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The Cosmos before Cosmology: Foreshadowing of Order in Prehistory

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Abstract

The cosmological view of reality developed within a mindset that was conditioned by the origin and early development of logical thought and of language: the earliest form we have is the one that was shaped "historiogenetically," by the literate civilizations of Mesopotamia and Egypt. The paper will highlight its extremely old prehistory, which can be characterized as pre-logical and pre-linguistic, lasting some two million years, and its culmination in the earliest stages of logic and language, some sixty thousand years ago. I will aim to show how in this period the germs developed that made eventually possible the reflection of the early "symbolists" who, as Voegelin writes, "were clearly not satisfied with merely relating [the facts]; they wanted to link them, through an act of mythopoiesis, with the emergence of order in the cosmos." My thesis is that these early "symbolists" had not only "historical materials" at their disposal, but also an embryonic sense of order that had been developed by their prehistoric confrères.

Introduction

The relevance of prehistory for Voegelin's concern with the concept of order¹ may at first seem doubtful, considering how little applicable the very notion of political organization appears to be for prehistory. Yet, I feel that an argument can be made in its support. It rests on the consideration that even the earliest tool-making of pre-linguistic times evinces a sense of structure that was independent from perception, in such a way that it could affect the stance in front of reality as otherwise perceived. There thus came to be a relationship to the cosmos that went beyond the immediacy of sense perception. However embryonic, this was a form of "cosmology" that emerged in clearer light with the appearance of articulate, syntactic language. Against this background, we will be in a better position to appreciate some of Voegelin's key points by seeing how their roots sink deeply into the human and even the hominin past.

¹ Erich Voegelin, Order and History. Vol. 1. Israel and Revelation. Edited by Maurice P. Hogan as Vol. 14 of the Collected works of Erich Voegelin. Columbia and London: University of Missouri Press, 2001.

It is significant to note that in his later years Voegelin developed a greater interest in prehistory, at a time when some of the data I will refer to here were just beginning to become known. He would have been just as interested in an aspect of archaeology that has developed in more recent years, namely what is known as cognitive archaeology.² As the term implies, this relies on efforts to infer patterns of cognition from the mere evidence of material remains: we deal with broken traditions in the sense that no living carriers of that tradition exist today or have existed for a long while, so that the hermeneutic effort cannot rely on statements of self-awareness.³

My interest in these early periods stems from the desire to understand the genesis of the early urban civilization, with which I have been primarily involved. I claim no expertise in the field of prehistory, and in what follows I will look exclusively at the evidence of material *culture* with the attendant degree of inference that seems plausible. The argument is relatively simple: on the basis of the formal attributes of an artifact as we have it today it is possible to establish formal patterns that imply a certain type of operational procedures; these in turn imply a sense of the whole that goes beyond the primary perception. It is on this evidence that I seek then to build the further argument that pertains to Voegelin's understanding of order in history.

1 The Cosmos in Prehistory

1.1 The Pre-Linguistic Phase

1.1.1 Spatial Competence

We will look at some aspects of lithic tool-making from the very early periods of the Paleolithic, following closely the highly insightful analysis of Thomas Wynn.⁴ He elaborates the notion of "spatial competence": starting (1) from the

² See on this Thomas Wynn and Fredrick L. Coolidge (eds.), *Cognitive Models in Palaeolithic Archaeology*, Oxford: Oxford University Press 2017; Karenleigh A. Overmann and Frederick L. Coolidge, *Squeezing Minds from Stones. Cognitive Archaeology and the Evolution of the Human Mind.* Oxford: Oxford University Press, 2019.

³ I deal at length with these concepts in *A Critique of Archaeological Reason. Structural, Digital and Philosophical Aspects of the Excavated Record.* Cambridge and New York: Cambridge University Press. 2017.

⁴ Thomas Wynn, *The Evolution of Spatial Competence*. Illinois Studies in Anthropology 17. Urbana and Chicago: University of Illinois Press, 1989. This book is a model of archaeological analysis, for the solidity and precision of its method. The examples I use in this section are all taken from it, and one should refer to it for a full understanding of the approach and its potential. Wynn has followed suit with a number of articles and volumes that have considerably developed his approach to cognitive archaeology (for his most recent title see above,

traces left when flakes were removed from the core and (2) from their reciprocal relationship on the surface of stone tools, and arguing from their reciprocal disposition in space to how the production process had taken place in time, Wynn infers, very systematically, that there must have been a controlling sense of how the component parts, however simple, would fit into an organized whole. The concept of "competence" refers to this control of the parts in function of the whole, and it is "spatial" because the resulting organization (which is what we have today) is wholly and exclusively articulated in space.

I would like to add here a methodological remark, particularly because the material evidence we will consider (stone tools from almost two million year ago) is seemingly so distant from the immediate concerns of our conference. Wynn's procedure may rightly be compared to the decipherment of a script used to render a now "dead" language. It is ultimately the repetitive coherence of the segments in their reciprocal correlation within the boundaries of a given whole that assures us of the validity of the effort. When reading a cuneiform tablet today, we could not claim the assuredness we would have were a Sumerian scribe here with us today to read the same text. And yet assured we are, because every "text" we come across does make sense in terms of how the segmental elements (the cuneiform signs) cohere together as part of a line and then of the whole tablet. It is analogous with what we have in the case of the notches on a lithic tool and their syntactical coherence, found to be repetitive over assemblages that include thousands of exemplars over a vast geographical area. Wynn's "reading" of these tools is wholly analogous then to our reading of a written text, and to this extent it gives us evidence of an intellectual stance on the part of the tool-maker that is not different, in principle, from that of a scribe. Spatial competence is not different, in its essence, from scribal competence.

Wynn distinguishes several sets of formal attributes that can be clustered in repetitive patterns that imply, by virtue of their very repetitiveness, intentionality. Thus the notion of an ordered sequence requires the coordination of proximity and separation with the addition of a constant direction of movement or orientation. So if we wanted to create a series of elements, for instance a line of posts placed in the ground for a shelter, we cannot simply place the third post near the second without also considering the position of the first

note 2). But this book remains, in my view, a real classic of archaeology, for the depth of the approach and the rigor of the analysis. The recent book by Karenleght A. Overmann, *The Material Origin of Numbers. Insights from the Archaeology of the Ancient Near East.* Gorgias Studies in the Ancient Near East, 14. Piscataway, NJ: Gorgias Press, 2019, deals with a similar problem, i.e., the material foundation of counting, but from a different perspective and primarily for the neolithic and early historic periods.

and of an eventual fourth, and this was easily done by maintaining a constant direction of movement.

We can review here a few of these sets of formal attributes, in a progressive order of complexity (the figures are all from Wynn 1989). I do this in some detail, and quoting extensively from Wynn's text, in order to convey the sense of the analysis on which the conclusions are based. The simplest is pairing (Fig. 5.1), where the sequence consists of blows that match each other (A with B and C with D) in order to produce a sharp or working edge (that has the effect of a blade): notice the symmetry of the blows in each pair, in terms of the size and disposition of each blow.



 Fig. 5.1
 Pairing (Olduvai, Bed 1–1,800,000 years ago)

 For all its simplicity, the incipient symmetry of the matching blows, on either side of the core, indicates intentionality

A straight line (Fig. 5.2) entails a sequence with a very clear direction of movement, obtained with a number of blows that vary in size but are all properly aligned to obtain the desired effect. To quote Wynn (p. 26): "The trimmed lateral edge of this cleaver is remarkably straight, and, more important, the extent of the trimming suggests that the original shape of the edge was considerably altered. The edge is also straight in profile. This required the knapper to control two viewpoints or perspectives at the same time. Competence in ... basic topological notions ... would not have been sufficient. The knapper had to have related the trimming of the edge to a constant point of view. Moreover, because the edge is also straight in profile, the knapper had to have considered a point of view located on another plane. Even if the knapper continually checked the edge by actual sighting, he had to be aware that the shape varied according to

the viewpoint, that what was straight from one sighting point was perhaps not straight from another. In other words, some notion of perspective must have been present in the knapper's spatial repertoire, and a fairly sophisticated one at that since there are two coordinated perspectives evident here."



Fig. 5.2 Straight line (Olduvai, Bed 2–1,200,000 years ago) Achieving a straight line, needed for the blade to function, requires careful planning

In Fig. 5.3 we gain insight into a more complex type of spatial competence, symmetry. Here is Wynn again: "The symmetry of this particular biface resulted from four short sections of trimming (A, B, C, and D) that are, for the most part, unconnected with each other. In order to have done this the knapper needed some notion of the shape broken down into potential constituent elements, in this case trimming flakes, and of their combination into the finished whole— in other words, a fairly sophisticated idea of the spatial relation of parts to the whole. Only by reducing the shape to potential trimming flakes could he

have determined which were necessary and which were not... ., we need not envision the hominid in agonizing contemplation, but even quick, on-the-spot planning required a notion of whole and part" (p. 19).



Fig. 5.3 Symmetry (Olduvai, Bed 2–1,200,000 years ago) The two faces of the core are worked to achieve an more complex symmetrical shape

One last example: measurement (Fig. 5.4). "The amount of trimming on this discoid suggests that the final shape was probably intentional. The rudimentary spatial notions of order and separation are insufficient to explain this artifact; the knapper must have employed some additional spatial concept. At the minimum, he must have used some concept of radius or diameter, that is some notion of a constant amount of space separating all of the edges. Alternatively, he might have used some idea of a regular curve employing a reference system of chords and arcs. But this is even more complex than a radius. We may conclude that the knapper of this discoid used some notion of interval, either radius or diameter, while making this artifact. Again, I do not mean to argue that the knapper was a geometrician and reflected upon such concepts, only

that he used a simple notion of interval in his spatial repertoire." (Wynn 1989, p. 40).



 Fig. 5.4
 Measurement (Olduvai, Bed 2–1,200,000 years ago)

 Achieving a spherical shape implies awareness of a constant diameter

In addition to the morphology of the individual pieces, it is also important to note that there is an overall sense of how these pieces fit together into an assemblage. The items in Figs. 2–4 represent three distinct functional slots that fit into a coherent larger whole, an organized inventory. In the complementary correlation of its parts, the notion of the inventory is significant because it shows us how not only the *production* of the tools (as indicative of spatial competence), but also their *use* (as indicative of functional competence), present us with a picture of these early hominins relating to reality in ways that go beyond simple perception. We need to consider now how we may best account for this early ability at controlling multiple aspects of reality.

1.1.2 Para-perception and Bracing

Assuming that there is first a physical perception when viewing a certain stone block, we can then speak of a parallel perception, which is the one that overlays a template on the stone tool. This para-perception anticipates the structure of the finished tool, and it does so by bracing the perception of the stone raw material with the intended model of the item. I render this schematically in Fig. 5.5a-c. The physical perception is the contingent sense recognition of the raw material. The parallel perception, or para-perception, anticipates the structure of the intended finished tool. Bracing refers to the operative overlay of the model or template over the stone, which results in a concrete stone tool, executed according to the guiding principle of the model. This accounts for the coherent repetitiveness of the items within a specific inventory of forms. And this leads to some interesting corollaries.



Fig. 5.5a Physical perception A core is viewed and perceived in its raw format





Fig. 5.5c Bracing of perception and para-perception Applying the template on the core, the core is transformed into a finished object

Fig. 5-5b Para-perception Concurrent with the physical perception, a template is envisaged that can be overlaid on the core

The first pertains to *experimentation*. It can be defined as a partial alteration of the template, which leads to variations that are more than just incidental changes in one finished product vis-à-vis another finished product; they are rather structural changes, such as to generate a new "type" of tool within the broader inventory that is already in use.

And then, templates can be transmitted, so that a certain type of apprenticeship develops. We are in a pre-linguistic phase, so this transmission does not rest on verbalized expressions. We may think of *education* in its fundamental sense of "bringing out" (*e-ducere*) an intuition that two individuals share—not yet as a concept (given the lack of words and logic), but, precisely, as a paraperceptual template.

With all of this, we go well beyond contingency. There is foresight because artifacts are not produced merely to respond to a one time need. They are assembled, as evidenced by the presence at some sites of quantities in the thousands. (Besides the size of the artifacts inventory, there are other significant indications of the awareness of aspects of life that go beyond contingency, as with the edentulous skull of Dmanisi⁵: an adult lived without teeth for some

⁵ David Lordkipanidze et al., "The Earliest Toothless Hominin Skull," in *Nature* 434 (April 2005) 717–18.









Education: transmission of template Even without concepts and words, a template is envisaged by an "apprentice," even if with some modification, and is transferred onto a finished product

two years before death, which implies a general weakness in the individual's health, and thus potentially an alert sense of anticipation of incumbent natural death and of caring for the individual on the part of others.)

1.1.3 The Intuition of Structure

Spatial competence refers to both the complex of skills that go into producing a patterned tool, *and* the awareness the user must have for the tool's properties and its functions. It presupposes a set of rules (pairing, symmetry, etc.) that, while not necessarily formulated in an explicit manner, are operative in both the production and the use. Production: there is intentionality in the choice of the steps needed in making a certain tool. Use: the choice of the proper tool for any given task implies, at its most elementary, the instinctive knowledge or competence of the pertinent properties (the same set of rules that was invoked in the making of the tool). Competence implies therefore control.

Para-perception refers to the ability of perceiving patterns as distinct from either the raw material or the finished product. It developed in a cultural context unable to avail itself of language in its double function of (1) providing a verbal/logical categorization of reality and of (2) externalizing the syntactical linkages that narrate the intended processes. In this pre-logical and pre-linguistic context, there was no possibility for an extraposition of paraperception into any self-standing medium (there were no formal concepts or words, and no sentences).

But we may infer that there was an *intuition of structure*, both static and dynamic. In its static dimension (akin to categorization) it could brace a fixed template that, overlaid on the raw material, would produce the finished product. But it was also dynamic because it recognized the sequential steps of the production chain, steps which were just as patterned as the template of the finished product.

The brief analysis we have undertaken above was concerned with structured patterns *imposed on* nature, i.e., with manufactured tools. But an inferential argument can also be made for an intuition of order in nature. I mentioned briefly the case of the edentulous individual from Dmanisi: the inferred sense of impending death speaks to order as implied in the awareness of a terminal moment in the chain of life. But think also of the supply chain of raw materials. Going to specific source areas ("quarries") implies a cultural ordering of the landscape. Unlike bees that harvest pollen from specific flowers, but only for it to be used for biological purposes, the paleolithic tool-makers went searching for specific stones to be used for non-biological, i.e., "cultural," purposes. We have here the most elementary form of awareness of an ordered pattern

intuited in function of another ordered pattern. An embryonic capacity of ordering the universe.

The key presupposition behind these phenomena is that there was already then an ability to brace elements that were not co-present in nature (the template with the raw material, the clustering of different tools in an assemblage, the long distance procuring of raw materials, etc.). Such bracing is at the root of culture as such and of all its developments that would follow.

The significance for our immediate topic is that, if the intuition of structure was not then dependent on language and logical thought, it follows that it is not dependent today either. In other words, the intuition of order is not dependent on verbal categorization and logical thought. If by "cosmos" we mean the ordered structure of the world as given, then we may say that there was a primordial cosmology, a pre-linguistic apprehension of order in the cosmos in the form of structured patterns.⁶

What did, then, happen with the introduction of language and logical thought?

1.2 An Explosion of Sense

1.2.1 Somatic Extraposition

The impact of language and logical thought had incalculable effects. The fundamental aspects of this epochal transformation were two. They are both in line with what we have seen already to take place in an embryonic fashion in the pre-linguistic phase.

The first is the categorization of discrete elements of reality, resulting in self-standing entities which were understood as concepts and communicated verbally as words. In Fig. 5.8, the solid oval represents such a concept and word, standing for both the tool and the para-perceptual template which overlaid its making.

The second fundamental aspect was the ability to link among themselves the concepts and words into strings that described processes: as sketched in Fig. 5.9, we have here a syntactical sequence standing on its own, independently of the phenomena to which it refers.

The concept/word and the chain relating to a process stand on their own, they are posited outside the natural phenomena to which they refer. This

⁶ A further development of this type of analysis could lead us to a fresh re-consideration of certain aspects of phenomenology, such as the notions of intentionality and of the eidetic reduction, and also to a consideration of the origin of consciousness—but these topics remain obviously beyond the scope of our present inquiry.





extraposition is somatic in that it is tied to the co-presence of two individuals (Fig. 5.12), one who speaks and externalizes concepts and processes in a verbal form, and one who listens and thus internalizes the same concepts and processes. With para-perception we had already a primordial form of referentiality: reality was referred to, but the referent was highly opaque as it was trapped in the fundamental muteness of the interaction. With language, referentiality comes fully to the fore: concepts/words and processes are fully reified, and stand as autonomous entities.

With Chomsky, I think that full linguistic capacity was a single event. Here is his most forceful statement to this effect: "the Great Leap was effectively instantaneous, in a single individual, who was instantly endowed with intellectual

capacities far superior to those of others, transmitted to offspring."⁷ There is no questions but that sounds were uttered all along the hominin trajectory, and that these sounds could carry meaning. But language as a structural system of complex phonological clusters (words) and of constrained linear concatenations (syntax) is an altogether different thing, and this is what is assumed to have had a sudden start that was genetically conditioned. This is assumed to have taken place around 60,000 years before present. I will not review here the reasons behind this assumption, and the objections to it, because ultimately it matters little, for our current concern, to be able to fix the point in time when this happened, or even, in fact, whether or not the change was as instantaneous as all that. The fact remains that around that point in time there is an explosion of sense for which we have abundant convergent lines of evidence in the material record.

1.2.2 Extra-Somatic Rendering

Not very long after the assumed beginning of language, we have two sets of data that show a burgeoning of experiments with different forms of extrasomatic renderings, figurative and non-figurative.

Of the two, the figurative elements are the more widely known, because of their aesthetic appeal. They are found especially in the cave paintings, where not only individual figures, but clusters of individual figures are found, as in the equid heads from the Chauvet cave, dating to about 32,000–30,000 BP (Fig. 5.10). The referential dimension that in language is tied to the somatic interaction between speaker and listener, is here transferred to the graphic plane, with realistic renderings of these particular animals.

From about the same date, we also begin to have non-figurative elements, where the referent is less transparent. In particular, we have a number of items, in bone and stone, with notations (Fig. 5.11) that have been interpreted⁸ as representing the phases of the moon, thus serving as calendrical notations. The interpretation is plausible, if still controversial. But what is certain, and is sufficient for our purposes, is that by virtue of the quantity of the exemplars found and geographical spread from Africa to France, these items are not mere doodling: they represent sequences, where the very fact of the sequence is significant. These notations render in fact clusters of elements that are not found

⁷ N. Chomsky, "Three Factors in Language Design," in *Linguistic Inquiry*, 36 (2005) p. 12; see also A. Moro, *The Boundaries of Babel. The Brain and the Enigma of Impossible Languages*, Cambridge, Mass.: The MIT Press, 2008.

⁸ Alexander Marshack, *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol and Notation,* New York: McGraw-Hill: 1972. On the notion of "analemma" see Ch. Jègues-Wolkiewiez, "Aux racines de l'astronomie," *Antiquités Nationales* 37 (2005). I owe this reference to the courtesy of K. Overmann, but have not been able to see the original text.



Fig. 5.10 Detail of equid heads from Chauvet Cave (30,000 years ago) The grouping is unlikely to indicate a simultaneous clustering in actual reality; it is more likely to indicate a conceptual clustering of similar individuals perceived as a type

as such, i.e. as clusters, in nature: if representing the phases of the moon, they render a sequence that can only be construed through the dissection of logical thought and then reassembled through the logic of syntax. You never see 29 moons in the sky at any one time, but there are 29 moon phases in the sky over the span of a month. The sequence is then given in nature, but not the cluster. In the same way, a seed and the plant that comes from it, do exist in nature, but not as clusters, meaning that they cannot be seen together. Thus the cluster of the phases of the moon comes into existence only through the conceptual bracing that finds its somatic rendering in language, and its extrasomatic rendering in the graphic calendrical notation (whatever the interpretation of the bone tool in Fig. 5.11 may be, agriculture did at one point come into existence, and that presupposes awareness of a time sequence of the type that would have to find its realization in a calendar).

These notations may in any case be considered as the earliest antecedents of writing. At it most essential, writing can be defined as the extra-somatic





extension of language. Language is the somatic extraposition of logical brain functions: taking Sumerian as the earliest fully recorded language, and using the word *apin*, Sumerian for "plow," two individuals (Fig. 5.12) can interface in such a way that one pronounces the word and another hears it, without any plow being present to either one of them.

Writing, as I have defined it, extends the communication of the same information extra-somatically: it places it in a medium that is self-standing, without one individual having to be co-present with another in order to get the message. Thus (Fig. 5.13), two individuals relate at any distance from each other to the same signal, even at a distance of almost five thousand years and many more thousands of miles from each other—as it happens when we, today, read a cuneiform tablet.

At the beginning, the sign tends to be representational, thus the sign for the word *apin* is roughly similar to an actual plow. With the passing of time, the representational dimension disappears, and signs loose all their figurative qualities (Fig. 5.14). The significance of this phenomenon for our argument is that greater and greater distance from the referent increases the level of abstraction: most of us have never even "seen" a plow, especially not one of this shape, and yet we have no difficulty in relating to what the original users (speaker and writer) meant almost five thousand years ago in southern Mesopotamia.

1.2.3 Cognitive Inferences

Writing brings to its culmination a process that had started with the early toolmakers. Spatial competence had shown us already, however embryonically, some of the fundamental aspects of what logical thought, in its successive embodiments as language and writing, would articulate more fully. Ordered *sequentiality* and internal *tensionality* are two of the most important ones. Both



Fig. 5.12 Language: somatic extraposition of logical brain functions Speaker and listener refer with the word *apin* (in Sumerian) to a concrete object (a plow) that is not present to either one of them





Writing: extrasomatic extension of language

Writer and reader relate concurrently, but not necessarily being present to each other, to the same concrete graphic symbol, a schematic rendering of the plow (in the early pictographic version of cuneiform)





speak to the intuition of structure (section 2.1.3), because an ordered sequence entails the awareness of the necessary links among all its constituent parts.

Going beyond these pre-linguistic moments, language as reflected in the earliest examples of extra-somatic renderings introduces an immensely higher level of structural coherence in terms of sequentiality and tensionality. The four equid heads from Chauvet (Fig. 5.10) are not the representation of a quadriga. It is more likely a study of four different profiles: tensionality in this case reflects the intent to make appear side by side elements that are not so clustered in nature. The intent would be to highlight similarities and differences among the members of the cluster.

The conceptual clustering is even more explicit in the case of the phases of the moon, which we assume to have been represented in the early lunar calendars (Fig. 5.11). Just like the four equids of Chauvet (Fig. 5.10) are not the representation of four animals tied to a single yoke, so the calendars are not the representation of an impossible cluster of moons in the sky (Fig. 5.15), but the rendering of the conceptual clustering made possible by the newly established logical categorization and the correspondent lexical apparatus. The tensional dynamics among the elements of the sequence is obvious: if you understand that if there is a waxing moon, then there must also be a waning moon, and a full moon between them. It is again the strong sense of structure that emerges from the reflection about perception.



Fig. 5.15 An impossible view of the sky with phases of the moon present at the same time The representation as shown is possible only in the mind of an observer, who recognizes sequentiality and tensionality in a series of non concurrent phenomena

2 The Incipient Cosmology

All that we have seen so far implies an early form of cosmology, to which I have pointed along the way. To explain how this may be so, and to show the import that this has for Voegelin's thought, we will look at three of his central concerns: compactness, cyclical time and order.

2.1 Compactness

There are two basic trends, from the earliest periods down to the beginning of writing: one that focuses on individual elements and the other that links these elements with each other. Already with para-perception we see how forms acquire an identity of their own, in the shape of a template that is applied to the raw material, while there is at the same time a type of bracing that links elements that are not found so linked in nature. Para-perception can be seen as the primordial "sym-bol," the bringing together of two distinct elements that are not contiguous in nature. It is a fundamental process that remains the same throughout time, while becoming of course more and more complex in its ramifications.

The apex of this process lies in conceptual fragmentation on the one hand and the simultaneity of control on the other, and they can be seen as the two faces of the same coin. The notion of compactness refers to the way in which reality is seen as an integrated cosmic whole, that includes in a single conceptual construct humans and nature. The suggestion I am advancing here is that this view has its roots in the double effort, in prehistoric times, to segment and to reconstitute reality. Compactness entails the existence of discrete elements that can then be so "compacted"

We must therefore start with the notion of *fragmentation*. Take the case of a hand-axe: the single concept and word for it could be broken down, through logic and language, into a number of sub-components, e.g., the place of storage, the potential use, the fact that it has a sharp edge, what kind of raw material is used, and so on (Fig. 5.16). These were implicitly known already to the earliest tool-makers in the pre-linguistic period, but it is with logical thought and language that they acquire their own independent status as separate concepts, each with its relative word. These could in turn be interconnected through syntactical processes that might or might not echo actual interconnections in nature. This was the origin of the full ability to segment reality and nature through the power of logical analysis.

But parallel to fragmentation is the ability to achieve *simultaneous control* over multiple concepts (Fig. 5.17). In a dim way this was present in the pre-linguistic phase, for instance with regard to the organized supply of raw



axe) can in turn relate to a number of different aspects, which are all subsumed in the primary concept "axe"





materials from distant sources. But it is only with conceptualization and language that this can expand on a practically unlimited basis (writing will reduce the level of the limits even further). And here, too, the impact on the relationship to nature is incalculable: it is the sense of control over reality itself that expands immeasurably, on the assumption of a total match between

categorization and reality. Fragmentation implies analytical control because by breaking down the whole into component parts, represented by concepts and words, one gains an understanding of the structure that holds the whole together. On the other hand, this opens up the possibility for a reconstitution of the parts into a new whole, where the coherence of the component elements is seen as the test of its validity.

In this sense, then, we have an incipient cosmology: a reconstituted universe that corresponds to the measure imposed on reality by conceptualization, building on the assumption that this measure has actually been discovered as being inherent to reality itself. It must be stressed that the whole import of cosmology lies in the presumption of control that it affords: by encasing the world in a logical construct, dissected and reconstituted, we hold in our hands the key to its functioning. It is this striving towards control that characterizes the whole prehistoric trajectory, and the cosmology that Voegelin identifies in the early civilizations is the heir of this extremely long tradition that precedes them. The compactness which he sees as characteristic of this early cosmology is in fact not so tightly "compact" as to exclude analytical thought.⁹ The two are inextricably connected, and by no means mutually exclusive.

2.2 Cyclical Time

We may develop similar considerations with regard to the notion of cyclical time. This, too, begins in prehistory, and by looking at the traces that we can see in the archaeological record, it appears that, while the cyclical nature of time as identified by Voegelin is indeed applicable, it can best be understood not because it excludes linearity, but rather because it presupposes it.

The notion of a starting and an ending point is central to the cognitive process through which one approaches reality. Already the production of a single stone tool, in earliest prehistory, presupposes operational steps that are eminently linear (Fig. 5.18a). All the more so with the observation of a cycle existing in nature (hence not produced) like the phases of the moon (Fig. 5.18b). The production cycle of the stone tool may be repeated endlessly, and the cycles

⁹ On Voegelin's view on cosmology in Mesopotamia, especially with regard to the relationship between compactness and analytical reasoning, see Peter Machinist, *Mesopotamia in Eric Voegelin's Order and History*. Occasional Papers. Eric-Voegelin-Archiv Ludwig-Maximilians-Universität. Vol. 26. Munich: 2001. See the interesting notion of a "composite wholeness" as developed by Peter von Sivers, "No Time to Rest: Hurtling from One Modernity to the Next," in Gabriele von Sivers and Ulrich Diehl, *Wege zur politishcen Philosophie. Festschrift für Martin Sattler*, Würzburg: Königshauseb & Neumann, 2005, pp. 140–42: the author discusses the paleolithic evidence briefly in connection with Voegelin's work (I owe this reference to the courtesy of Gabriele von Sivers).

of the phases of the moon do in fact recur without cease in the sky (Fig. 5.19): taken as a whole, the phases are repetitive sets of patterned sequences where each sequence is linear in itself, going from one starting to one ending point, and in their repetitiveness they constitute another cycle, looping incessantly from one end point to the next starting point (Fig. 5.19).



Fig. 5.18a Perception of starting and ending point: in an artifact In the production of a tool: a straight line is created to obtain the effect of a blade



Fig. 5.18b Perception of starting and ending point: in nature In the observation of nature: the waxing and waning of the moon



Fig. 5.19 Perception of multiple cycles A recurring cycle of cycles is based on the notion of the starting and an ending point of each sub-cycle (of phases of the moon in this example)

There is a parallel with what we saw about compactness. Linear segmentation is the equivalent of fragmentation, and the cycle is the equivalent of the reconstitution in a new conceptual system. In both case, the goal is to achieve greater control on reality, by reducing it to its component parts and then seeing it re-organized in an assembled whole.

2.3 Order

While it is very difficult to extrapolate to the social and political order from the scant evidence we have for prehistoric times, based as this is exclusively on material remains, we may infer that the sense of structure we have seen displayed in a variety of different ways lies at the basis of the perception of order in Voegelin's sense. What is significant in this respect is the double nature that the sense of structure may take. On the one hand, it identifies structural patterns that are inherent in reality, while on the other it structures reality itself according to given conceptual patterns. Thus the lithic industry of prehistoric times bases the production of the tool on features that are inherent in nature, such as the quality of the material, but then overlays on it a shape that is not given in nature. There are two ways in which this happens, and they are in close correlation with each other.

The first (Fig. 5.20) is that multiple, concrete individual items are subsumed under a single category. Each single hand-ax is different from the other, but they are subsumed under a single functional category, well before a concept and word comes into existence. In this case, ordering collapses multiplicity into identity.



Fig. 5.20 Order: identity within multiplicity Different concrete tools are subsumed under the same para-perceptual template, an anticipation of concept and word

The second consideration regarding order with lithic tools pertains to the notion of assemblage (Fig. 5.21). Distinct tools are repeatedly produced to serve *distinct functions*: they are produced with a view towards the whole (the assemblage), and they are put to use to serve distinct needs, in advance of whatever need may arise.



Fig. 5.21 Order: distinctiveness within multiplicity Differences in concrete tools display boundaries between groups, which together form a functionally diversified tool kit or assemblage

In the case of lithic tools, order is imposed on crafted tools that are not found in nature. The observation of the phases of the moon, on the other hand, rests on what is given, the calendar represents a conceptual construct that is applied to these given data.

Once more, segmentation of reality lies at the root of the ordering effort. It is possible to order only that which has been "dissolved" (analyzed) into its constitutive parts. Structuring does not look for a non disassembled wholeness; or rather: it aims at constituting its own wholeness, as something which is more than the sum of its parts, but is nevertheless, to begin with, the sum of its parts. Ultimately, it is again a matter of control, and the achievement of control through order will translate well into the social and political order on which Voegelin focuses his attention in the case of the earliest civilizations. Here order leads to the achievement of the highest yet degree of control.

If we can speak of a cosmological awareness for even the earliest prehistoric times, it is in the sense of an early apprehension of order and coherence as intrinsic in reality.

3 Conclusion

The relevance for Voegelin's work of the ideas I have been advancing here, rests on the suggestion that the developments in prehistory strongly conditioned the shaping of those intellectual developments and institutional consolidations

which form the basis of his analysis. This conditioning went deep into the very essence of the later realizations, and thus it helps greatly in reaching a better understanding of their proper nature. He was just beginning, towards the end of his life, to become attuned with the data from archaeology and of prehistory in particular, much of which was coming to light in those very years.¹⁰ And so I would like to think that he would find the material I have presented, and the attendant analysis, not only interesting but ultimately cogent. In many ways, it buttresses his theoretical stance, even when in matters of detail it may suggest changes and revisions.

To conclude on a note that brings together the various strands of thought we have been reviewing, we may consider Voegelin's notion of "leap in being." What I have called here an "explosion of sense" would be such, in his terminology. It was ushered in by the introduction of logical thought and language, and the reason for its extraordinary significance is that it extricated paraperception from being purely within the subject and gave it an autonomous consistency as concept and word: even in the earliest stages, this went from a merely somatic expression of concepts through language to an extra-somatic embodiment through figurative and non-figurative representations.¹¹ All of

See Eric Voegelin, *The Drama of Humanity and other Miscellaneous Papers*, 1939–1985, ed. with an Introduction by W. Petropulos and G. Weiss, University of Missouri Press, Columbia and London 2004 (CW 33), pp. 276–279, 284 (with reference to Young's arche-types, and on graphic symbols), 302 (a "revelatory process" going back perhaps to the Paleolithic), 447 (in relationship to the landscape); *Autobiographical Reflections*, edited with an introduction by Ellis Sandoz. Baton Rouge and London: Louisiana State University Press: 1989, pp. 75, 82, 96. A detailed analysis of how res the material foundation of counting earch in prehistory came to play an important role in Voegelin's later years is found in Peter J. Opitz: *The Drama of Humanity—oder: Eric Voegelins Aufbruch ins Neolithikum*, in Voegeliniana. Occasional Papers, N. 95. Munich 2014, especially pp. 24–30.

It is interesting to recall Chomsky's use of the term "Great Leap" when referring to 11 the beginning of language (note 7).---I have developed some aspects of this argument in three recent papers, "The Transcendental Revolution," in H. Amstutz, A. Dorn, M. Müller, M. Ronsdorf, S. Uljas (eds.), Fuzzy Boundaries. Festschrift für Antonio Loprieno. Vol. I. Hamburg: Widmaier, 2015. pp. 47-54 (online at giorgiobuccellati. net/2015Transcendental); "The Creation of the City of Man," in Communio. International Catholic Review, 46 (2016) pp. 617-641 (online at giorgiobuccellati.net/2016CityOfMan); and "Le origini preistoriche di simbolo e mito," in Città e Parole, Argilla e Pietra. Studi offerti a Clelia Mora da allievi, colleghi e amici a cura di M.E. Balza, P. Cotticelli-Kurras, L. d'Alfonso, M. Giorgieri, F. Giusfredi e A. Rizza Bari: Edipuglia, 2020, pp. 137–147 (online at giorgiobuccellati.net/2020Origini. I am preparing for publication a volume that deals at length with the issues discussed here and turns to the later periods as well; it is based on the McGivney lectures entitled The Four Republics, which I gave at the Pontifical John Paul II Institute at the Catholic University of America in February 2015 (online at giorgiobuccellati.net/McGivney).

this depended on a deep awareness of structure, both as seen in reality and as imposed on it; and the correlative side of this ever greater structuring ability was the equally greater capacity of control, which rested on the identification of predictable patterns. From this perspective, it appears that we do not have properly a leap in "being," but rather a leap in cognition.¹² In many ways, this is applicable also to the late transformations that were of interest to Voegelin, to which we might then also refer, more appropriately, as epistemological leaps.

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¹² See the remarks by Voegelin, Autobiographical Reflections, p. 79.

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Ignacio Carbajosa, Nicoletta Scotti Muth (eds.)

Israel and the Cosmological Empires of the Ancient Orient

Symbols of Order in Eric Voegelin's Order and History, Vol. 1

With the collaboration of Aldo L'Erario

BRILL | WILHELM FINK

Contents

	Acknowledgments	VII
1	Introduction Ignacio Carbajosa and Nicoletta Scotti Muth	1
I	Forms of Civilization	
2	Eric Voegelins Rekurs auf aristotelische Denkmotive im Theorierahmen von Order and History Nicoletta Scotti Muth	37
3	Eric Voegelin and His Orientalist Critic: The Case ofWilliam Foxwell AlbrightPeter Machinist	73
4	Zeitlos. Zum Geschichtsbild der alten Ägypter Dietrich Wildung	119
5	The Cosmos before Cosmology: Foreshadowing of Order in Prehistory Giorgio Buccellati	129

II Order and History

6	Die symbolische und transzendentale Struktur der Geschichte: Order and History Massimo Marassi	157
7	Truth and the Ambivalence of Empire: on the Theoretical Workof Eric VoegelinJohn Milbank	169

III On the Old Testament

8	Divine Law and the Emergence of Monotheism in Deuteronomy Dominik Markl	193
9	Assyria and Israel: The Political Theory of the Book Deuteronomy and its Reception by Max Weber and Eric Voegelin Eckart Otto	223
10	"The Exodus of Israel from itself:" The Role of the Prophets in Voegelin's Israel and Revelation Ignacio Carbajosa	233
IV	Israel and Revelation	
	Judgism and Povolation Frie Voogolin's Israel and Povolation	

11	Judaism and Revelation. Eric Voegelin's Israel and Revelation Reconsidered Marvin A. Sweeney	263
12	History as Constituted by What it Cannot Contain: Israel and Revelation David Walsh	279
13	What about Judaism in Israel and Revelation?Catherine Chalier	301
	General Index Index Locorum	319 324