superstitions" that you should do the last day of the month. Hesiod opened his twentieth chapter with an activity that the owner of a farm business must do. This was not the first day, but the last (thirtieth) day of the month. During the last day of the month, the manager-owner should ensure that all works of the month had been done (like a monthly statement of works done!). Only then if the manager-owner determined that the workers (people) had completed honest work during the month, their payments would be given to them (distributed). Payments would be distributed because some payments were in-kind and I guess not equal between all of them. This truly is amazing for all those who are being paid at the end of each month, after the supervisor has checked that they have worked all month. If superstition and astrology help in implementing this very practical business rule, so be it. There might be a costless way of enforcing bad owners of businesses to pay on time, because otherwise there will be a curse on them. I am sure many

workers around the world who are being paid late and not on time, wish their bosses would have the same superstition as once described by Hesiod.

All superstitions of this chapter are similar to the first one and my reading is completely different. My reading is that they help the production process and particularly to those who are responsible of implementing a day's activity on time. If they do not do, not only would they be paid less, but they would be punished by Gods; an excellent marriage of the ontology of wages with the metaphysics of superstition. This chapter deserves a separate paper to analyze all these superstitions as part of sound economic analyses. This is left for future research.

Conclusions

Hesiod was a manager and an owner of a farm business, most probably one of the largest in the area, which he inherited from his father. Not only did his father provide him with the means to live a good life, but it was most likely his father who taught him. From his superb talent of learning it made him the first great writer of an economics textbook. It was his experience with the business of the farm and his talent which produced the masterpiece of his *Works and Days*.

Hesiod's method is one that most historians and economic historians use today. Hesiod had a very good education, but at the same time he also had good experience as a manager of a business (agricultural) enterprise. Discussions with his father also provided him with additional evidence. From the Greek mythology, Hesiod was able to distill what was important especially for his book. From his business experience he had first-hand data to analyze and include in his book.

The argument that Hesiod's *Works and Days* was used as a textbook of introductory economic analysis explains the poetic structure of the work. The poem was read out loud in social gatherings most probably with the use of long breaks and the use of musical instruments. This helps the memorization of the verses. It is well known that the first step of learning something is the ability to memorize (remember), and the rhyming style of the text enhances this ability. Thus, the poem's purpose was to be didactic, and as such, should be evaluated. This paper examined this aspect of *Works and Days* as an introductory text of applied economics. This also explains why so much emphasis was given to agriculture because almost all aggregate production comes from the primary sector. Also, as a good economist Hesiod analyzed the (social) institutions the same way that modern economists analyze the institutional arrangement of today's market.

Thus, the discussion over the authenticity of some parts of the poem is not really important because it is quite possible that new additions to the poem were made as it was passed down from generation after generation. What is important is that *Works and Days* was and is a useful economics textbook.

Cited Translations of Hesiod's Work in English and Modern Greek

Modern Greek

Lekatsas P (1941) *Hesiod: Theogony, Works and Days, Aspis Hercules, Hoiai*. Athens: Zacharopoulos.

English

Mair AW (1908) *Hesiod, The Poems, and Fragments*. Oxford: The Clarendon Press.

West ML (1988) *Hesiod: Theogony, Works and Days*. Oxford: Oxford University Press.

References

- Alesina A, Giuliano P (2015) Culture and institutions. *Journal of Economic Literature* 53(4): 898–944.
- Aristophanes (5th Century BCE) *Frogs*.
- Bartlett RC (2006) An introduction to Hesiod's *Works and Days*. *The Review of Politics* 68(May): 177–205.
- Baumol WJ, Panzar JC, Willig RD (1982) *Contestable markets and the theory of industry structure*. New York: Harcourt Brace Jovanovich.
- Beall EF (2004) Theism and mysticism in Hesiod's *Works and Days*. *History of Religions* 43(3): 177–193.
- Claus DB (1977) Defining moral terms in *Works and Days*. *Transactions of the American Philological Association* 107: 73–84.
- Cook RM (1989) Hesiod's father. *The Journal of Hellenic Studies* 109(Nov): 170–171.
- Heath M (1985) Hesiod's didactic poetry. *The Classical Quarterly* 35(2): 245–263.
- Herodotus (5th Century BCE) *Histories*.
- Hesychius (5th Century CE) *Lexicon*.
- Knight FH (1921) *Risk, uncertainty and profit*. Boston and New York: Houghton Mifflin Company.
- Nelson S (1996) The drama of Hesiod's farm. *Classical Philology* 91(1): 45–53.
- Papadopoulos AP, Papanikos GT (2005) The determinants of vinegrowers employment and policy implications: the case of a Greek island. *Agricultural Economics* 32(1): 61–72.
- Papanikos GT (2014) *Η οικονομική κρίση της Ελλάδος: μία ταξική ανάλυση υπέρ των μνημονίων*. (The economic crisis of Greece: a class analysis in support of memorandums). Athens: Athens Institute for Education and Research (ATINER).
- Papanikos GT (2015) Taxing wealth and only wealth in an advanced economy with an oversized informal economy and vast tax evasion: the case of Greece *Vierteljahrshefte zur Wirtschaftsforschung, DIW Berlin* 84(3): 85–106.
- Papanikos GT (2020) Thucydides and the synchronous pandemic. *Athens Journal of History* 7(1): 71–94.
- Papanikos GT (2021a) Collective decision-making in Homer's *Odyssey*. *Athens Journal of Mediterranean Studies* 7(1): 59–84.
- Papanikos GT (2021b) The first five verses of *Odyssey* and their adaptation to modern Greek and English language (in Greek) [Οι Πέντε Πρώτοι Στίχοι της Οδύσσειας και οι Αποδόσεις τους στην Νέα Ελληνική και Αγγλική Γλώσσα]. *Athenian Academic Periodical [Αθηναϊκό Ακαδημαϊκό Περιοδικό]* 1(2): 81–100. / <https://bit.ly/3JnO1qQ>

- Papanikos GT (2022a) Hesiod's place in the economics literature. *Athens Journal of Business and Economics* (forthcoming).
- Papanikos GT (2022b) Hesiod on economic history. *Athens Journal of History* (forthcoming).
- Papanikos GT (2022c) Hesiod on scarcity. *Athens Journal of Business and Economics* (forthcoming).
- Papanikos GT (2022d) The five ancient criteria of democracy: the apotheosis of equality. *Athens Journal of Humanities and Arts* 9(2): 105–120.
- Papanikos GT (2022e) The bright future of democracy is in education. *Athens Journal of Education* 9(2): 187–198.
- Papastephanou M (2008) Hesiod the cosmopolitan: utopian and dystopian discourse and ethico-political education. *Ethics and Education* 3(2): 89–105.
- Pausanias (2nd Century CE) *Boiotika*.
- Rand EK (1911) Horatian urbanity in Hesiod's *Works and Days*. *The American Journal of Philology* 32(2): 131–165.
- Ricardo D (1817) *On the principles of political economy and taxation*. London: John Murray.
- Souda (10th Century CE) *Lexicon*.
- Stigler GJ (1957) Perfect competition, historically contemplated. *Journal of Political Economy* 65(1): 1–17.
- Teggart FJ (1947) The argument of Hesiod's *Works and Days*. *Journal of the History of Ideas* 8(1): 45–77.
- Thucydides (5th Century BCE) *Peloponnesian War*.
- Uden J (2010) The *Contest of Homer and Hesiod* and the ambitions of Hadrian. *The Journal of Hellenic Studies* 130(Nov): 121–135.
- West ML (1967) The contest of Homer and Hesiod. *The Classical Quarterly* 17(2): 433–450.

