The Memorial of Metrodorus
Greek Stoichedon from North Africa

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I wish to acknowledge the organizers of this Fifth International Forum for their coordination of such relevant subject matter as the History of Writings, Calligraphies, and Inscriptions together with the Tenth Anniversary of the New Great Library and what this means for the recognition of both diversity and universality of written communication in our world. My thanks go to the Supreme Council of Antiquities for permission to study the funerary inscription of Metrodorus, the subject of this paper, and the lunette portion of the Stele of Moschion, to which I will also make reference.

The memorial of Metrodorus is, on its simplest level, a six-line inscription written in Greek commemorating the deceased by name: Metrodorus; with patronymic: son of Apollonides; with Demotic: of Miletus. Many, if not most, Greek funerary monuments when charted across all periods of Greek epigraphy limit the commemoration to precisely these three elements. They may be accompanied by some other relief embellishment, which the Metrodorus monument does not have beyond the plain raised border that carefully frames the inscription a full 2.5 cm on all four sides. The outer dimensions of the limestone plaque are 38.4 cm high and 36.4 cm wide, almost a perfect square. The inscription is written in first person. The monument itself is speaking, not the deceased, again not unusual, but we observe that it necessarily includes the nomenclature in the genitive, and hence privileges the monument to the fullest extent.

There are two things, however, that begin to distinguish this monument and elevate it in our estimation. The first is its provenance, important for the North African focus of the conference. The inscribed plaque most likely is from the site of ancient Naukratis, located in the western Delta, core of the Greek presence in Egypt from the period of the Saïte pharaohs. Under Pharaoh Amasis, the port of trade was officially awarded to the Greeks for their loyal military service towards the king, although archaeological evidence indicates Greeks inhabited Naukratis from the foundation of the Saïte Dynasty by Psammetichus I in the mid-seventh century BCE. Among other colonial groups, a population of transplanted Milesians resided there. Early graffiti recorded by W.M.F. Petrie in the precinct of Apollo Milesios date from the third quarter of the sixth century BCE. Naukratis would boast temples to Amun-Re and Thoth in addition to an array of Greek deities connected to the individual polis contingents. The most famous temple establishment, according to Herodotus, was the Hellenion, and it was co-founded by a full range of poleis, including Miletus, with the earliest archaeological evidence dating back to the first quarter of the sixth century.¹

It is interesting to consider our inscription in the organizational context of the Catalogue général for Egyptian Antiquities in the Cairo Museum, where it exists today (Inv. 31183). In the volume Greek Inscriptions edited by J.G. Milne and published in 1905, which must serve as a fundamental resource for this subject while the collection database is still being formulated, there are a total of seventy-two funerary stelae and inscriptions in Greek from locations throughout Egypt—a large category (as it normally is) compared to State decrees (ten in number), honorific inscriptions (fourteen), religious regulations (thirty-eight), and so forth. Out of the seventy-two grave markers, thirty-five are from Delta sites, with another eight from Alexandria. Out of the thirty-five, only two are considered from Naukratis. The Metrodorus monument is so judged on the basis of its alphabet and dialect, as well as the claim on the part of the original seller to the Giza Museum that the piece had been brought from Damanhour, ancient Hermopolis Parva, just to the northwest of Naukratis.² The other stele is more secure, with Petrie’s own label showing Naukratian provenance.³ Its design is very different
from that of Metrodorus, but still cross-culturally innovative. One might expect more examples, but the location of Naukratis and the archaeological difficulties incumbent on that topography, from the time of Petrie and Gardner onwards, are well known. Therefore, the survival of the Metrodorus monument is in itself noteworthy.

The second distinguishing aspect concerns the exceptional treatment of the simple elements composing this memorial. We are speaking of the palaeography and layout of the stone. The alphabetic letterforms of the inscription are arranged in a gridded stoichedon formation that reinforces the overall square of the plaque with its raised frame. Stoichedon inscriptions are characterized by the manipulation of the written elements composing a text with respect to an underlying grid. The Greeks made this layout the hallmark of their most distinct epigraphic style, flowering in the fifth century BCE but continuing well into the fourth and in various revivals or attempts at archaizing in later periods. It has been the aim of my research on the subject to understand the geometry of this style and its manifestations, particularly at the point of origin. I have recently argued that Egypt should be considered as the motivating impulse behind the Greek experimentation with grids that ultimately characterize the stoichedon style. The full Egyptian grid system, canonized for treatment of the human body as early as the Middle Kingdom and used for the organization of hieroglyphic inscriptions as well, continued into the New Kingdom, Late, Ptolemaic, and Roman Periods. What subtle changes in the canon of proportions that occurred at various points along this timespan are very important, but so is the continuity of the grid as the device for proportional composition. In the sixth century BCE, it would have been easily transmittable through just such a trading center as Naukratis to the larger Greek culture beyond.

The description by Diodorus Siculus (I.98.59-) of the methodology employed by the sixth century Samian sculptors Theodorus and Telekles, each making half of the cult statue of Pythian Apollo following the Egyptian canon of proportions and then successfully joining the parts, attests to the Greek interest in modular proportion at this critical moment. The earliest Greek stoichedon probably occurs in Samos, not in Athens, ca. 560 BCE as evidenced by the inscribed dedication by cheramyes from the Samian Heraion in the Vathy Museum. Even if the story of Theodoros and Telekles is anecdotal, as suggested by J.J. Pollitt, the principle of modular proportion is not. The transmittal of the principle of canonization from Egypt through Samos makes sense, especially since the Samians were among the first colonists at Naukratis. There are important early examples of Miletus’ interest in alignment and lettering as well, the most exceptional being the remains of a calendar of offerings reused in the later Delphinion at Miletus and tentatively dated by L.H. Jeffery 525-500 BCE. Despite the governance of the strong horizontal guidelines on the boustrophedon inscription, the careful spacing and alignment of the letterforms suggest that this, too, is stoichedon. Even the label for the inscription at Berlin’s Altes Museum describes it this way: ‘The characters are evenly distributed like in a grid and the lines are to be read alternately left to right and right to left.’ In my definition of the style, I make a distinction in how the alignment can be manipulated. The even placement of letterforms within the grid matrix, each letterform within its unit, or stoikos, with no empty spaces, and hence aligned with the one above and below, to the right and to the left, I define as rectified stoichedon. If the centering changes in any way, up to the alternation of a full space on the grid, still deploying the letterforms in alignment but not directly below each other, this I define as offset stoichedon. The effect is in the
manner of an isodomic wall construction. For Greek epigraphy in general, this format has never before been recognized as stoichedon. Despite privileging the horizontal drive of the text by means of guidelines and boustrophedon arrangement, the Miletus calendar nevertheless demonstrates the principle of the offset stoikhed on.

The power of the stoichedon layout of the Metrodorus inscription lies in its perfection of numbers and spacing. The letterforms are arranged in six vertical rows and six horizontal rows, thirty-six total stoikhoi or units with no visible guidelines, painted or incised. The height and length of each row, whether vertical or horizontal, is 25.0 cm, making the dimensions of the stoikos unit 4.2 sq. cm. The average letterform height, and it is extremely consistent for both rounded and upright forms, is between 3.0 cm and 3.5 cm; only the omega is short, measuring 2.5 cm on average. The Metrodorus inscription is a rectified stoichedon for the full length of the inscription, one of the finest and most regular that I have ever seen.

The palaeography is in accord with the scrupulous alignment of the layout. These are monoline letterforms with no variation intended in the width of the stroke, which stands at 3 mm. This means the ratio of the width of the stroke to the height of the letterform is around 1:10. There is no appreciable swelling of the stroke at any point along its length, and no serif, and the strokes are deeply cut. As mentioned above, the letterform height is remarkably consistent, the average between 3.0 cm and 3.5 cm; whatever variation there is, is also consistent, creating families of letterforms. Tabulating the dynamic between letterform height and width is how I begin the analysis of the alphabet of any given inscription, the full treatment of which is not possible to discuss in the time allotted for this presentation. It is worth mentioning as a starting point, however, that the omega, already identified as the only letterform that drops significantly from the common height, is also the widest letterform, the horizontal extent if its arms even occupying the full width of the stoikos unit the first time we read the letterform at the beginning of line two. It is the quintessential Ionic letterform. Of the three occurrences of omega in the inscription, this example best demonstrates the form with clarity and balance. In any Greek alphabet, the two most basic geometric shapes, the line and the circle, stand in their own right as vowels in addition to contributing to the formation of all other letters or grammata. In the Milesian alphabet of the Metrodorus inscription, the basic vertical orthostat is the iota and the full circle is the omicron. These letters help set and refine the 3.0 - 3.5 cm range. Interestingly enough, both of them measure the low end of this range for the majority of their occurrences (four each) over the inscription. This might not be surprising for the omicron, which traditionally is a smaller letterform in the development of Greek epigraphy; but it is surprising for the iota. Yet the ultimate and penultimate letters of the inscription are an iota and an omicron at the end of line six, and both are clearly and deliberately outsized: 3.7 cm for the iota and 3.9 cm for the omicron. The entire last line gives the appearance of added height: the sigma is a full half-centimeter taller than its only other occurrence in line three. The result is a strong, magnified sense to the closing line completing the genitive for the family's demotic origins, with the 'matching' iota, and omicron at the end doing their full share in creating an emphatic visual closure.

The large scale and careful geometric sensibility of the overall inscription recalls the high quality of the Hekatompedon inscription itself, dated early fifth century BCE from the Athenian Acropolis, with which I have spent much time in study and drawing. Over and over, it is said we cannot date by letterform, yet we can certainly ballpark and with proper caution, certain letterforms are considered
diagnostic in the chronological sense, especially for an epichoric alphabet. In the first publication of the Metrodorus plaque by P. Jouguet in the BCH of 1896, the inscription is not dated. Subsequently, the Catalogue général dates it to the fourth century BCE, but with no discussion why. The Sammlung der griechischen Dialekt-Inschriften, also published in 1905, leaves out the date but points to the epsilon still rendered with equal-length horizontals, and the smaller omega. A. Wilhelm, picturing an ‘Abklatsch’ of the inscription in his Beiträge of 1909, introduces it as an example of the pure field quality stoichedon is capable of achieving, which any admission of word or line break will destroy, something he finds that Attica does early in the history of the style, but still no date for the Metrodorus inscription. The JE entry just calls it ‘Late’, clearly in relationship to the Pharaonic timeline. This is the full bibliography I have compiled on the stone, yet the issue of date has not been adequately addressed for this, one of the most important Greek inscriptions in all of Egypt. We will return to the date in the end.

Something else that recalls the Hekatompedon Inscription is the grand-scale use of the three-point interpunct; and as with the Hekatompedon, the punctuation of the Metrodorus inscription furnishes the key to how the inscription really works. Here is where literal content and visualization come face-to-face. This funerary monument may not have relief, but it has punctuation, very strategically placed. Yet we find it only in the first three lines. Three-point interpuncts occur three times within these three lines, the first securing the exact center of line two, between the omicron signalling the end of Metrodorus’ name in the genitive and the epsilon of εἰμί. No additional stoichos is ever added to accommodate the punctuation. The second and third interpuncts are symmetrically placed in line three between the first and second stoichoï and between the fifth and sixth stoichoi. They separate εἰμί and σῆμα in the first case, and σῆμα and the genitive for Apollonides, Metrodorus’ father in the second. The placement of these two interpuncts is structurally symmetrical and perfectly frames the word σῆμα, yet the first interpunct is cut vertically between the iota and sigma, while the second is cut diagonally between the alpha and tau, following the right oblique of the alpha. That variation is nothing short of brilliant, as the triangular shape, which has been symmetrically blocked out, is composed asymmetrically by the treatment of the two lower interpuncts in relationship to the first: two vertically composed, one on the diagonal. Word by word, Μητροδώρο εἰμί σῆμα takes on special power precisely because of these three-point interpuncts. Likewise, the power of the pyramidal triangle now imbedded within the inscription created by the punctuation framing the word σῆμα is no accident. Directly underneath the triangle, the patronymic fused with its demotic, occupies three lines, just like the first half of the inscription, but without punctuation. Just as surely, this is no accident. The very foundation for who Metrodorus is and for the σῆμα that consequently speaks for him—that is to say his identity vis-à-vis the first generation behind him, namely his father, and the ancestral polis behind that—is the subject matter of the second set of three lines and is treated as a solid mass of letterforms. There can be no punctuation allowed in the second half of the inscription, both from the standpoint of content and visual display. The perfection of the placement of the three-point interpuncts in the first three lines, when this is analyzed, penetrates and begins to explicate the whole display. What occurs here qualifies for the definition of concrete poetry: where the shape and formation of a piece of writing fuse with the literal content of its text to produce meaning beyond what each is capable of producing separately.
To what purpose in the memorial of Metrodorus is this phenomenon taking place? Granted that the palaeography and layout are remarkable, a model indeed of the rectified stoichedon style, but this is more. Beginning with the perfect square, the six by six horizontal rows crossed by vertical columns, the ample accommodation of the thirty-six letterforms in proportion, the first-person address in three words, separation of these three words and the flagging of the word σήμα using three three-point interpuncts, the resultant triangle crowning the three lines of massed text below—all of these elements have been numerically orchestrated for the perpetuation of the memory of this man on a completely different level. This level is understood better by the host culture than the Greeks settling in Naukratis: it involves concretization of form, however real or abstract the composing elements may be, and the role of magic in activating them. In no area of their existence is this more critical, as evidenced from the whole of Egyptian civilization, than the funerary. I believe that this inscription was intended as something akin to a magical word square. R.P. Austin, who wrote about the stoichedon style in the late 1930s, described a word square or crossword as ‘a group of letters set out in such a fashion that they make straight lines horizontally and columns vertically, and form intelligible words when read in either direction’. 12 While the Metrodorus inscription is stoichedon rectified, it is not a bona fide word square, nor is it an acrostic. It is, however, utterly preoccupied with mathematics and proportion and replete with what can only be termed numerological symbolism from its sheer repetitiveness of the number three. It is a unique take on a magical word square, playing with the positioning of letterforms to some degree as though they were numbers. The presence of the magical word square is known on Egyptian soil, most famously in the much later Stele of Moschion. 13 The most famous example of an inscription incorporating magical word squares known from Egypt is the Stele of Moschion, 14 a bilingual demotic and Greek dedication that has been dated end of second century, beginning of third century CE. That date, like the Mithrodorus inscription, needs reevaluation. I am hard pressed not to say more about the Stele of Moschion, especially as it undoubtedly is from Sakha. Today, the lunette portion is in Cairo and the body fragment in Berlin; but assuredly the stele continues to be a critical player in my study on the stoichedon style because of its nearly intact Greek grid and the rare occurrence of the word stoichedon in its text that explicates and justifies the offset definition I have given.

John Onians in his classic study, Art and Thought in the Hellenistic Age, references the phenomenon of fusing form with literal content as occurring frequently in the development of the epigram in the Hellenistic period, one of the best examples being Βωμός, or The Altar by Dosiadas. 15 Such a visual interplay between word and image, where the shape of the poem imitates its contents, is known as a technopaignion or a ‘game of skill’. Onians prefers the word symbolon. 16 Dosiadas’ technopaignion or symbolon, composed of iambic rhythms, sets itself up as a dedication made by the mythic hero Jason. Even more importantly, Onians suggests that the Hellenistic period was disposed towards this flourishing play on words and images because ‘the essential characteristic of these poems is their reference to a system of written communication relying not on an alphabet but on the use of representations of men, animals, plants, and other objects’. 17 The writing system which by its nature incorporated the model of this interface at its core was the Egyptian hieroglyphic, known to the Greeks from their earliest contact with the host culture, even as the grid must also have been. Ultimately, the Hellenistic world, whose acknowledged capital was Alexandria in Egypt, could intensify in a highly sophisticated, multi-
cultural environment, that ‘essential equivalence between word and image’, as Onians puts it,\textsuperscript{18} which in the end produced such a prodigy as an alphabetized hieroglyph: something like the altar epigram of Dosiadas. Despite its simplicity, the Metrodorus inscription has this kind of sophistication.

Would this suggest, then, that the Metrodorus inscription is Hellenistic in date? Far from it, in my opinion, although parts of it do scan in iamb. I am disturbed even by the fourth century date in the \textit{Catalogue général}. The Metrodorus inscription has a significant affinity to one Milesian inscription in particular that we have already seen, the religious calendar extracted from the Delphinion at Miletus. By definition, the calendar qualifies as an early example of offset stoichedon, probably late sixth century as already stated. While more archaic in appearance because of a mixing of diagnostic forms, the generous size and spacing of its letters, the powerful omicron are strongly reminiscent of the Metrodorus memorial; of equal importance is the prolific use of triple interpuncts, strategically placed in accordance with the needs of the text. Just as in the Hekatompedon Inscription, the triple interpuncts are accompanied by more complex punctuation, in the case of the calendar a five-point interpunct. Indeed, as Jeffery states, the calendar ‘has been well compared with that of the famous ‘Hekatompedon’ inscriptions from the Acropolis in Athens’.\textsuperscript{19} The fact that the Metrodorus, on its own terms, bears comparison with both the Milesian calendar and the Hekatompedon says much for the inscription. Its ties to the Late Archaic and Early Classical are strengthened even more through another fragmentary stele with sacred content built into the Delphinion at Miletus.\textsuperscript{20} This inscription is much tighter and irregular in format than the calendar, more densely inscribed on four sides and combining pockets of offset and rectified stoichedon, but still directly comparable in palaeography to certain diagnostic letterforms of the Metrodorus memorial, especially the epsilon that attracted attention in the \textit{GSI} publication. On another trajectory which may, in fact, prove to bring all of this together, Jeffery refers to the so-called ‘Milesian’ alphabetic numeral system, found as early as the sixth century BCE in vase graffiti.\textsuperscript{21} More work is needed to substantiate Miletus’ actual role in the development of the Ionic alphabetic numeral system, which will eventually replace the acrophonic system in Attica, but the equation of letterforms with numerals is an activity definitely to be associated with the polis at an early stage; and numerals, as we have seen, are to be associated with this inscription.

In conclusion, the claim this funerary inscription has for a significant role in the development of the stoichedon style in Egypt is great. It is earlier than the fourth century BCE, very likely early fifth century, and a precursor through its image-creating punctuation of nothing less than a Hellenistic technopaignion, some two-hundred years ahead of its time. Even as the owner of the memorial himself is so grounded, the inscription appears very well-grounded in its Milesian epigraphic heritage, which includes evidence for the burgeoning stoichedon style in the late Archaic period. In this paper the Metrodorus inscription demonstrates the true perfection of the rare stoichedon arrangement in Egypt because of its unique properties as a would-be word square using numerological symbolism that may require the host culture to fully decipher. On one level, the Metrodorus inscription is all about letters, numbers, and proportions and we observe it fulfils its job very well. The Egyptian necessity for a memorial that functions effectively on more than one level of reality, one of those being the magical, takes the letterforms in their stoichedon matrix and weaves in the eternal.
The Memorial of Metrodorus

(Fig. 1) Metrodoros 1

(Fig. 2) Metrodoros 2

(Fig. 3) Metrodoros 3

(Fig. 4) Metrodoros 4

(Fig. 5) Metrodoros 5

(Fig. 6) Metrodoros 6
(Fig. 7) Metrodoros 7

(Fig. 8) Metrodoros 8

(Fig. 9) Metrodoros 9

(Fig. 10) Metrodoros 10

(Fig. 11) Metrodoros 11

(Fig. 12) Metrodoros 12

(Fig. 13) Metrodoros 13
Notes