

## Aristotle's Science of Economics

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### Introduction

In this chapter the Aristotelian conception of the economic science will be explained. First, the notion of oikonomike will be introduced. Then, it will be determined whether Economics was a science for Aristotle. In the third place, it will be analyzed what kind of science, within Aristotle's classification, Economics is. The characteristics of practical sciences will then be displayed. Finally, the consequences of Economics being a practical science for Aristotle will be deduced. The present study both relies on Aristotle's textual analysis and interpretation of his thought in a sort of translation of his teachings to today language and application of them to today Economics.

### What is Aristotle's oikonomike?

First of all, it should be warned that the economy of Aristotle's time did not have the characteristics it has nowadays. Economics as such had not yet been founded and he only devoted a few pages to these issues. However, his ideas about oikonomike may serve as a guide to scrutinize today Economics.

Aristotle considers oikonomike as the use of the things necessary for Good life, i.e., the life of virtues. Aristotle's oikonomike is more than household management, as many economic historians believe. He pointed out that oikonomike deals with the house and also with the *polis* (cf. Politics, I, 8, 1256b 12-4; I, 10, 1258a 19-21; I, 11, 1259a 33-6). It is subordinated to Politics because the things used by oikonomike are a necessary condition for the very existence of the polis (cf. Politics III, 9, 1280b 31-2).

For Aristotle, oikonomike can only be aimed at the good; it is essentially moral. He distinguishes another related concept, chrematistics, which is a technique subordinated to oikonomike dealing with the acquisition of those things used by it.<sup>1</sup>

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<sup>1</sup> Some authors have interpreted that chrematistics is a technique which serves both oikonomike and politike (See Barker 1959, p. 357 and Arendt 1959, p. 28). Given that

This technique, on the contrary, is not essentially oriented towards the good. Therefore, while for Aristotle a harmful oikonomike is unthinkable, two kinds of chrematistics can be considered: a subordinated, limited and natural one, and a wicked, unnatural, unlimited one. Thus oikonomike is an act, the right act of using things in order to achieve the good, i.e., virtuous life. Therefore, virtue is needed as a habit that facilitates the performance of this act. Besides, oikonomike was embedded in its political environment.

Was Economics a Science for Aristotle?

At the very beginning of the Nicomachean Ethics Aristotle states (I, 2, 1094b 4-6) that Politics:

ordains which of the sciences should be studied in a state (...) and we see even the most highly esteemed of capacities fall under this, e.g., strategy, economics, rhetoric; now since politics uses the rest of the sciences, and since, again, it legislates as to what we are to do and what we are to abstain from, the end of this science must include those of the others, so that this end must be the good for man.

Taking into account the whole context of the treatment of oikonomike in the Politics the Aristotelian scholars have usually interpreted this passage in the sense of Economics being for Aristotle a practical science (see, for example Reeve 2006, p. 206, Natali 1980, p. 117, Berti 1992, p. 89, Newman 1951, p. 133 and Miller 1995, pp. 6-11). Politics is the “most architectonical” (Nicomachean Ethics I, 2, 1094a 27) Aristotelian practical science. Ethics and oikonomike are also practical sciences for Aristotle.

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the former deals with the house and the latter with the polis, they consider that “political economy” would be a contradiction in terms for Aristotle. In my opinion, however, they are stressing something that could be left aside because, independently of the terms adopted, the criteria proposed by Aristotle for using properties in the house and in the *polis* are the same. Thus, in this paper I subsume in the term oikonomike the use of wealth both in the field of the house and that of the civil community.

There is even a terminological similarity between Politics (politike) and oikonomike that is worth pointing out. Let us hear from Ernest Barker's commentary on Aristotle's Politics (pp. 354-5):

'Politics' in the Greek is an adjectival form – as if we should say 'the political'. What is the noun which it implies? Strictly, it is the noun 'science' (episteme). But sciences may be, in Aristotle's view, practical as well as theoretical, and since the science of politics is largely practical, we may say that 'the political' implies the noun 'art' or 'capacity' (techne or dynamis) no less than it implies the noun 'science'. In a word, it implies both. 'Politics' is the scientific study of the polis, and of all things political, with a view to political action or the proper exercise of the political 'art'.

Oikonomike is also a Greek adjective: it 'the economic'. I offered a similar analysis about it in a recent paper on the ontology of 'the economic' for Aristotle (Crespo 2006). I there suggested a fourfold meaning of the term. Aristotle uses this adjective to refer to all that is related to the use of wealth in order to achieve the Good life. He does not use it with corresponding nouns. Thus, it is in fact a substantivated adjective. What is the meaning of this expression 'the economic'? What kind of reality it is? In that paper I argued that it is an analogical term. Analogous terms have different however related meanings, one of which is the "focal" or primary meaning to which the other, derivative meanings, refer and are connected. What are these different meanings?

#### 1. A human action

In the mentioned article I concluded that the focal meaning of oikonomike is its definition, the action of using the things that are necessary for life (live at all) and for the Good life (live well). When Aristotle speaks about "life at all" he is referring to what is achieved at home (oikos). When he talks about the Good life he is referring to what is attainable in the *polis*, and it is the end of the civil community. According to him, the latter concept of life has a precise moral meaning; it is a life of virtues by which humans achieve happiness.

#### 2. A capacity

Aristotle also considers oikonomike as a capacity, that is, an ability, or power; in this case, a power to perform economic actions. Oikonomike as capacity is a derived sense of oikonomike, because the capacity of using exists for the sake of the action of

using. Given that capacities are defined by their ends or functions (De Anima II, 4, 415a 16-21), these ends are ontologically prior to the very capacities and correspond to the focal meaning in a case of an analogical term such as oikonomike.

### 3. A habit

According to Aristotle, the repetition of actions engenders and consolidates habits that facilitate the very action. In effect, Aristotle speaks about household management as a kind of prudence (Nicomachean Ethics VI, 8; cf. also Eudemian Ethics I, 8, 1218b 13). Oikonomike as a kind of habit is another derived sense of oikonomike: it is the habit that helps the performance of oikonomike as the action of using necessary things for living well.

3. Finally, oikonomike is also, as stated above, ‘the economic’ science. Newman (1950, I, p. 138) stated that “Political economy almost originated with him.” For Peter Koslowski (1985, p. 2) “Economic science is an integral part of the hierarchically ordered sciences of human action and societal interaction.”

Those previous meanings of oikonomike will help us to confirm, as also affirmed above, that it is a practical science. In order to achieve this, we have to answer two questions: what is a practical science? and why is the economic a practical science?

What kind of science is ‘the economic’ science?

What is the meaning of practical science? Aristotle distinguishes between theoretical, practical and poietical (or technical) sciences. The distinction corresponds to their different subjects (Metaphysics VI, 1, 1025b 20-1 and cf. 1025b 19ff. and XI, 7, 1063b 36 – 1064a):

1. Theoretical science deals with those things that are not feasible or modifiable, which can only be contemplated. Theoretical sciences according to Aristotle are Metaphysics, Physics and Mathematics. Theoretical science is the strictest notion of science for Aristotle.

2. Practical science deals with those subjects that originated in human decision or choice. They have a practical aim (Metaphysics II, 1, 993b 21-2; see also Nicomachean Ethics I, 2, 1095a 6 and II, 2, 1103b 27-8).

3. Technical science deals with artifacts and the rules for their production.

Both practical and technical science deals with human actions. How do we then differentiate practical and technical sciences? In the Metaphysics, Aristotle distinguishes between two kinds of human actions. Firstly, immanent actions, that is, actions whose end is the action itself such as seeing, thinking or living. The results of immanent actions remain in the agent. Secondly, transitive actions where the “result is something apart from the exercise, (and thus) the actuality is in the thing that is being made” (Metaphysics IX, 8, 1050a 30-1). Transitive actions are actions the results of which transcend the agent and are something different from the agent as, for example, a product. Aristotle calls immanent action prâxis and transitive action poïesis (Nicomachean Ethics VI, 4, 1140a 1). All human actions are both immanent and transitive except in the case of a fully immanent action (to think, to love). For example, when somebody works there are two results, i.e., an ‘objective’ result, such as the product or service (transitive aspect), and a ‘subjective’ result such as the increase in ability or the self-fulfillment of the agent as well as the morality of the act (immanent aspect). For Aristotle, this latter – the immanent aspect – is the most relevant one. It is the one sought for its own sake, not for any further reason. Aristotle affirms that “we call that which is in itself worthy of pursuit more complete than that which is worthy of pursuit for the sake of something else” (Nicomachean Ethics I, 7, 1097a 30-1). That is, Aristotle attributes more relevance to the intrinsic or immanent aspect of action – that which is in itself worthy of pursuit – because it is the aspect whose end is the very fulfillment or perfection of the agent. For him the external aspect of action is simply instrumental.

Given this previous explanation we have to add that for Aristotle the subject of practical sciences is the immanent aspect of human actions and the subject of technical (or poietical) sciences is the transitive aspect of those human actions.

What kind of action is ‘the economic’? I have indicated that oikonomike is an action of using, in Greek, chresasthai. What kind of action, immanent or transitive, is chresasthai? “To use” is a transitive action insofar as the thing used is consumed or wasted when used. However, the complete action of oikonomike is to use what is necessary to satisfy the agent’s requirements to live well: this is the immanent consideration of use, for it is using for the sake of the proper perfection. The action of chrematistike, instead, is clearly transitive.

In what sense practical science – and thus economics – is a science?

In the last years, together with a reconsideration of practical science in the realm of moral philosophy and philosophy of action, some doubts were raised about the scientific character of practical science. Some authors, for example Gadamer (.....), deal with practical science as it were a habit, not properly a science.

Aristotle established the characteristics of science in his logical treatise called Posterior Analytics. The object of science must be necessary and no perishable (Posterior Analytics I 4, 73a 23-4; I 6, 74b 14; I 8, 75b 24). It is not knowledge on something particular but universal (Posterior Analytics I, 4, 73b 26 and I, 31, 87b 28-35; De Anima II 5, 417b 23). Finally, it has a deductive or syllogistic demonstrative form.

It is difficult to fit practical science with this concept of science. In effect, human action is not necessary, neither not perishable nor universal and practical arguments are often inductive, dialectical, metaphorical or topical. However, Aristotle speaks about it in the quoted passages of the Metaphysics. How could we solve this conflict? We must hear to a suggestion of Gauthier and Jolif (1970, pp. 23-5 and 453-5). “Science” is, as ‘the economic’, an analogical term. There is a strict and a looser meaning of science. The strict meaning corresponds to theoretical science, the science described in the Posterior Analytics. Aristotle refers to practical science as a science by similarity: kat’ homoiótesin (cf. Nicomachean Ethics VI, 3, 1139b 20). This is a middle ground between strict science (theoretical), and prudence and action. Consequently, this analogical meaning of science is not the clearest and most central. However, practical science owns the characteristic common to all kind of sciences, i.e., to be a “state of capacity to demonstrate (héxis apodeiktiké),” (Nicomachean Ethics VI, 3, 1139b 32) with the limitations inherent to its subject-matter, human choice and human action (contingent, variable, free, singular).

Aristotle recognizes this ‘weaker’ character. He asserts in the Nicomachean Ethics that

“Our treatment discussion will be adequate if it has as much clearness as the subject-matter admits of; for precision is not to be sought for alike in all discussions, any more than in all the products of the crafts. Now fine and just actions, which political science investigates, exhibit much variety and fluctuation (...). We must be content, then, in speaking of such subjects and with such premises to indicate the truth roughly and in outline.” (Nicomachean Ethics I, 3, 1094b 11-27, emphasis added).

Aristotle identifies two reasons for this ‘inexactness’ of practical sciences: “variety and fluctuation” of actions. That is, there are lots of possible different situations and the human being may change his decisions. This is why for Aristotle human action is always singular. He says:

“We must, however, not only make this general statement, but also apply it to the individual facts. For among statements about conduct those which are general apply more widely, but those which are particular are more true, since conduct has to do with individual cases, and our statements must harmonize with the facts in these cases.” (Nicomachean Ethics, II, 7, 1107a 31-3, emphasis added).

And also,

“(...) actions are in the class of particulars, and the particular acts here are voluntary. What sort of things are to be chosen, and in return for what, it is not easy to state; for there are many differences in the particular cases.” (Nicomachean Ethics, III, 1, 1110b 6-8, emphasis added).

Properties of actions are variable. An action may be just or unjust according to the situation; and the concrete determination or content of a just situation is also variable (cf., e.g. Nicomachean Ethics, V 10, 1137b 28-30 on equity: “... about some things it is impossible to lay down a law ... For when the thing is indefinite the rule is also indefinite” ). Aristotle also affirms this with regard to wealth, beauty, and courage, among others. This is why he says, for example, that “a young man is not a proper hearer of lectures on political science; for he is inexperienced in the actions that occur in life, but its discussions start from these and are about these” (Nicomachean Ethics I, 3, 1095a 2-4. He often compares Politics with medicine in this respect, as in the next quotation). In sum,

“matters concerned with conduct and questions about what is good for us have no fixity, any more than matters of health. The general account being of this nature, the account

of particular cases is yet more lacking in exactness; for they do not fall under any art or set of precept, but the agents themselves must in each case consider what is appropriate to the occasion, as happens also in the art of medicine or of navigation.” (Nicomachean Ethics II, 2, 1104a 4-9).

Let us remember that practical science, as conceived by Aristotle, ends in action. However, the more “practical” practical sciences are, the less general they become. By leaving generality behind to move towards concrete reality, science limits its scope. That is something that ought to be kept in mind; we should look for a balanced position: if we try to include all relevant factors in a concrete situation we lose generality and, thus, explanatory power for different situations in the conclusions we reach. But as we try to gain generality, we lose contact with reality as it actually is, and thus explanatory, predictive and normative ‘efficiency’. Moreover, could we speak about prediction in the above described conditions? What is the solution to this choice between accuracy and generality? It may help to analyze what happen in other sciences in order to answer this question.

This problem occurs not only in practical science, but also in physics. What are the essentials of its subject-matter? If physics reduced its scope to that what is strictly necessary it would not have much to do. It also has to deal with that what is probable. But in this case the results are not often universals (which express essences), but generalizations, which express general, though not necessarily necessary, properties: consequently, generalizations may fail. However, though not completely certain, prediction is sufficiently accurate, thus allowing for science.

As already stated, the Posterior Analytics is the book where Aristotle characterizes science. It belongs to the set of Logical books Aristotle called Organon (i.e. “instrument” of thinking). J. M. Le Blond, in his classic Logique et Méthode chez Aristote, maintains that “the books composing the Organon, are more concerned with exposing science in a rigorous way than with doing science. His scientific books, on the other hand, focus on research and they are the ones that reveal the method” (1939, p. 191). That is, the Organon contains a theory of science, while the scientific books are actual science that does not always follow the precepts of the theory.<sup>2</sup> As Hankinson states, “one can trawl the whole of Aristotle’s considerable scientific oeuvre without

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<sup>2</sup> For this argument, see also Bochenski 1969, p. 187 and Sanguineti 1991, p. 46.

netting a single instance of a fully worked-out syllogism” (1995, p. 113). General theory must be adequate to the empirical data (cf. 1995, p. 137).

In fact, in his studies – especially biological (On the Part of Animals, The History of Animals), physical (Meteorology), and practical (Ethics and Politics) -, Aristotle gives plenty of room for experience and he does this in order to discover and also verify scientific principles. He says in Generation of Animals (concerning his observations about the generation of bees) that “credit must be given rather to observation than to theories, and to theories only if what they affirm agrees with the observed facts” (III 10, 760b 31; cfr. also De Anima, I, I, 639b 3 ff. and 640a 14 ff.). That is, some principles in some sciences are based on empirical data leading to generalizations, not to universals. Universals are grasped by a sort of intellectual intuition – called abstraction— which presupposes experience but is not based on a complete enumeration of cases. Moreover, in some cases, one or a few cases suffice to abstract the universal. Generalizations, however, are based on enumeration of empirical or experimental cases. Le Blond shows how Aristotle uses experience in detailed observation as well as in experiment: “flux and reflux of the research going from facts to theories and from theories to facts” (1939, p. 242). This clearly explains why Aristotle states in Nicomachean Ethics (VI, 8) that “a boy may become a mathematician but not a philosopher or a natural scientist.” The reason, he adds, is that the philosopher and the natural scientist need experience. As he states in On Generation and Corruption,

“[I]ack of experience diminishes our power of taking a comprehensive view of admitted fact. Hence those who dwell in intimate association with nature and its phenomena are more able to lay down principles such as to admit of a wide and coherent development” (I 2 316a 5-8).

Summing up, generalizations from the point of view of Aristotle’s strict science are not scientific, for science deals with universals. However, the contingency of the subject matter justifies the use of generalizations instead of universals in science. Even in the Posterior Analytics Aristotle considers as object of science occurrences that are only as general connections, premises, or rules (Posterior Analytics I 30 87b 19ff, II 12 96a 8-9). If this is applicable to Physics there are more reasons for applying it to human action as subject matter, for freedom adds an extra quota of contingency. This is the case of practical science.

There are two sources that allow generalization in practical sciences: first, an anthropological natural basis; second (and compatible with the former), the recurrence of habits. This is because in the realm of human action “in most respects the future will be like the past has been” (Rhetoric II 20 1394a 7-8). Hence, generalizations in practical science are actual dispositions or habits (see Wieland 1999). This is why close contact with facts is necessary in practical science. The more stable the habits and tendencies the more predictable the outcomes. In any case, general tendencies may change: they are not firmly established universals. Aristotle develops a theory about the stability of habits (Nicomachean Ethics, VII, 9, 1151b 25-7 and VII, 10, 1152 a, 26-7). When habits are sufficiently stable as to constitute social institutions, practical science is firmly based. Therefore, institutions are very important for they consolidate tendencies and habits and facilitate accurate science. Thus, according to this meaning of the economic we can predict better when social institutions are solidly consolidated; and, even so, nothing is definitive. I will return to this point in the conclusion.

The meaning of oikonomike as practical science is analogical in respect to ‘economic’ human action. Although being a practical science, science for Aristotle is different from action and from practical wisdom (prudence): “practical wisdom (phrónesis) cannot be science (epistéme)” (Nicomachean Ethics VI, 5, 1140b 2).

I have spoken of practical science of a middle ground between prudence (a habit) and theoretical science. In effect, while prudence deals with the particular, practical science tries to formulate generalizations. Although these generalizations cannot be exact but only probable, this should be the task of practical science and cannot be considered as a weakness of it but as the adequate way of tackle its subject. As Kraut asserts Aristotle “is asking us to have different expectations of different fields: not higher standards for some fields and lower for others, but different standards” (2006, p. 87). No matter how different, I insist, the task of practical science is to try to generalize. Politics, Aristotle states, “legislates as to what we are to do and what we are to abstain from” (Nicomachean Ethics I, 2, 1094b 4-6). Ideally, Reeve comments, “the scope of deliberation should be minimal; that of universal law maximal” (2006, p. 211). However, the tension remains: inasmuch as it tends to universality it moves further away reality. Let us analyze other characteristics of practical science that will fulfill the frame of them.

What are the characteristics of practical science?

As already explained, practical science is not an exact science: the truth of the practical is not fixed. Other characteristics of practical science are the following.

Firstly, practical science must be closely linked to the concrete case. “Now no doubt,” Aristotle says, “it is proper to start from the known. But ‘the known’ has two meanings - ‘what is known to us,’ which is one thing, and ‘what is knowable in itself,’ which is another. Perhaps, then, for us at all events, it is proper to start from what is known to us” (Nicomachean Ethics I, 4, 1095b 2-4). That is, we must start from the manifest surface facts to discover the causes.

Secondly, another distinctive feature of practical sciences is their pragmatic end. Aristotle states that “the end of this kind of study [Politics] is not knowledge but action.” (Nicomachean Ethics I, 3, 1095a 6) and that “we are not conducting this inquiry in order to know what virtue is, but in order to become good.” (Nicomachean Ethics II, 2 1103b 27-28) He adds in his Metaphysics that “the end of theoretical knowledge is truth, while that of practical knowledge is action.” (II, 1, 993b 21-22) Nowadays, social sciences are theoretical studies of practical subjects. Then one can ask: what is their epistemological condition? Aquinas completes Aristotle on this point: he distinguishes three principles to decide whether a science is theoretical or practical. These are the subject-matter, the end and the method. This threefold classification leaves room for “mixed” cases, as those theoretical studies of practical subjects just mentioned above. Aquinas asserts in De Veritate:

“Knowledge is said to be practical by its order to act. This can happen in two ways. Sometimes *in actu*, i.e., when it is actually ordered to perform something (...) Other times, when knowledge can be ordered to act but it is not now ordered to act (...); in this way knowledge is virtually practical, but not *in actu*” (q. 3, a. 3).

This is an important point because current social sciences – included Economics –, although they may try to be only theoretical, are virtually ordered towards action. Thus, although a particular science may be theoretical secundum finem, or may have both theoretical and practical aspects, its implicit orientation towards action determines its epistemological framework.

The third characteristic of practical sciences is normativeness. Inexactness, closeness to reality and pragmatic aim are features of the practical sciences stemming from the singularity of human action, as conceived by Aristotle. Besides, the normative character of practical sciences has to do with their pragmatic aim. The statement that “it is rational to act in a concrete way” is both a “positive” and normative statement. Practical sciences have an ethical engagement arising as a consequence of human action’s immanent aspect. In transitive human actions, a triple rationality may be distinguished: practical or moral, technical, and logical. Practical immanent rationality permeates the whole action to the extent that, as already explained, the existence of a purely technique transitive action cannot be sustained. Whatever may be the action, it is always essentially ethical. Since human action is ethical, and since economic action is human action, therefore political economy has an ethical commitment. Concerning our field of study, Gilles-Gaston Granger (1992, p. 80) states that, within the economic area, braiding the different perspectives of rationality seems to be necessary in order to attain an effective definition of concepts.

Finally, a reference should be made to the methodological devices characteristic of practical sciences. The abundant bibliography on this topic could be summarized as a proposal of methodological plurality. In his Politics and Nicomachean Ethics, Aristotle admirably combines axiomatic deduction, inductive inference, dialectic arguments, rhetoric, imagination, examples, and topics. Some authors, beginning by Burnet (1900), have stated that there was a predominance of dialectics and topics in such a way that practical science would lack a minimal of scientific character (see e.g., Hennis 1963). The reaction from the Aristotelian scholars leads to a deep study of the method of practical science. The result of this study is: a) in the Politics and Nicomachean Ethics there are also typical scientific demonstrative arguments (see, e.g., Barnes 1980, pp. 494-5 and Barnes 1993, p. 29): they are “a state of capacity to demonstrate” (Nicomachean Ethics VI, 3, 1139b 31); b) this science provides what all sciences provide, pisteue, that is certainty (Nicomachean Ethics VI, 3, 1139b 34); c) it is transmissible, as all sciences: this is why Aristotle writes the Politics and the Nicomachean Ethics; d) it has a hierarchical order: all practical sciences are subordinated to Politics (Nicomachean Ethics I, 2, passim and Politics III, 12, 1282b 14)

and they are (implicitly) subordinated to Metaphysics, “the most authoritative of the sciences” (Metaphysics I, 2, 982b 5). Let us conclude.

## Conclusion

From an Aristotelian point of view, the science about ‘the economic’ is a practical science. The subject matter of practical sciences, and within them, of Economics, entails a kind of “living science”, where the principles are few and most of the conclusions of science are variable according to the cases.

Generalizations in these sciences, as explained before, are possible thanks to the tendencies of some kind of actions to be repeated. As Alasdair MacIntyre explains, predictability in the social sciences is only imperfectly possible. However, it is often achievable thanks to knowledge of a) statistical regularities; b) of the way people carry out their need to schedule and coordinate their social actions; and c) also thanks to the awareness of the causal regularities of both, nature and social life (see MacIntyre 1984, pp. 102-3 and Wieland 1996).

Given the previous conclusions, there are several reasons why institutions matter greatly in the economic realm. Institutions both embody and reinforce steady habits. That is, there are two directions of analysis: on the one hand, how habits shape institutions, and on the other, how institutions encourage habits. Concerning the first direction, habits, specially good habits, make actions more predictable and thus facilitates the consolidation of institutions. According to Aristotle, the incontinent man is unpredictable; instead, the virtuous man, who is continent, is more predictable because he/she perseveres:

“A morally weak person,” he says, “does not abide by the dictates of reason” (Nicomachean Ethics, VII, 9, 1151b 25-7). “A morally strong person remains more steadfast and a morally weak person less steadfast than the capacity of most men permits” (Nicomachean Ethics, VII, 10, 1152 a, 26-7).

In this way, virtues facilitate the predictability of acts and help constitute institutions, which are embodiments of regular behavior patterns towards a defined end.

In the other way, institutions foster habits, for they reinforce the realization of determined acts through rewards and punishments. According to Aristotle, the main

means to foster these actions are education and law. Firstly, education, in the broad Greek sense of paideia, is the shaping of personal character. This is why “it makes no small difference, then, whether we form habits of one kind or of another from our very youth” (Nicomachean Ethics, II, 1, 1103b 24). Secondly, law bears a pedagogical objective (cf. Nicomachean Ethics, X, 9, 1179b 31 – 1180a 4). Aristotle understands that a set of concrete virtues leads humans to their natural excellence. This process begins with the education of those virtues, conveniently consolidated by laws.

Hence, there are two reasons why this presence of institutions is relevant. Firstly, they are relevant for the very possibility of economic science. As explained, practical sciences (and Economics within them) may make generalizations and predictions thanks to the repetition of acts. Institutions help in the consolidation of habits.

Secondly, predictability and institutions facilitate economic coordination. Coordination is possible when acts are foreseeable. Thus we can conclude, in an Aristotelian minded spirit, that economic coordination is more easily achievable and economic science can more accurately postulate generalizations within a virtuous environment.

This condition does not diminish freedom but, on the contrary, it supposes and fosters it. Aristotle considers virtue as a state of character concerned with choice, lying in a mean, i.e. the mean relative to us, this being determined by a rational principle, that principle by which a person of practical wisdom (prudence) would determine it. The word “choice” means that the main act of moral virtue is the right decision: the decision of doing here and now what is needed for a good behaviour. This right decision presupposes a good discernment on means and ways of acting. This is the role of practical wisdom. “Choice” also indicates that the good action is wanted and elected in itself: intention matters. Hence, virtues facilitate good acts without annulling freedom; on the contrary, they suppose a constant free behaviour. Consequently, a consequence of Aristotle’s conception of economic science is that as long as the society in which economy function were free and virtuous, Economics will be more precise in its predictions.

Liberty is a necessary precondition for virtue and virtue is ultimately necessary for the survival of liberty. I finally quote Robert Sirico on this complementarity of freedom and virtue: “Liberty is (...) the context of actions and social institutions that facilitate or

enable virtue. In other words, the requisite condition for a virtuous act is the ability to exercise choice in that action. We can thus say, then, that the predicate for virtue is liberty” (1997, p. 2).

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