

## **Aristotle on technique and chrematistic**

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### **Acquisition as a dimension of life**

At the beginning of Book I of Politics, Aristotle shows that living things are born, grow, reach a certain fullness, and then die. That means we need resources from the external environment, which is why nature has endowed each kind of proper procedures to do so.

In regard to man, as he says in *On the Soul*, it is the most unfinished living in a sense the most open, the most dependent on the outside to perfect in all its dimensions, especially the cognitive, so purchasing activity extends beyond the biological, towards an end that Aristotle designated as good or properly human life.

When studying the purchasing activity of man, Aristotle, who always comes from the bottom up, from the simple to the complex, usually begins with the purchasing activity of other animals. In this sense, the primary and immediate motivation, which leads to the formation of the family, is the purchasing activity of the resources that allow you to maintain life<sup>1</sup>. At home, where it converges with the cognitive biological, man is born, raised and educated until reaching adult status.

What Aristotle meant by this approach was to present the process of acquiring human continuity with animals, and to highlight what sets you apart. It seems as if he is stressing that to understand the man in all its manifestations, including its rationale, we cannot dispense with his animal condition.

At first it might seem that, acquisition for animals is more efficient and simpler than for men, since they are provided with everything they need to live, while men have to go further, have to guess the meaning and purpose of their life, the means required, as well as design and implement the most appropriate ways to achieve them. While for animals the problem of acquisition and life was already solved, for men that simplicity is inaccessible. In this sense we can say that this is the only animal that is unable to live naturally.

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<sup>1</sup> (Pol.1252.b.1) “It begins in the stark necessity of life and continues in existence because of the good life”.

It is a characteristic of human acquisition that it is not completely determined by the environment in which they live. Unlike the animal, the man is not part of that self-sufficient whole we call Nature, but he has a pragmatic freedom, i.e. he can propose for himself a lot of things and perform them in many ways. In other words, he states and distinguishes between means and ends.

This comes to relevance when Aristotle states (Pol.1252.a.1.31) only one who can foresee with the mind, can set the order of his wants and the most appropriate means to achieve them, is by nature an owner and a lord, someone with the ability to rule and dominate. While those who only carry out with their bodies what others establish, are by nature instruments and slaves. It seems then that the distinction between human and animal acquisition is based on the fact that man has logos.

If what characterizes human acquisition is to foresee, it means that it is an activity that is not contained in the immediacy of the biological, but it extends over time and thus open to the universal, which is what allows order between ends, or to distinguish between means and ends. It does not refer exclusively to the assimilation of the existing immediate, as it is the case of the other living beings, but points to what it is still not present, thus with time and effort itself can exist. Although human acquisition -like animals'- begins with the experience; unlike them, it is open to the logos, thus is inseparable from knowledge.

It is significant that for Aristotle (Pol.1252.a.1.12) it is the gift of language that makes human acquisition possible. That is to say, acquiring and knowledge involve themselves one to each other. It is therefore a relational activity in two ways: firstly, because it does not catch things separate and unconnected, as an animal does, but things integrated in a plexus that makes sense to them, that is to said, that can be reported; secondly, because they take place within a community, which is what gives meaning and unity to all things.

Through language logos became present in the biological, enabling things that were in the natural plane to be located in the human plane. It can therefore be said, that acquisition is another form of human communication, a way to express and share with other men.

Just as man does not learn words in isolation but rather acquires a language immersed in a family, a community of life, he does not take things in isolation either, but immersed in a world, in a plexus of things with reference to each other, with meaning and purpose, in which he learns to value them. Man does not seize what is given, but his acquisition implies novelty, to enter into a world that is not given in nature, but depends on its own action.

The language, which allows the access to that aspect of reality we call truth, the stronger and most intrinsic way to have, is, because of that, the basis and foundation of what is proper to human acquisition. Without language just could exist that extrinsic and weak form of possession that holds the animal, which with its claws caught in each moment as it feeds, which keeps it alive<sup>2</sup>.

Man can acquire because he is lord, because he knows and can speak. On the other hand, as he does not know the real being of things themselves in their own uniqueness, is not master in an

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<sup>2</sup> Thinking of an apple is not the same as having it in hand, but the latter would not be possible without the mental. One hand will never get a thing but an object. The man does not eat without thinking, has in mind before taking into the stomach.

absolute sense. For this reason human acquisition is a task of practical reason, ordered to the knowledge in time, to the perfection of his own life. It cannot be a task of the theoretical reason.

Human acquisition is something intrinsic, manifestation of an interiority, so that involves transformation of both the acquired, which is humanised or produced, as the man himself, who is affected in his own intimacy. The animal acquisition, by contrast, is something extrinsic, which does not affect either what is acquired, which remains in the natural level, nor the animal that catches and grabs, which does not change, since it lacks interiority.

In this sense, when acquiring, man produces, transforms the natural into a means or an instrument, he gives rise to a novelty, something that was neither on the natural level nor at the level of logos. This explains why, for example, man is the only gastronomist animal, who eats what he has previously known, what he has produced. To the extent that even when he seeks "to eat raw" in fact he does nothing but eat a cultural product, the result of reflection and knowledge. Men cannot eat anything natural, as other animals do because, to do so, he would lack of language and knowledge, and being fully embedded in nature, as one of its parts.

For Aristotle (Pol.1253.a.1.26) any acquisition, human and animal, has to have a term, otherwise it would be a sign of imperfection, of failure to attain his own goal. From this point of view, perfection implies efficiency<sup>3</sup>. However, in the case of man, sufficiency becomes complex, because on account of his animal dimension he is limited, whereas his cognitive dimension seems to be limitless.

We can state that in human acquisition there is a tension between theoretical reason, which is inexhaustible in regards to the knowledge of the being, and practical reason, which in a sense is also endless, but only in the ways to achieve, not in what it can do and have in each particular moment. We could say that sufficiency of man is at another plane, is rather in his freedom, in its capacity to set and moderate the limits of his ability to acquire, his way of life.

Aristotle was aware of the uniqueness of this difference when he notes that a human individual alone cannot be self-sufficient, whereas, by contrast, a single animal can. This suggests that insufficiency of human individual is a sign of the superiority of his way to acquire. On the other hand, gods are self-sufficient, but in a different and more superior way to man, as they are capable of an intrinsic possession in its highest perfection.

We can conclude that human sufficiency is at a midpoint between the gods and the beasts, something open, pointing to the perfection of acquisition. The man knows that it is different to have one thing into his hands than to have it fully known, that there is a gap between these two forms of possession that he cannot overcome. In this sense theory is the highest and finished form to which every human praxis leans towards. Acquisition and human growth seeks knowledge as its final end. Human acquisition has both an end and a perfection, which is to achieve an activity that is self-sufficient, because the end of all human life is to determine the activity and stay in it.

Everything seems to point out that for Aristotle the most perfect human sufficiency is the one that can be achieved into the city, while the most imperfect and unsustainable, would be that of an isolated

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<sup>3</sup> (Pol.1253.a.26) "He who is sufficient by itself is a beast."

man. Just in the city, through language, it is possible exchange and division of labor, which allows a human life more worthy of that name.

## Human sufficiency: domain and wealth

For Aristotle, although the most perfect human sufficiency is the one achieved in the city, this would not be possible without the basic sufficiency or natural of man, which is not the one of the isolated individual -which is impossible- but the one of the family.

As one of its parts, though not the most important, every family needs a set of things that constitute what we called the domain<sup>4</sup> or wealth (Pol.1253b.12) that enables the sufficiency of a family. Sufficiency should not be understood as absolute independence or ability to live in isolation, but rather allows for a certain mode of living, the self of each family. This is the reason to designate this set of terms Aristotle interchangeably used the words or the word domain wealth or property.

Domain or wealth is a necessarily finite set of things, both in number and quantity, as an unlimited instrument does not make sense. With this approach it seems that for Aristotle human acquisition has a natural end, wealth or domain, which is only possible within a family<sup>5</sup>.

It is remarkable that Aristotle has identified domain with wealth, which seems to state that it is a unity at the service of a family, something that is beyond the mere possession which is capable any isolated animal. Just possession is necessary for the way of living of an animal, which is carried out by the simple instinct, as, for example, is the case of birds living in a nest, something extrinsic and transitory. On the contrary, the human living, the proper of a family, requires a home, which means domain and wealth, to have a set of possessions endowed with unity for a foreseeable end, intrinsic and permanent, expression of the presence of logos that leads to the formation of a world, in which human life develops.

That is why the symbol of human possession is the hand, as Aristotle states, the “instrument of instruments” (Ac.A1.III.432.a.1-3), which arranges and orders the other instruments. Hand, physical manifestation of the logos, comes to constitute an extension of language. This explains why since ancient times hand has been the symbol of power, the human capacity to take things over, to make present the logos in the animal dimension of human acquisition. It is through his hand as the man transforms and appropriates nature, as he humanizes it and gives it a value, integrating them into a property<sup>6</sup>, at the service of human life.

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<sup>4</sup> I used the word domain, of Roman origin, because I think it best expresses the idea of Aristotle, that the word property, which is also of Roman origin, but much more modern now employed in an individualistic sense.

<sup>5</sup> The richness of the speaking Aristotle referred to such things as land, animals, slaves, who were part of the home, set of tools that made possible the life of a family. Not united on a purely functional, like the things that is the nest of some birds, but with a view to an end, a certain kind of life.

<sup>6</sup> That explains that in Roman law the release of a slave is to leave him out of the property.

Each one of the parts that constitute wealth or domain of a family is located in the plane of the means. They are subject of a finite and precarious possession, for example, shoes that can be placed or removed. Only richness and domain -which belongs to the plane of the ends- are intrinsic, permanent and stable, and in no way removable, but a result of the habit of the lord., who knows how to use what he has.

That is why Aristotle states (Ret.1361.a.23) that wealth or domain is oriented towards action –plane of the ends- while possession, which is the proper of the constituent parts of the property, is aimed at production, to provide what is needed for family life.

On the other hand, there is a distinction between instruments, whose use results in a product, like a shuttle, which is used to produce a fabric, and others which are instruments in a general sense, whose use does not result in a product, such as a dress or a bed.

The owner is the one who knows how to use things, he is capable of providing unity and making sense of them, putting them at the service of the action, of a human life. In this sense, someone can be described as lord and master not because he has many things, but because he has enough to live his life well, he is not obliged to produce constantly as do the slaves, which is why they are instruments and parts of his domain or wealth. In other words, the proper of a lord and master is not to be an instrument of production, a subject of possession, but to use them properly.

Each family lives its own life, they have their own wealth and domain, separate and distinct, because they occupy a different place and have pragmatic freedom to dispose of their possessions. Then naturally emerge the comparison between the wealth of the families and the consequent potential for improvement through exchange between them, something that is among the reasons that lead to the development of the city. But with the emergence of the city also appears a new sense of wealth and domain, which points to a common and superior end for each of the families. It then becomes clear that families make sense only as part of the city (Pol.1260.b.15).

This new and broader concept of wealth has to do with all the human needs within the city. However, these things; besides being part of the wealth or domain of each of the families are somehow shared in common through exchange, based on reciprocity with the common good. With the constitution of the city there will appear a new problem: the relationship between economics and chrematistic that we will discuss in the next section.

## Economics and chrematistic

The wealth or domain of a family is composed of a set of instruments that need to be managed so they could be used in the precise moment that are required and in the

adequate quantity. In this way, it arises a technique called 'household economics' or household management<sup>7</sup>.

However, it should be noted that for Aristotle (Pol.1259.b.13ss) economics, that is, household management, must attend firstly men rather than inanimate possessions, virtues rather than the possession of wealth, free men's rather than slaves<sup>8</sup>.

Anyway, it is very important<sup>8</sup> in the economy to address the supply and replacement of the parts of wealth, which are consumed in use or will wear (Pol.1256.b.26ss) because nobody can survive without providing himself with the necessary to live. That is an activity that can not be unlimited<sup>9</sup>.

Aristotle begins by distinguishing, on the one hand, what he considers a natural way<sup>10</sup> to acquire, that is, the way through the family self-supply itself, which necessarily has an end; and in the other hand, another way to acquire, the so-called chrematistic, which is performed by exchange -buying and selling trade- that seems to have no end<sup>11</sup>. The first way would not be a proper technique, but something linked to the simple experience that men share with others. The second would be a technique itself, which implies the presence of a knowledge that goes beyond mere experience and points to the expectation that goes further than the immediacy.

Furthermore, families as parts of the city are not self-sufficient and so imperfect. None of them can be supplied by itself as that would be a sign of being locked into the animality. This leads Aristotle to support a kind of intermediate way of acquisition between the two previous already exposed, based on the exchange of things that would not be against nature<sup>12</sup>, as it would be addressed to complete the natural sufficiency of the family<sup>13</sup>.

In any case, as Aristotle himself recognizes, it is from this intermediate way of acquisition how chrematistic would have arose. With this, somehow, chrematistic would be implicit in the act of exchange between families.

<sup>7</sup> (Pol.1253.b.24) "property is part of the house, so the art of acquiring property is part of the economy, or art of managing the house ... because without the necessary things you can not live well, not even the simple life ... just like each of the arts is necessary to have appropriate instruments to carry out the work, so it is in the domestic administration ... possession is an instrument for maintaining life and property ... is a multitude of instruments".

<sup>8</sup> (Pol.1556.a.1-5) "the same way as the art of making shuttles is part of textile art or the art of making bronze is part of the art of sculpture ..." this is therefore a part.

<sup>9</sup> (Pol.1256.b.27) "The instruments of the art are never unlimited, neither in number nor size".

<sup>10</sup> (Pol.1256.a.10-13) "In the acquisition technique there is therefore a part that is a natural element of housekeeping as it provides the necessary means for the economy".

<sup>11</sup> (Pol.1256. B.40 - 1257.a.5) "There is another kind of purchasing art which is called chrematistic, to which there seems to be no limits to wealth and property ... it looks like the former but it is not the same, one is by nature and the other is not, but results from a certain experience and technique".

<sup>12</sup> (Pol.1257.a.28) "this type of change is not part of the chrematistic and not contrary to nature, but it is necessary to satisfy human needs".

<sup>13</sup> What is not clear in this approach is what Aristotle means by natural sufficiency of the family. It seems that natural is what allows to attain his own end, which is set with the use of the logos.

Departing from the experience of direct exchange of things by things –barter-, that actually was not a technique<sup>14</sup> but a quasi-technique, little by little, money would have appeared, as a symbol<sup>15</sup> and measure of the common need of the city, resulting in the technique of chrematistic.

Although Aristotle does not state explicitly, money appeared because in the original exchange of things the extension in time was not allowed, the forecast, and this fact made the formation of the real wealth or domain more difficult, indicating that this change was not perfect at all. Money, beyond the proper immediacy of animal acquisition, made possible the acquisition with order and forecasting, which is the proper of the logos. Nevertheless, with money appeared the appeal of owning the time, the abstract sense of living, which is a deformation of the object of chrematistic.

The basis of acquiring through exchange, which is the most properly human because it is not only based on simply experience but on a technique, would be that, according to Aristotle, all object under domain supports a dual purpose: as a direct satisfaction of a need and as an indirect one. For example, a shoe can be used as a shoe or as a medium of exchange. In the first case, the shoe is intended for immediate possession, whereas in the second case the shoe is an object of domain that can be exchanged. Both uses are acceptable, as it is a fact that some families have more and others less than they need, so it is natural that the trade of buying and selling arises, with a view to the common good.

In any case, -Aristotle emphasizes- a shoe has been made in order to be used as footwear, not as a way of exchange. With this statement he reflexes about the fact that the perfection of a technique, such as shoe production, depends on the singularity of the end, in this case, the concrete foot the shoe is addressed to. To make a shoe for exchange involves leaving without specifying the specific end of production, which leads to inevitable imperfections in the product. As Aristotle states (Pol.1252.b.1-3), nature does not do petty things such as the makers of delphian knife<sup>16</sup>, but does each thing for each end<sup>17</sup>.

One risk introduced by chrematistic, is the fact that it can be employed to convert in money everything it touches. However, as money only serves to be changed, in some way it seems to serve for everything, whereas in reality it is useless. This leads Aristotle (Pol.1257.b.15) to state: "certainly peculiar is this kind of wealth that in abundance leads to starvation, as tells the myth of king Midas, who, because of his

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<sup>14</sup> (Met.II981.a.5-7) "Many memories of the same thing become experience" (Met. II 981.b.103) "In this sense, the expert does not know ... the same way that fire burns".

<sup>15</sup> (Pol.1257.a.33) "was introduced by necessity the use of money ... something that they remain useful in itself, out of use easily manageable for life "

<sup>16</sup> Apparently the delphian knife was produced in order to be sold in the Delphi sanctuary, so it was used for many things: cutting, skinning, sawing, etc. when in fact none of these tasks were done to perfection.

<sup>17</sup> To see the relationship established by Aristotle between technology and nature, see Schummer J. (2001) and Solms, F. (1963).

insatiable desire, would turn into gold everything he touched". For this reason, the delphian knife, made to be sold, is similar to money, because it loses the perfection of its own end. It seems that chrematistic exercised in a wrong way becomes an obstacle for the perfection of the performance of other techniques.

It is clear that the trade of buying and selling is based on the fact that all objects of exchange have a common dimension: they are intended to be part of a wealth or domain, so that they may belong to a specific family. Moreover, if families remained isolated, their surplus would be worthless, so it would not be proper wealth or part of a domain. However, as families naturally tend to live together, they can exchange, so all things become valuable as if they were going to be part of a new and broader common need, which holds the city together, in which the needs and wealth of every family are considered. In this way, a new kind of wealth emerges, which is not limited and tangible as the family's one, but reveals the common need.

The appearance of money was a way to improve exchange, but it also made possible to pursue a new kind of spurious wealth<sup>18</sup> through excessive accumulation that apparently lacks of name<sup>19</sup>. This is due to the fact that money, for being a symbol and not a thing, such a shoe that can be directly used, is not object of possession but can only be exchanged. In this sense it is not part of any wealth or domain, as it refers to an undefined need, the proper of the city, which at first seems to be limitless. It is not an instrument in the proper sense of the term. Having money is something like staying in the middle of a change, which is only perfected when it reaches its end, when it is exchanged for another thing.

Anyway, there is an affinity between the two ways of acquisition, as both of them aim to reach wealth, but as domain or the whole of a family' possessions in one case; and as accumulation of money in order to increase wealth and domain<sup>20</sup>, in the other. That is to say, one aims to live well<sup>21</sup>, within an order, whereas the other one points to live limitless, without an order.

Chrematistic made the improvement of exchange possible; however, as it requires some kind of money accumulation, it constitutes a threat to the unity of the city,

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<sup>18</sup> (Pol.1257.b.18) "The definition of wealth and the art of getting wealth. It is not the same the natural wealth and the natural art of getting wealth, which is the economy, whereas the former is the art of commerce, which is productive, not in general but through exchange, as money is the basic element and also the end of exchange. This kind of wealth is unlimited, the derivative of this chrematistic ... there is not in this chrematistic a limit to his end "

<sup>19</sup> (Pol.1257.b.1) "when the use of money was introduced by the need for exchange arose the other form of chrematistic: the trade of buying and selling ... In the beginning appeared in a simpler way but then thanks to experience it became more technical, learning how and when exchange in order to get more profit ... it seems to be about money and its end is to consider where you will get plenty of resources, because it is a productive art of wealth and resources ... considering wealth as abundance of money because that is the object of chrematistic and trade".

<sup>20</sup> (Met.II981.a.20-24) "It is not the man in general that the doctor heals, but Callias or Socrates, or another one that was also a man".

<sup>21</sup> (Pol.1256.a.35-40) "Therefore there is a natural art of acquisition for those who manage the house and the city".



which is the finality of exchange<sup>22</sup> into the city. Without chrematistic, neither the division of labor would be possible nor the emergence of artisans, who earn their own living through the practice of their techniques, that is to say, by buying and selling their products. Nevertheless, at same time, passion for money threatens these techniques, as happened with the delphian knife makers, who not only made wrong products, but they themselves were degraded as men.

However, chrematistic can not only corrupt other techniques, but also itself, giving place to that deformed and monstrous way of acquisition, which is the usury, (Pol.10.1258.b) where accumulation of money does not come from its natural role, but from a fiction from whom money generates itself, without taking part in exchange. This is why "from all businesses this is the most unnatural way" (Pol.10.1258.b) as it is based on the radical distortion of exchange.

It is interesting to recognize the Thomas Aquinas statement (S.Th.II-II.q78.a1) that affirms that money cannot be the object of selling because it is something that does not exist, it is not a thing, but a symbol. In this way, he explains by an example that it is possible to require a price for the use of a silver pitcher, because as it is an instrument, it supports to distinguish between its possession and domain. However, this silver, as money, is not a thing anymore but a symbol which only exists in the act of exchanging. Besides, he adds, silver as an element, neither minted nor in a jar, supports the distinction between possession and domain, and so a price could be asked for its use as well as for its sale.

## Chrematistic as a technique

To develop this issue may be appropriate to remember briefly what Aristotle meant by technique<sup>23</sup>. He states that the logos, according to the aspects of the being it faces with, results in five types of knowledge: *téchne*, *phronesis*, *episteme*, *sophía*, and *nous*, which are not exchangeable to each other. While the first two are addressed to contingent beings, the last three deal with those principles of human being that cannot be in any other way. *Téchne* is therefore one of the ways to know the truth, a path to knowledge.

In the book E of *Metaphysics* he remarks that theoretical disciplines -superior in rank- arise from the study of necessary things, so they have a leadership role. From the study of things that can be in other ways (EN.1139.a.7) emerge the disciplines which transforms the reality. In this case, a new split has to be done<sup>24</sup> because if that transformation is immanent, that is, if it reverts to the man's perfection, we will have the *práxis*, whereas if this transformation is external we will have the *téchne*.

<sup>22</sup> (Pol.1257.a.18) "trade buying and selling is not part of the chrematistic by nature, since then exchange would be necessary to sufficiently satisfy needs... exchanges would cease when reach sufficiency ... it has no sense in the family, but in the city".

<sup>23</sup> For a detailed analysis see Aspe V. (1993) and Croce, E. de la (1976).

<sup>24</sup> (EN.VI.4.1140.a.1-2) "What can be of a different way is both the operable -poietón- as the agile -praktón- that is why production and action are different".

Anyway, the most important thing of a technique is not its productive or transformative dimension in relation to nature, but to be a path towards the knowledge of the truth on the way to the man's perfection. In the Greek world the first and most important thing was the knowledge of truth, which is the meaning of the name of Prometheus, whereas the name of his reckless brother, Epimetheus, it means to abandon the thought and the pursuit of truth. Because of that, Aristotle remarks (Pol I. 11. 6) that the techniques the "most vile are the least needed of personal qualities."

In Chapter 7 of Book Z in *Metaphysics* it is shown the teleological conception of *téchne*. The beginning of the technical process is developed in the field of mind, *noesis*, which prescribes and governs. The doctor, for example, knows something about health, and from that knowledge is able to perform the *poíesis* (production process), which is addressed to a particular man's health (Met. 1032.b.52ss). Without the end and the form, *téchne* would change into *tribé*, that is pure routine, which is *alogos* or movement without neither word nor knowledge. That is why birds that build a nest do not have a technique, but follow a *tribé*, simple routine, ignoring the causes which enable this type of construction.

The object of every technique is a contingent being whose existence is not given from the beginning, but depends on the passage of time, on one's ability and effort to contribute to the fullness of its being. This is a truth that is revealed, at the time it is being undertaken, which requires giving it a form, which is not always possible nor fully achievable, but is merely probable and always approximately.

There are many techniques as contingent objects can men propose to themselves or find out. Furthermore, as the objects of the techniques are overlapped and influenced between them, as seen in the case of the delphian knife, it may happen that with the development of some techniques other possible techniques appear, with their own object, which are as a junction of the object originally proposed.

In any case, no single technique can be guided by the essence of their objects because they do not have them, which is the last to achieve, in case they succeed in achieving it. In all of them, the way of holding the beginning does not entail to have the end, as it happens in theory, because time and process exist between both of them (beginning-end). That is why practice is needed in order to be able to learn how its own object can achieved the status of being. It is precisely this separation and tension between them, the previously expected and the already done, which leads to *poiesis*.

Since in these techniques the end is separated from the beginning, its perfection lies in the proper exercise of the activity, therefore what characterizes the knowledge of the techniques refers to the most essential of the activities that make possible to obtain its object. This is a knowledge that, on the other hand, cannot be a theory, but it is merely addressed to provide points of support in order to make that activity as well as possible. In this sense, technical knowledge aimed at improving the practice

of an activity. He who practices a technique has to contemplate what he is doing in order to improve or rectify what it is outlined or in the way of becoming.

As techniques cannot fully know the essence of their subjects, they cannot be completely satisfied with what they achieve. Thus, for instance, medicine never abandons the search of health, its subject, because it never possesses it completely. Consequently, the techniques' limit has more to do with the used means, that with the object it seeks (Pol.1257.b.30ss). For the same reason, techniques always deals with the singular and specific, not universal, so medicine tries to heal a particular man, not men in general. Its purpose is not about the idea of health, which is unknown, but trying to cure the singular man, and thereby knowing what health can be.

Considering the case of chrematistic it seems that its original purpose was to improve the execution of change, regarding to a better acquisition, simply said, regarding to manage to buy lower and sell higher. However, with the emergence of money, as a result of the efforts to improve the execution of change, it appeared a variant of chrematistic, whose object was to obtain the maximum monetary gain in each exchange, as it seemed to be a good measure of exchange efficiency.

In Aristotle's explanation on how Thales of Miletus was enriched (Pol.1259.a.5-20) it seems that indeed the subject of chrematistic would be the achievement of monetary gain. According to this explanation, it seems that in part was a superior knowledge of the future which enabled him to foresee better than others. In addition, it also required not only to know the available resources to deal with that contingency, but also to have a certain amount of money in order to buy or rent these resources. From this point of view it seems that indeed Thales gave proof of wisdom. However, Aristotle adds, the "general principle of chrematistic" is to ensure, where possible, the monopoly of some resource. Accordingly, the subject of chrematistic would "be to generate a monopoly," which is openly against to what was its origin, that is, to improve the exchange. Moreover, achieving a monopoly is not the proper of wisdom, but rather of violence or fortune. Therefore, Aristotle concludes that "although it is easy for philosophers, if they want to, to become rich, that is not what they are eager to do" (Pol.1259.a.20).

In *Nicomachean Ethics* (1133.a.1) it is remarked again that exchange is necessary in order to keep the city together, so it seems that for chrematistic to be a real technique it should have to be addressed to the best execution of exchange carried out into a city. However, is it possible for chrematistic to achieve it by itself?

While Aristotle's answer is clearly negative, the conclusion from modern economic theory is absolutely in favor of it. One of its key assumptions is that if each individual pursues in every exchange the maximum monetary gain, there is at the heart of the city a mechanism that, in a impersonal and inevitable way, leads to the establishment of equilibrium prices, those who allows the coordination of plans for all individuals, in other words, the highest perfection for all individuals exchange. In

this way, chrematistic becomes not only the mainstay of modern economy, but it is transformed into a part of a theory<sup>25</sup>, a part of an *episteme*. In addition, it does not only remain as a technique, as an indefinite knowledge, which is the proper of human action, but its use has been encouraged without any limits, as it is poorly argued that it is self-sufficient and is able to regulate itself and be determined.

In any case, it is true that chrematistic is the proper of the city, the technique of exchanging through money, whereas the proper of the family itself is the economy, the technique of managing the household. It makes much more sense to speak of a political chrematistic, which is what Aristotle intends to do when he speaks about a chrematistic limited by the economy, rather than a political economy which is what modern economics proposes when converting the chrematistic into a theory, transforming it into a coordination mechanism in order to reach a balance between needs and wants, which is a way of treating the city as if it were a strange family.

For chrematistic to become part of a theory, as modern economic science pretends, it is necessary to have, from the beginning, a perfect knowledge of its subject, a universal exchange model, which equates all individuals offer and demand<sup>26</sup>. The result is that instead of a united city, which involves activity and freedom, an equilibrium state is obtained, where human action is not possible.

It can be said that modern economics has put all his attention on the essence of a supposed abstract model of market exchange<sup>27</sup>, leaving aside the essence of the exchange process, the unique and specific of each of them. Moreover, as it has been checked in the recent development of modern theories of economic equilibrium, it has not been possible to develop a theory according to the proper activity of exchange.

Aristotle did not follow the path of the modern thinkers, which was the way as Plato exposed it<sup>28</sup>, because he believed that the technique was more oriented to “do” rather than to “know”, that is to the *poiéthic* perfection of men. For him, it was through the technique how man reaches his humanity. He knew that it was not possible to depart from a perfect or abstract idea of exchange -from an ideal city- but, on the contrary, it had to be discovered, through a concrete practice, the way to carry them out. Only in that way, a more and more united city, although never finished, could be achieved.

Unlike the case of modern economics, who has put all its interest in the hypothetical perfection of an abstract rational system, where there is not place for the action of individuals, Aristotle was interested in the development of the individual, in

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<sup>25</sup> On the relationship between the modern economy and the financial considerations is very suggestive Berthoud, A (2002).

<sup>26</sup> It is not understandable how if everyone seeks for the monopoly, a situation of perfect competition may ultimately arise, where no one has more power than the others on prices.

<sup>27</sup> It is significant that Walras had to resort to the metaphor of "auctioneer" to explain how the process of trade, which is a practice, could ever become a state of equilibrium, which is a theory.

<sup>28</sup> In this sense it is very suggestive the approach of Berthoud, A. ob. cit.

the continuous improvement of the men capacity for action, which means helping each other in the acquisition of virtues. In this sense, true exchange between men can only be done under the influence of their greatest virtues and abilities, which is what enables exchange and make men happy. Happiness then is an activity, a way of action that pursues the good life, not a mere allocation of things.

Contrarily to modern economic thinkers' opinion, exchange is not a "natural fact", something objective and neutral, but the result of human actions, whose perfection depends on the vices and virtues of the actors, something that is learned from acting more than thinking. As Aristotle states: "in order to know about the things we want to do, we should do the things we want to know" (EN.II.1.1130 to 32-33). Nobody knows what to do, until he has done it, because "no process is from the same order as its respective final end" (EN VI.4.1140.a.1-10).

The perfection of a technique is achieved through the practice of solving practical cases. It is very significant that in the story of the alleged enrichment of Thales, the exchange was raised in an abstract and general way, which is imposed to all others, and which is precisely what modern economic theory does.

The problem of chrematistic is that it is a technique which regulates the exchange, something concrete and singular, through money, which by definition is abstract and general. Therefore all concrete exchange is somehow open to the general, and as a result a certain accumulation of money is always required, so that exchange can be broken into two stages: the buy and the sale, which can be separated in time, allowing a better management of wealth or domain of a family.

Chrematistic is a technique, a knowledge which is not exact but approximate, in continuous research and improvement because the truth it pursuits is constantly being built up, so it can go ahead as well as backwards. That is why Aristotle insisted in the importance of focusing on the essence of the exchange process, because it was the only way to make it improve. It cannot be reduced to the calculation of some equilibrium prices, as modern science has sought economic purposes, but rather to learn how to exchange better and better.

For that reason, Aristotle states that chrematistic must be subordinated to the economy in order to put a natural or reasonable limit to the inevitable tendency it has to accumulate money. I do not think it is good to talk about good and bad chrematistic as if it was something intrinsic to that activity, but rather to speak about of good and bad use of money, or about the confusion at the time of establishing the meaning and purpose of exchange.

The fact that chrematistic does have no limit in itself is something proper of a technique which, like all others, requires something that from outside of itself, establishes its limits and gives sense to it. On the opposite, it becomes an absurd activity which is detrimental to the city, as the excessive accumulation of money can

turn out to a loss of its value, and this distortion can make it impossible to return to the objects, which is the natural way of the end or perfection of exchange<sup>29</sup>.

It is interesting that Aristotle reports that usury multiplies the amount of money (Pol.1258.b.) since it is not an exchange of things by things. We should not forget that money is a symbol of unity -need of the city- so it is not strictly possible its absolute appropriation. It is not money which gives unity to the city, but on the contrary, friendship and good citizen behavior what makes money possible, which is an expression of mutual trust in the way of building the city.

On the other side into the city there are a lot of techniques, as we have had occasion to see, reciprocally influence themselves, both positively and negatively, as men can be confused at the moment of setting a technique' objects<sup>30</sup>, and that is why they must be necessarily subordinated between them, according to the purposes they serve. Furthermore, chrematistic must be subordinated to economics, and this, to politics, which is the most complete perfection of man. Since techniques are a kind of imprecise knowledge, generalizations based on trends, can easily make mistakes and faults due to the contingency and uniqueness of the field of human action. There is a great inaccuracy on techniques because of the variety and fluctuation of human actions. Not everybody behave the same way in front of the same circumstances.

The proper end of each particular technique is integrated into the framework of a hierarchy of techniques, of moral actions and sciences. The production of brakes for horses must be subordinated to horsemanship, this to war, and so on until achieving politics. "The purpose of politics should include the end of the others, from which it follows that the end of politics is the truly human" (EN.1094.a.26ss). This is a natural order.

Politics' object, however, is man himself, because it points to the common good that includes all partial and instrumental ends. Politics are not a productive discipline but a practical one that covers the core to which all activities are oriented, and that is why it is the right one to govern techniques.

Convert a technique, like chrematistic, as part of a theory, as modern economic science has attempted, is trying to convert the human acquisition process into something autonomous or neutral, out of politics and cut off from the common good. However, what has actually happened is that it is no longer a *téchne*, and not to become part of a theory, but to become a spurious and inhuman *tribé*.

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<sup>29</sup> I think the financial crisis of recent years have much to do with this process of creating money without based on contracts actually achievable, resulting from false attempts to get disproportionate monopolies.

<sup>30</sup> That is the case of money, which by its own way of being has no natural use (Pol.1528.a.6-14)

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