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ΜΕΤΡΟΝ, ΜΕΤΡΙΟΝ, ΜΕΤΡΙΟΤΗΣ. **Greek Concepts of Measure**

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> It is most difficult to know the measure of wisdom, which alone holds the end of all things.
>
> Solon (fr. 16)

Introduction

The difficulty with elaborating the scope of the concepts of measure is their versatility, for they have found the applications in different fields of human consideration: in theoretical reflection, inquiries concerning social order, concerning righteousness and moderation, and within the domain of the arts and crafts as a criterion of correctness, and thus precision and skillfulness. The early Greek authors evinced an unexampled penchant for exploring nature, and seeking an explanation for physical phenomena, providing justification for their social conditions, and delivering proper methods for expanding skillfulness and precision. Their admirable exertion for the perfection of the intellectual cognition, developing characters and outstanding creations through careful studies, and socio-political and artistic activity, induced them to introduce profound considerations into the concept of measure within theoretical, practical and technical investigations.

To present the variety of these concepts, referring only to the early Greek sources, I've decided to divide the paper into four subsections enclosing different aspects of the issue. The first presents theoretical inquiries concerning the structure and functioning of the universe, its principles, and thus the observable (and intelligible) order that emerged and exist from, due to measure. The second explains the instrumental dimension of measure and measurement as a method developed in the field of the arts and crafts. The third subsection refers to the ethical, political and legal aspects of measure realizing itself through moderation. The last puts forward the question of the ἄνθρωπος μέτρον dictum with reference to the present research and constitutes the conclusive part of the paper.

It is also important to explain that the idea of measure presents itself from diverse perspectives, therefore it reveals itself in different conceptual ranges, and in different notions, for we need to make the distinction between μέτρον and μέτριον, considering the first as a criterion or mean (μέσον), and

the second as substantial regularity and an attribute of beings (referring to the concepts of φύσις), or even as a touchstone and goal (referring to socio-political and technical dimensions). The latter conceptualization inclines also to the complex investigations of καιρός and μετριότης being correlated with the ideas of correctness, fitness and properness, but also a moderate mode of acting (practical dimension) and operating (technical dimension) (Academy of Athens, Research Center for Greek Philosophy 1994, 198; 244; 248-249). The diversity will be precisely explained in the present investigation.

Measure: Cosmological Dimension

The myth of the beginning implied an inquiry (ιστορία) into the world's order revealing itself in becoming beings and the principles (ἀρχή) that conducted the processes of change within the entirety of phenomena. It initially gave an explanation for the questions: how and why had something emerged and remained in existence, what is the principle or mechanism of its development or hopefully, advancement (Naddaf 2005, 1-4). Following these issues, early Greek researchers attempted to reconsider the emergence and expansion of κόσμος due to the reason (Reale 2005, 71), or more precisely—principle (ἀρχή) (Reale 2005, 77). We should begin with an explanation of the early Greeks' understanding of the term κόσμος as an ordered entirety of beings, structured and aligned, to elaborate later the parameter of measure as a conceptualization of recognized patterns.

The contemporary meaning of the term κόσμος refers to "the aggregation of the celestial bodies" and the expression stays closely to our common association of today. Early Greek investigators of nature believed that this "aggregation of celestial bodies" emerged from chaotic and unstructured being in an act of alignment. Thus, κόσμος was perceived as an order that was brought to a preexisting chaos. As Plato presented in his reflection on the mythological views of his compatriots, the act of alignment was executed by the Constructor, the Maker (ποιητής) or the Artificer (δημιουργός), who arranged the entirety of beings, according to the eternal pattern he relied on (Plato 1997, 28a-29a). The parabolic representation of the act of creation underline several features of the early Greeks' understanding of world's existence mechanism. Two are vital for the forthcoming analyses.

Firstly, κόσμος has emerged through the structuring of the chaotic matter as an order, a pattern, that could be recognized. Secondly, the existing world was an opus (έργνν) of an act of creation (ποιείν). The first of these aspects will be explained in the present subsection, the latter in the following one. Structuring or imparting a structure means "to organize," "to bring an order," "put in a framework". Referring the concept of structure to the aggregation of entities, we may construct the idea of entities which have been

arrayed in a certain arrangement or configuration and the way in which relations between them were defined. John Lewis explains the notion citing Robert Hahn: "The kosmos is an "organized whole," with "distinct parts that comprise the union." It is the nature of the parts and the principle of their arrangement that makes the multiplicity a kosmos" (Lewis 2006, 19-20). The parts were of course "the material of the structure" but only while organized by the principle they could be named "an organized whole," to be precise, κόσμος. The concept of the structure is elaborated plainly by A. L. Loeb:

> A structure is an array whose entities bear a well-defined relation to each other; alternatively, the word structure is used to denote the set of relations between the entities of a pattern. Pattern recognition is the recognition of systematic relations between the entities in an ordered array. A study of structure is therefore a study in relations (Loeb 1971, 339-346).

To unfold the meaning of the first aspect in the context of measure we have to take a closer insight into the relations issue and the human ability to recognize them as intelligible, as available for human cognition, basing on the early Greek theoretical attempts at defining the fundamental principles organizing κόσμος. According to this approach the present paragraph regards measure as a cosmological notion arising from the human recognition of κόσμος and tenable for discursive abilities, in other words, it is possible to present them in the theoretical thesis giving an explanation for the actual state of the entirety of phenomena by presenting the reasons (or principle) of their existence. The explanation the early Greek thinkers developed to pursue this goal basically focused on identifying the fundamental principles the whole being relied on and arranging them in a cosmological representation for becoming beings. Especially, the Ionians, and further Pythagoreans, reducing qualitative aspects to the quantitative ones described a given order in the notion of measure and number (Vamvacas 2001, 50). But we can easily find similarities in other Presocratic investigations concerning proportion, balance and harmony.

It is necessary first to precede the forthcoming inquiry with a brief remark clarifying the early Greek approach to this matter. The presented approaches, commonly perceived as philosophical, should be not placed above the inquiries of other kinds. I have chosen Heraclitus and Pythagorean concepts combining logical approach with previous forms of explanations: cosmological myths and poetic presentations of the discussed subject. They constituted transitional form of scientific inquiries, religious adoration and philosophical astonishment. It's necessary to notice that the so-called "philosophical approach" to the great question of the world's foundations is only one among many other forms of cosmological narration (Most 1999, 332-362).

The idea of measure as a discursively possible to explain, thus objectively verifiable, relation between entities, objects or phenomena in reference to cosmological dimension of research was developed mostly by two early Greek thinkers: Heraclitus and Pythagoras. As far as the first and fundamental

principles are concerned, we can guide our inquiries in two directions: to delineate speculatively distinguished principles as the fundamental reason, or to point them out in the actual, empirically accessible, relations between entities. It is the principles of the latter presentation are the subject of this article. In other words, I'm inquiring into the early Greek attempts of finding an explanation or even justification for existing the world's alignment. The principles might have arranged κόσμος, shaped the relations between the entities, creating a pattern that stayed beyond any accidental configuration, bringing order and recurrence. However, the Greeks could name the world κόσμος by dint of the fact that there were empirically confirmed regularities that could be the evidences for the order's actuality. As Loeb pointed out "recognition of systematic relations between the entities in an ordered array" results in creating a pattern of recognition (Loeb 1971, 339).

The early Greek term of λόγος relating to the order of the whole being, συμμετρία as a commensurability, ἁρμονία as a consonance or a perfect union of entities, and ῥυθμός as the systematical pace of changes, are the theoretical concepts representing the actual patterns. In the context of human recognition, each of them could be expressed with the concept of measure. Both Heraclitus and Pythagoras introduced some of them, adequately, to their theories—presenting the latent, eternal, divine world's order, or respectively, recognizable representations of κόσμος.

The Heraclitean λόγος, despite its multiplied linguistic meanings seems to be an extremely capacious philosophical term prone to multifarious interpretations. The authors interested in this case tend to agree that λόγος pertains to objective (non-relative with any factor or agency) and fundamental principles arranging the reality.

For the purpose of this research there's a necessity to examine whether this term could be perceived with reference to the conceptualization of measure, and what would be the theoretical consequences of this association. Proceeding with the article of Edwin L. Minar "The Logos of Heraclitus," firstly, we encounter a derivation of λόγος that leads to a verb λέγω (gather, collect) as its etymological root (Minar 1939, 323). One may notice at least a vague concatenation with the denotation of the process of alignment ("to gather, collect" as "to bring order"), λέγω, maintaining a close relation to the Heraclitean understanding of the latent structure of κόσμος and its principle, λόγος (in mutual relations, the process of alignment based on the principle resulting in creating a cosmic structure, the principle recognized by human as a reason for actual state). Then, following the lexicon of Liddell and Scott, we explore the meanings of λόγος listed in several groups, but the most significant, in terms of this research, are: computation, proportion, relation, correspondence and, last but not least, measure. Moreover, Minar argues that these meanings relate to not only the adequate Heraclitus passages, but also to Herodotus, Hippocrates, Pythagoras and other early Greek authors (Minar

1939, 324). Λόγος being the power that navigates the κόσμος and furthermore a discursive representation of the divine laws (cf. Graham 2010, Heraclitus: fr. 41) is supposed to present itself, according to the meaning ramification, also with the notion of measure as its perceivable realization, and, moreover: "the latent structure [ἁρμονία] is master of visible structure" (cf. Graham 2010, Heraclitus: fr. 54). Thus, I claim, λόγος and μέτρον weren't interchangeable terms and represented two different dimensions: the becoming being (as preceding factual state principle and actual arrangement as well) and the cosmological representation. We also learn that:

> Earth is liquefied as sea and measured into the same proportion it had before it became earth (Graham 2010, Heraclitus: fr. B31).

The introduced fragment refers to the structure of the elements' arrangement by a proportion expressed in a certain measure, a primer for the becoming being. There can be made an assumption that the measure, in the context of λόγος, was a principal characteristic of the structure of beings (even before they'd become as such), firstly delineating their interdependence, secondly presenting the relation between entities. The measure was basically not only the representation of the balance and order of nature, but also the representation of the principle of the process, e.g., for Heraclitus measure was a rule of change that held opposites in harmony (Schiappa 2003, 119). Thus, we may consider that measure as a cosmological concept was born with an inquiry of the nature (περὶ φύσεως ἱστορία) and as a notion reducing "the imprecise unknown to the precise known"—disorder to order (Moutsopoulos 2006, 280). Measure was perceived as a proportion characterizing the relations between becoming being (κατὰ λόγον), but also intelligible cosmological, theoretical description, and thus a model representation for perceptible examples. In the field of cognition, the metrical interdependence, while identified as a pattern for a group of phenomena, can be recognized as a revelation of the universal principle of the perpetual process of change (Vamvacas 2001, 109-110). In the field of knowledge, the rendered measure, understood as a model, constituted a formal pattern for physical objects and phenomena. It can be perceived substantially, as a constitutive part of the primal reason, the principle, expressing the proportions that were fundamental for the emergence and development of κόσμος, and instrumentally, as a conceptual tool explaining the observable relations. Hence, the concept of measure developed by the early Greek thinkers, contributed to a certain generalization, a universal, theoretical description of the entirety of phenomena, reconstructing the perceptible realization of the principle of alignment with the concept of measure. Therefore, while engaging the concept of λόγον with the notion of measure there can be a conclusion drawn of a genuine similarity between the cosmic measured order and man's rationality capable in apprehending it as such (Vamvacas 2001, 113-114). The cognitive representation of measure

induces postponing the contemporary understanding of the term, its random appearance as quantitative characteristics (e.g., weight) attributed to particular objects or phenomena.

Seemingly, the Pythagorean conception met on the common ground with Heraclitean inquiries. The meaning of the Pythagorean ἁρμονία inclined to the Heraclitean λόγος with its reference to the structure and mechanism of κόσμος. But there are also significant differences. According to his master's teachings, Philolaus explained Pythagorean harmony as the unity of the whole being, different entities and phenomena combined by the rules of the universe in an encompassing consonance (Tatarkiewicz 1970, 95). However, harmony used to be presented as a quantitative form of number, measure, and proportion (ibid. 96). According to Pythagorean teaching, the principle of the universe was the number (ἀριθμός), hence proportion (ἐμμετρότης) (Aristotle 1984, *Metaphysics,* 986a), displaying the relations between entities, it constituted the existing order of the whole being. Furthermore, measure expressed those regularities, delineating (by accuracy) which of the perceivable phenomena are "fit" or "due". Due measure (ἐμμετρία or καιρός) was, thus, the designation of particularity in its resemblance to the eternal pattern. Here, as we can see, Pythagoreans stressed the incongruence between measure as an absolute principle and measure as a human method of reasoning, for the latter could not entirely overlap the former. As Constantine J. Vamvacas pointed out:

> "Measure" does not necessarily lead to the "truth." The Pythagoreans have such a profound understanding of the *limits* of measurable knowledge, that for them it merely constitutes the means of *approaching* absolute truth, which is unutterable, inexpressible (Vamvacas 2001, 81).

The latter passage carries content of great significance. As long as we can delineate the relations of entities with the parameter of measure it still could be fit, due, proper or right, but not entirely designate the becoming being. Therefore, the measure which was supposed to describe the patterns of nature was more or less proper, right, or accurate, even just, but still a "merely" representation or approximation of the existing order. Measure described the cosmological dimension, a basal order of the entirety of entities, the model patterns of remaining in mutual relation phenomena, presentation of the mechanism of κόσμος, its laws propelling the existence of the world as the Ancient Greeks knew it. Actually, number and measure as symbols or tools of the logic was not supposed to reveal the one true order in its whole magnificence but still, step by step, it uncovered the veil of ignorance, bringing it closer to people's understanding. And thus, according to Pythagorean, not only the universe was seen as a consonance of proportions due to the right measure, but the human constitution was perceived as ruled by the same laws—therefore was also arranged in an orderly way by the same proportion also proper, right or just in actions revealing its nature.

Perceiving κόσμος as the alignment of entities Pre-socratics distinguished in this context organization (the arrangement of the elements) and the mechanism of change, of dynamism (between the elements of the arrangement—rearrangement due to the strict rules). Describing the given order not only with epistemological criteria (truth, plausibility, relevance), but, as a matter of fact, also with evaluating remarks (right, just, proper, due), Pre-socratics were studying the congruency of κόσμος as a harmonic structure of beings, which, governed by divine principles, represented the ultimate, most eminent model. Translating their discoveries into terms and notions (discursive substitutes of eternal models), they assigned them attributes of wisdom and righteousness, putting an effort in devising the proper methods and forms of a reconstruction of the cosmic harmony in the human domain.

Measure: Correctness, Fitness, Properness

Measure, being not only a presentation of a static order but furthermore an instruction for its functioning, was engaged into creating the technical directives for an instructive and effective kind of knowledge. However, there was no need to develop brand new techniques to achieve this goal, for they'd already existed. However, the matter of their improvement was strictly bound with the injunctions of the right measure. The arts (τέχναι) constitute a repertory of those techniques, the instrumental rules and methods of technical knowledge, which couldn't be reduced only to the term of "skillfulness" but referred chiefly to an expanded form of wisdom following the recognition of principles and relations between them. Therefore the artful process included reasoning (λογισμός), causal explanation, and cognizance of various aspects of a certain object of interest (e.g., the human body) or the recognition of different factors which have an impact on it (e.g., climate, nutrition details). Long before philosophy emerged as a discipline developed by the distinguished group of sages, the Greeks perceived skilful craftsmen, poets, physicians, commanders, or rhetoricians as the profusely gifted, blessed with an exquisite kind of wisdom.

A distinctive feature of the early Greek arts was their comprehensive character and elaborated methodological background. Rarely, a particular craft left its holders a possibility for exercising their imagination in an act of unbounded, joyful creativity. The framework was precisely defined and the rules were obliging for everyone who wanted to be called a craftsman. Therefore, in the field of the arts' certain priorities and criteria (both for an act of creation and its result) were developed and preserved. Broadly speaking, to point out the most fundamental of them, we'll take a closer look at the requirements of correctness, fitness or properness.

According to the Hippocratic author, τέχνη was the opposite of τύχη (chance, accident) (Schiefsky 2005, 6). By this statement, he stressed the

intentional nature of the activities and actions arising from the practice of genuine art. To be precise, he claimed, referring to medical art, that the recovery of a patient resulted from proper treatment, and not out of luck; what concerns failure—it ensued from the lack of technical knowledge (ἀτεχνια), or at least, a case was beyond skillful resolving. Correct and incorrect use of an art is therefore a sole reason for success and failure (apart from the cases that are not resolvable by medicine or any other art) (Schiefsky 2005, 7; from: Hippocrates *De arte 4,* 227. 12-15, Jouanna [L 6.6]). The Hippocratic author identified the art of medicine with a successful treatment due to reasoning and the correct application of proper methods. Moreover, he derived the existence of art from the existence of the factual appearance of the distinctive situation of correct and incorrect art principles' realization and method's application (Schiefsky 2005, 8). Correct (ορθός) treatment conducted by a physician (a craftsman of his art), succeeding in the patient's recovery, was, thus, the undoubted trait of the existence of a certain art—e.g., medicine (ιατρική τέχνη) and the most distinctive criterion of τέχναι in general.

This short introduction is not only an exemplification of genuine craft but also an applicable presentation of the characteristics of the early Greek status of the arts. The relationship between the arts and measure can be specified by distinguishing the particular significance of the requirement of precision or accuracy (ἀκρίβεια) which revealed itself in methods subordinated to measure.

Ακρίβεια can be translated as "exactness" or "precision", a feature of any activity or function, e.g., the act of creation, which can be evidently graded and can undergo an improvement. Referring to the previous inquiries, the top point of ἀκρίβεια in exercising a particular art or craft would be associated with the correct application of the principles (ἀρχαι) and method (οδός) assigned to an adequate field of practice. Schiefsky states also that:

> It was a *w*idespread view that a τέχνη *needed to be able to achieve* ἀκρίβεια, and any discipline that could claim only limited ἀκρίβεια ran the risk of not being recognized as a τέχνη at all (Schiefsky 2005, 13).

Therefore correctness, constituting a condition *sine qua non* of an occurrence of τέχνη, depended on a certain preciseness. Consequently, few factors could be delineated as precise as the metrical dimension developing quantitative methods fulfilling the requirement of the right measurement. Schiefsky underlines the close relation between precision and artful methods implying a conduction of measurements. It refers strictly to the field of practical usage, especially in the field of the arts and crafts: architecture, sculpture, medicine, navigation, martial tactics. The precision obtained by a measurement is perceived as an approach to a processing of physically attainable objects, not an operation on the abstract mathematical units (Schiefsky 2005, 15).

Writing *On Ancient Medicine,* the Hippocratic author reflected on the standards necessary for a precise usage of the quantitative methods in medicine. The quantitative features of this art, among qualitative ones and the right timing, created the necessary repertory for a practitioner to achieve ακρίβεια (cf. Schievsky 2005, 34). As long as the precision of highly developed arts and crafts demanded more sophisticated methods, more elaborate knowledge and compounded skills, the quantitative aspects of this practice took their leading role. Following the statement, the correctness of treatment could be obtained, chiefly, by aiming in due measure at every patient exclusively and with great accuracy and acuteness (cf. Aristotle 1984, *Nicomachean Ethics,* 1096a 31-34: "Medicine is knowledge of the due measure in nourishment, and gymnastics is knowledge of the due measure in exercise."). The individualization of treatment implied the usage of quantitative methods due to their instrumental character. The principles that constituted the theoretical background were approaching to φύσις in its generality, not any particularity. Thus the concept of measure in the field of the arts and crafts was divided into two dimensions, theoretical, presenting formal patterns, with proportions recognized as the models (a desirable aim of treatment), and instrumental, as an useful implement for a practitioner exercising his discipline.

> For one must aim at a measure; but you will find no measure – nor number nor weight besides – by referring to which you will know with precision, except the filling of the body (Hippocrates 2005, fr. 9.3).

The complementarity of knowledge and its application with the proper methods in each particularity (a certain situation or case) is a concurrence we may actually investigate under the requirement of correctness. Furthermore, measure, as a delineation of the formal, model relation of body fluids (indicating health), the purpose of treatment (μέτριον), and a particular method's application, the means to achieve it (μέτρον) (Schiefsky 2005, 187) was perceived separately. The first belonged to the model representation, both theoretical and exemplified in a certain case (as the health possessed by a person or that which needed to be restored to a patient). The second was attributed with the evaluation of accuracy and properness, for it constitutes the process of healing according to the conduct of correct procedure (the art of measurement—μετρετική τέχνη). Hence, it appears that measure could be right (ορθός) or due, fit (καιρός – especially in the meaning of right timing) only as a way to achieve a purpose. However, in reference to the previous subsection, it was also a goal to pursue (being the exemplification of the general pattern – the proper proportion, brought back with the correct artful method's application).

The dual manifestation of measure, as μέτριον and μέτρον, can be displayed with the example of the visual arts. Following Theognis, Władysław Tatarkiewicz in his *History of Aesthetics* indicated two main features from the

characteristics of early Greek arts and crafts: measure and correctness (Tatarkiewicz 1970, 44). The elementary rules of the visual arts, such as architecture, sculpture or painting, were enclosed in κανών which introduced the model proportions for buildings, human images and other artful representations (cf. Tatarkiewicz, 60). Thus, κανών was expressed by due measure and constituted the quantitative pattern accomplished in a piece of art. The sculptors, like Polycleitus, reckoned that a perfect human body, and actually, the whole of nature, could be delineated and recreated with mathematical proportions. Galen mentioned this in his considerations *On the Doctrines of Hippocrates and Plato:*

> Policleitus first gave us full information in that book about all the proportions of the body, then he confirmed his account in action by fashioning the statue in accordance with the demands of the theory; and he gave to the statue, as he did to the treatise, the name Canon. All physicians and philosophers place beauty of body in the proportions of the members, and health in the proportion of the elements, whatever they may be, to each other (Galen 1984, 309).

Artisans, as well as physician, studied physiognomy and designed κανών as the idealization of nature (Tatarkiewicz 1970, 70). The perfect proportions, or due measure, were perceived both as a conceptual model and as the aim of the creative act. The correctness (fit measure as a mean), appearing in the process of creation, was based on the proper methods of the genuine art or craft, and their application appeared in the mode of accuracy. Therefore the correct measurement and obtainable precision of a procedure precision were also the criterion of art in the meaning introduced by the Hippocratic author.

Right measure, and its manifestation in fulfilling the criterion of correctness and fitness, was also an essence of the various crafts of words: poetry, sophistry and rhetoric. Theognis, a Greek poet, expressed through the terms of due measure and correctness not only the fundamental principles for the arts and crafts in general, but also for poetry in particular. The metrical structure, especially of early Greek poems, was not only perceived as a proper arrangement but, frankly speaking, the perfect one thanks to the similarity to "the voice of gods", which, through rhythm and rhyme, mediated by metric verse, filtered the ultimate and eternal wisdom into the world of men (Most 1999, 353). Moreover, the sophists, like Protagoras or Prodicus, argued that there is a great importance to be attached to the skillful usage of language to provide the accuracy of the selection of proper words and to carefully examine the distinction between their denotations—"correctness of words", as they named it. Gorgias persuaded also that a skillful application of words can be characterized by the concept of καιρός, which can be explained as "speaking the right thing in the right moment" (Woodruff 1999, 295-300), but also as utilizing "fit measure", proportion or fitness (cf. Liddell & Scott 1889). Phillip Sipiora extends the meaning and usage of this term:

> A fundamental notion in ancient Greece, kairos carried a number of

> meanings in classical rhetorical theory and history, including "symmetry," "propriety," "occasion," "due measure," "fitness," "tact," "decorum," "convenience," "proportion," "fruit," "profit," and "wise moderation," to mention some of the more common uses. In some critical ways, kairos is similar to another master term, logos, in that both concepts generated many significant definitions and interpretations and carried strategic implications for historical interpretation (Sipiora 2002, 1-22).

The instrumental devices presented in the present subsection were founded on those principles and methods referring to the concept of right or due measure. Complying with them provided the exact precision. By exercising a genuine art or craft, thus following the criterion of correctness, the holders obtained a desired goal. This artful instrumentation was invoked purposely, for as right measure remained an object of vital theoretical interest and, as we mention in the upcoming subsection, ethical considerations, technical correctness was helpful or even, in some cases, necessary to provide the most effective results, in pursuing wisdom and conducting a life of virtue.

Measure: Moderation

The concept of the Heraclitean λόγος or the Pythagorean harmony as proportion expressed with right measure were founded on the assumption that the given order, the ultimate principles delineated within the parameters of human recognition, the latent structure translated into intelligible patterns, constitute objective models that need to be followed, for the speculative conceptualization presented order that was not only relevant to the actual state, but furthermore: right and just, as well (cf. Plato 1997, *Timaeus* 87c: "Everything that is good is fair, and the fair is not without proportion"). The cosmological and socio-political motifs interwove in the early Greek concepts, one influencing another—for what was cosmologically perceived as harmony and proportion, ethically was known as moderation (μετριότης, μέτριον). With Pythagorean teaching, these ideas gained the status of a systematically developed life style of self-restraint. However, the sole idea of maintaining the conduct of a proper life due to right measure was at least as old as the first preserved literature. Gerard Naddaf claims that:

> In fact, in a cosmogonical myth, both cosmic evolution and cosmic order are modelled on, and expressed in term of socio-political structure or life of community (Naddaf 2005, 2).

Thus, the cosmogony is a politogony and anthropogony, as well. Naddaf persuades that it is plausible that the creation of myths, and perhaps, the inquiries into nature, was politically motivated, for the utmost purpose of the myths used to be explaining and guaranteeing the appropriate "way of life." Therefore, a "parallel and continuity between political engagement and cosmological theory" shall not pass unnoticed (Naddaf 2005, 2). Solon's approach to the subject suggests that he compared well-ordered society with

a cosmic arrangement, and for him, society was actually κόσμος (Lewis 2006, 11-12).

Giovanni Reale pointed out that before the sophists and Socrates there was no moral philosophy and the preceding reflection was based on the conviction that a man and society is a part of the cosmic arrangement, the same as the elements and the phenomena around him (Reale 2005, 219-230). Therefore, the principles of the universe—concerning its structure, existence, processes, motion, or transformations within—have their application also in a human domain. Or, on the other hand, they were somehow mirroring the rules of men's harmonic existence elevated to its ideal form. Hence, in response, this ideal form was the goal to pursue and obtain by every man, organized societies and political structures.

The early Greek moral reflection was, according to Reale, beyond philosophical reasoning, beyond any justification. As he presented, the early Greek convictions on the subject was a collage of guidelines and prescriptions of a common sense. Still, as far as the idea of perfect harmony occupied people's mind, the recommendation of moderation appeared to be the most prominent and widespread ideal of an "ethical code". Moderation was pursuing due measure while oscillating between extremities.

The practice, understood as acting in ethical and political sense, was not convergent with any theoretical contemplation (ἐπιστήμη), nor technical devising (τέχνη). Its entirely distinctive domain, however, closely correlated with both of them. The correlation was particularly evident with the second domain, while it came with possessing an efficiency of means, though noticeably with the first as well, especially among the disciples of a new, rising reflection combining the theoretical and ethical dimension—philosophy.

The initial considerations on the subject are evoked with the manifestation of early Greek wisdom. To stress the primordiality of the "existential" character of moderation as aiming at the right measure in the mode of an individual's life style (not only in an ethical meaning), we will take a closer look at the poets, politicians, sages and philosophers—those who took the challenge of creating proper educational, or paideutic, schedules, following Hesiod in his conviction: "Bear in mind measures; rightness (καιρός) is the best in all things" (Hesiod 2007, fr. 694).

Accompanied by the noblest and the most influential men among the early Greek thinkers—Thales, Cleobulus, Solon, Theognis, Bias of Prien—Hesiod expressed a broadly expanded declaration of their times: μέτρον ἄριστον—measure (moderation) is best. Diogenes Laertius (I/6, 93) ascribed this latest sentence to Cleobulus of Lindos. Nevertheless, it was obviously he expressed not only a separated opinion of an individual but gave the voice for common sense and considerations that had dwelt among the Greeks.

However, the most eager advocates of moderation and protagonist of the Aristotelian golden mean (μέσον) was one of the Seven Sages—Solon. He identified Δίκη (justice or righteousness) with moderation, aiming at the due

measure which used to stand against υβρις (arrogance), seeking "the truth in the middle" (Lewis 2006, 91). Thus, it constituted the highest ethical standard every man ought to possess: right reckoning (Lewis 2006, 39). Moderation had its source in prudence (γνωμοσύνη), the careful consideration of a problematic matter in its practical aspect. Solon delineated the problem as "the measure of wisdom" or "the hidden measure of judgment":

> It is most difficult to know the measure of wisdom, which alone holds the end of all things (Kirk, Raven, & Schofield 1983, Solon, fr. 16).

Γνωμοσύνη was the kind of knowledge that searched for an answer to a question concerning the end or limit of all things. In their commentary, Kirk, Raven and Schofield set together Solon's and Heraclitus' approaches to the problem of wisdom, stressing that it was strictly connected with a struggle for obtaining a satisfying life, for the understanding of λόγος, the recognition and understanding of the arrangement of things in general, also in reference to everyday life (Lewis 2006, 91). According to the specific of γνωμοσύνη, it was obvious that the moderation, as a mode of wisdom, was not only a matter of personal guidance in striving for the appropriate life of an individual, but foremost, a mechanism of harmony among the people of πόλις, that ought to be the final aim (Lewis 2006, 46). Albeit, he was aiming at establishing firmly moderation as αρετή of the individuals constituting society, Solon underlined the problem of judgmental dilemmas and the moral justification of verdicts due to lawfulness (Ευνομίη) (Lewis 2006, 124), as well as the burden of political leadership entangled in legislative procedures. Both the personal and social perspective of moderation, according to Solon, implied the development of a certain kind of wisdom, prudence or consideration. The same proposition emerged from an analysis of the Heraclitean λόγος as reasonable proportion and right reckoning (Hussey 1999, 91). It referred to the situation that demanded a difficult judgment or decision in the case where the truth is not the beacon light but the right answer or choice appeared only in the frames of possibility. Chaim Perelman recalls the term ευλόγος to delineate sentences that base only on the plausibility of a qualitative character: thus the judgement or opinion could be "generally accepted" and "worth accepting", usually connected with a probability that the reasonable person could accept to take up a position - for the issues concerning the moral or political dimensions rarely revealed themselves in a mode of finality and their proper evaluation was concealed at the distant perspective and multitude of factors. Moderation or right measurement we could describe as "a procedure" of weighing the argument or one's words (opinions, decisions) due to their significance, advantageousness, even pleasure, wielding a touchstone of the right measure. This specific mode of measurement—moderation—is thus a form of social, political, legal prudence or consideration, a mode of wisdom, realizing in a calculative research the proper means to achieve the given purpose.

Democritus was convinced that the ultimate goal of men was cheerfulness understood as a proper approach to a matter of pleasure. The "proper approach" was nothing else but moderation:

> Having identified human interest with cheerfulness, the evidence of the testimonia and the fragments is that he thought that it was to be achieved by moderation in the pursuit of pleasure, by discrimination of useful from harmful pleasure, and by conformity to conventional morality. The upshot is a recommendation to a life of moderate, enlightened hedonism … (Taylor 1999, 197).

Democritus also identified moderation with self-restraint (Graham 2010, Democritus: fr. B211) and finding due measure (perceived as a goal) in a cheerful life pursuit (Graham 2010, fr. B233):

> Self control (σωφροσύνη) increases enjoyment and makes pleasure even greater (Graham 2010, fr. B 211).

> If one should exceed due measure (μέτριον), the most pleasant things would become most unpleasant (Graham 2010, fr. B 233).

The thinker presented the human being as a *microcosm,* a little world, and thus he underlined the harmonic structure of man's soul. The harmony, revealing itself in virtues and happiness, was obtainable through following due measure, with moderation, the offspring of prudence (Vamvacas 2001, 228-233).

Following the adduced opinion on moderation and right measure, we may assume that they used to be identified with a sort of ethical and political instinct or sense of what is just and righteous. It seems, however, that moderation is not a simple virtue or a guidebook for obtaining a noble and cheerful life. However, basing on the principles, it is rather a matter of consideration than reflection, principles "in action" and a certain skillfulness, which man ought to possess to distinguish the right from the wrong, the useful from the useless, just from unjust. While the answer wasn't crystal clear, and the situation brought a dilemma, there was a need of devising both a foothold, constituting a standard or norm, and a proper procedure providing the best results. The Greeks referred therefore to the right measure.

Measure: An Anthropocentric Challenge

Such beliefs underlaid the most famous Greek dictum concerning measure – Protagoras' apothegm: man is the measure of all things: Πάντων χρημάτων μέτρον_ἄνθρωπος, τῶν μὲν ὄντων ὡς ἔστιν, τῶν δὲ οὐκ ὄντων ὡς οὐκ ἔστιν (Protagoras: fr. 80 B1), and ἄνθρωπος μέτρον was perceived as a norm of judgment (Reale 2005, 247). But what are these "things"? Χρημάτων, translated commonly as "things," could be considered as broadly as this word implies—as the whole of things man turned his mind to, which was

emphasized by preceding it with a term παντών (Schiappa 2003, 118). But since Sextus Empiricus examined the contextual usage of χρημάτα over πραγμάτα it clearly must have changed the connotation. Πραγμάτα delineated those things which belong to concrete, firm reality, and thus, related to a certain standard of objectivity. On the other hand, χρημάτα, denoted the things that were valuable or useful (goods, properties, objects for use). Janet Atwill suggests that a similar comparison can be made between χρόνος and καιρός. While, the first one is rather abstract and exists "independently" from human being, the second one shows its attachment to the area of possibility or occasion, which may have a genuine value for man. Therefore, χρημάτα also appeared to be something one could have an interest in, or grant a value: ethical, instrumental or even epistemological. According to Protagoras, also the field of knowledge belonged to the domain of χρημάτων, because "what we know is what we find worth knowing" (Atwill 2009, 138-139).

We may assume "man's measure" as a normative regulation for cognition, action or creation, concerning a genuine "measurement" which didn't actually aim at undergoing a true-false judgement. Ευβολια—a Greek term of "good judgement" —referred to a situation, when firm knowledge was unachievable, or its objectivity was no longer a matter of importance. Measure appointed a standard of utterance, action or work, which one could recognize as right or just, valuable or simply useful. Every man was able enough to produce a proper judgement, relying solely on a probability of the desired effect's appearance. As far as the good judgement located itself in the frame of a choice between extremities, moderation, as a quality of a man's character (ἦθος), was mostly eligible. Moderation was perceived as a specific ability of proper measurement according to the right proportion or proper measure, also a kind of balance which constituted a normative background. However, the properness or correctness of measurement depended not only on the quality of character but also on a certain skilfulness reaching beyond the field of ethics.

As aforementioned in the second subsection, the properness, correctness and precision of measurement underlay the domain of the arts and crafts. Although, moderation could be developed only in the process of considering possibilities and decision-making, it depended to some extent on the instrumental guidelines, including those that belonged to the arts and crafts.

Solon was convinced that poetry has an ethical and political value (Tatarkiewicz 1970, 43), Heraclitus believed that the skilfulness of poets lacked only in truthfulness, but they, who did not, reflected in their poems the gods' wisdom, *resp*. λόγος that ruled the world. However the metrical verse, they used as a form, was the most suitable for the prophets, oracles, and presumably, also the philosophers or sages—those who ought to speak the truth, thus they also ought to use a proper form. Furthermore, Parmenides claimed his poems were a result of divine inspiration. Empedocles esteemed

not only poets but also physicians, musicians and many other craftsmen in their resemblance to the gods. John Lewis notices that poetical systematic integration was not only a form of beauty but also utility, and furthermore, could find "an application to the organization of πόλις." As he elaborates on the poetical presentation of cosmogony:

> ... an integrative order is used to bring complex phenomena into the reach of man's intellect and actions. To create an order among the particular things (kosmein) or to order something well (kata kosmon, or eu kata kosmon), is to create such an arrangement (Lewis 2006, 19).

The early Greek philosophers eagerly took advantages of artful techniques, perceiving them as fit and correct due to the task they served – gaining knowledge and justifying actions (Most 1999, 332-360). There is no need to elaborate in details on the Pythagorean reflections on music's influence on the human soul (Tatarkiewicz 1970, 97), it is enough to conclude that through him measure gained the highest rank in the cosmological, ethical and technical dimension. While harmony, expressed with the concept of measure, became fundamental for both cosmological and ethical inquiries (Tatarkiewicz 1970, 98), the metrical aspects of the arts and crafts, especially music, appeared to be a gateway to understanding the surrounding phenomena and achieving consonance, balance, moderation—right measure.

Finally, there's a necessity to consider the aspect of ἄνθρωπος μέτρον significant for the research. The previous examination revealed that man's measure as a normative standard for knowledge, socio-political activity and creation concerned only those matters which were valuable for man. As far as we take under consideration a certain man in his particularity, and a number of the researchers agree with that (Atwill 2009, 138), it appears obvious that the judgements and opinions on the same subject differed among individuals because the subject presented itself differently to opposing human beings. Object appearances based on perceptions, thus they were not coincidental or arbitrary to the individuals, and as a "matter" of judgements and opinions were "open to question and challenge" (Atwill 2009, 140). Hence, even the highest principles, especially those concerning ethical and political relations, could have survived only in the form of human established laws, and rules as their representation, the relativity of which resulted from the factuality of the described relations. For those who believed ἄνθρωπος stood for the whole of mankind, the "man's measure" passage of Protagoras is an apophthegmatic manifestation of a general assumption that knowledge has a meaning or value that could be "measured" only with the criteria men established for their intellectual, socio-political and technical projects.

While there was no need to deny the existence of simple truths, or even undermine more elaborated theoretical inquiries, the sophist was interested in examining the human methods of creating the representation of the becoming entirety of beings, and furthermore, the human struggle in the fields

of ethics, politics and law. Therefore, right measure was not only a epistemological standard for a reflection of wise men confronting the relativity of human cognition or decision-making, but, particularly, it constituted a sole goal, for the individuals and society. A delineation of what is valuable, righteous and useful was the first step to a construction of the world around according to man's expectations and needs. This is why laws, rules and principles presented only a specific perspective: Human λόγος was merely aspiring to achieve precision for representing the latent structure of the universe – harmony. Yet, it was the only thing that delivered a meaningful interpretation of it, which found its fulfilment in the socio-political dimension. The measure and the procedure of measurement, both in theoretical researches and the inquiries of humane interactions and creations, could not be only an instrumental facility, but, while putting aside the technical context and speaking broadly, the sole mode of wisdom men could ever possess which brought all beings to an order, but not a cosmological one—but an anthropological order, that made things understandable, just and achievable.

The early Greek philosophers, such as Heraclitus, Pythagoras or Parmenides maintained their justification of the socio-political order, which they yearned to introduced as widely as possible, from the recognition of the cosmological structures to the introduction of principles of a physical and ethical nature (expressed by proportions, thus right measure). Furthermore, the most advantageous method they did not waver to exercise, both for a formal arrangement of the content of their writings and for composing the instrumental repertory for gaining the goal they established as a beacon light, was the matter of measurement due to gaining right measure. While the purpose is difficult to obtain, the touchstone excels in moderate consideration, and the method must be as precise as it's possible in a certain case. The correctness of the measurement, depending basically on the skillfulness of the individual and his judgment or opinion, or even, knowledge perceived as firm, could aspire to a certain properness and thus, produce plausibility, by consistency and preciseness of the conducted process. And those parameters characterized the field of the arts and crafts.

The early Greek arts and crafts were perceived as those which have been established with careful studies of nature and grounding their rules and methods in the centuries of exercising. Therefore the instrumental value of artful guidelines was never underestimated. It's probable that moderation, as aiming at attaining right measure, as well as the stipulation of correctness, properness and fitness, combined the basic political and ethical demands with the skilfulness emerging from the principles of the arts principles and the methods of their correct implementation.

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ΜΕΤΡΟΝ, ΜΕΤΡΙΟΝ, ΜΕΤΡΙΟΤΗΣ. Greek Concepts of Measure

Abstract: Submitted article presents a variety of the concept of measure in the early Greek investigations of nature, development of ethical and political structures, fundamental norms of the arts and crafts, and conclusively, searches for understanding of the ἄνθρωπος μέτρον challenge. Among the crucial notions of the early Greek investigations, *measure* was one of the most receptive: from speculative inquiries to ethical considerations, from theoretical constructions to methodological directives, from normative arrangements to technical solutions. The thinkers and sages introduced the concept of *measure* into the normative reflection of the ethics and politics, enclosing the most essential and fundamental prescriptions for noble, virtuous and favourable life. Furthermore, the concepts of measure combined the cosmological order with the mathematical proportion, logical principles of recognition with the methodological arrangements for the truth approximation.

Keywords: Measure, moderation, proportion, correctness, *homo mensura* (ἄνθρωπος μέτρον)

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