

POLIS V12: The Complete Archaeology Series – 12 Giants

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This document combines two companion papers:

*“Tensional Reinterpretation of Six Founders of Modern Archaeology”
and “Tensional Reinterpretation of Six More Archaeological Pioneers”.*

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Abstract

Within the POLIS V12 tensional ontology, every archaeological system is a polis constituted by three meshes (solid, liquid, gaseous) and governed by the closure condition $\epsilon = \sum K_m(2 + K_m) = 0$, with $T = K_{\min}$ as the tensional origin. This paper applies the framework to six foundational figures of archaeology: Johann Joachim Winckelmann (art history), Christian Jürgensen Thomsen (Three-Age System), Charles Lyell (geological stratigraphy), John Evans (stone tools), Augustus Pitt Rivers (excavation method), and Flinders Petrie (sequence dating). Each classical contribution is reinterpreted as a tensional configuration: Winckelmann's stylistic seriation as K ordering; Thomsen's Stone, Bronze, Iron ages as material K progression; Lyell's uniformitarianism as constant T ; Evans's typology as K classification; Pitt Rivers's context recording as preserving ϵ ; and Petrie's seriation as minimising ϵ of artefact sequences. The universal equations remain unchanged; no free parameters are introduced.

1 Introduction

POLIS V12 is a closed, parameter-free tensional conservation theory built on four axioms (Tensional Ontology, Harmonic Ground $H = 1$, Tensional Conservation, Data Origin $T = K_{\min}$). The governing equation, after normalisation, is

$$\epsilon = \sum_{m=1}^n K_m(2 + K_m) = 0,$$

with $K_m = (v_m - T)/(v_{\max} - T) \in [0, 1]$. The disequilibrium index is $\text{IDT}^* = \epsilon/(1 + \epsilon)$. All real archaeological systems reside in Phase 4 ($\text{IDT}^* \geq 0.70$) unless artificially uniform. The Rolling Law $2\pi r_p = V_{\text{orb}}T_{\text{rot}}$ applies fractally at all scales.

This paper reinterprets six key archaeological contributions within this tensional ontology. No classical primacy is assumed; tension is the primitive.

2 Johann Joachim Winckelmann – Stylistic Seriation

Winckelmann systematised the history of ancient art, ordering Greek sculpture into stylistic periods (archaic, classical, Hellenistic). In POLIS V12, stylistic seriation is a chronological K ordering of artefacts based on morphological traits. Winckelmann's method assumes that form evolves gradually (smooth K change). His "edle Einfalt, stille Grösse" (noble simplicity, quiet grandeur) is a tensional ideal where ϵ is minimised. Winckelmann's influence on classical archaeology established the normative K scale for judging art.

His distinction between the "high" classical period ($K=1$) and "decadent" later periods ($K<1$) is a tensional judgment.

3 Christian Jürgensen Thomsen – Three-Age System

Thomsen organised museum collections by Stone, Bronze, and Iron Ages based on tool materials. In POLIS V12, each age represents a different K regime: Stone Age (low K technology), Bronze Age (medium K), Iron Age (high K). The transitions are Phase 4/5 events (adoption of new materials). Thomsen's relative chronology (Stone \rightarrow Bronze \rightarrow Iron) is a tensional sequence that does not depend on absolute dates. The "Three-Age System" is the first tensional synthesising classification of prehistory.

Thomsen's work at the National Museum of Denmark applied K ordering to thousands of artefacts.

4 Charles Lyell – Uniformitarianism and Geological Stratigraphy

Lyell's *Principles of Geology* (already in geology) provided the deep time framework for archaeology. In POLIS V12, Lyell's uniformitarianism (constant T and v_{\max}) allows archaeologists to interpret past human behaviour through present K analogies. His concept of "recent" vs "ancient" deposits sets the temporal K scale. Lyell's influence on Darwin (evolution) also extended to prehistoric archaeology (antiquity of man).

Lyell's visit to the Somme valley (with Prestwich) authenticated Boucher de Perthes's stone tools, pushing human antiquity back to Phase 4 (pre-glacial). The tensional shift from Biblical chronology (6,000 years) to deep time (millions of years) is a large increase in v_{\max} .

5 John Evans – Typology and Classification of Stone Tools

Evans systematised British prehistoric stone tools, creating typologies (e.g., handaxe types). In POLIS V12, a typology is a partition of artefact K values into discrete categories (types). Evans's work on flint implements showed that certain forms (bifaces) appear consistently across Europe, indicating shared K traditions. He also refined the Three-Age System for Britain. Evans's "The Ancient Stone Implements of Great Britain" (1872) is a tensional catalogue.

His cooperation with Pitt Rivers established standards for recording K (location, association). The "Evans-Pitt Rivers" method is a tensional protocol for excavation.

6 Augustus Pitt Rivers – Excavation Method and Context

Pitt Rivers insisted on total recording of all finds, not just "beautiful" objects, and the principle of stratigraphic context. In POLIS V12, context is the K environment (matrix,

association) that gives meaning to an artefact. Removing an object without recording its context increases ϵ (loss of information). Pitt Rivers's excavation of Cranborne Chase (1890s) set standards for horizontal and vertical provenience. His "typological series" (arranging artefacts by form) is a tensional seriation.

Pitt Rivers's museum in Oxford organised collections by typology, not culture – a tensional classification. He pioneered the use of photography to record K (spatial distribution).

7 Flinders Petrie – Sequence Dating and Seriation

Petrie developed sequence dating for predynastic Egyptian graves (e.g., Naqada). In POLIS V12, sequence dating orders assemblages by an index of K (e.g., pottery styles). Petrie used the "method of frequency seriation": he arranged grave groups in a sequence that minimised the ϵ between successive groups (i.e., smooth changes in style percentages). The resulting sequence (SD 30–80) correlated with relative chronology before absolute dating. Petrie's "hawk-headed god" typology for Aegean pottery also used tensional seriation.

Petrie's innovations: the Harris-Petrie typological system (still used), his use of statistical analysis (chi-square) to test seriation. He also set high standards for excavation recording (drawing, photography, publication). The "Petrie Museum" at University College London holds his tensional archives.

8 Conclusion

The six foundational contributions to archaeology are coherently reinterpreted within the POLIS V12 tensional ontology. Stylistic seriation, the Three-Age System, uniformitarian stratigraphy, typology, contextual excavation, and sequence dating all become natural consequences of the closure condition $\epsilon = \sum K_m(2 + K_m) = 0$ and the fractal hierarchy of archaeological polises. No free parameters are added.

Zenodo references

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Abstract

This paper extends the POLIS V12 tensional reinterpretation to six additional archaeological giants: Howard Carter (Tutankhamun’s tomb), Mortimer Wheeler (grid excavation), Vere Gordon Childe (culture history), Dorothy Garrod (Palaeolithic archaeology), Kathleen Kenyon (stratigraphy at Jericho), and Lewis Binford (processual archaeology). Each is re-read as a tensional configuration: Carter’s discovery as high- K event; Wheeler’s box-grid as K coordinate system; Childe’s urban revolution as Phase 4; Garrod’s Neanderthal work as extending K range; Kenyon’s Wheeler-Kenyon method as precise ϵ minimisation; and Binford’s middle-range theory as tensional bridging. The universal equations remain unchanged; no free parameters are introduced.

9 Introduction

As in the companion paper, POLIS V12 rests on four axioms. After normalisation the mother equation is

$$\epsilon = \sum_{m=1}^n K_m(2 + K_m) = 0,$$

with $IDT^* = \epsilon/(1 + \epsilon)$. All real archaeological systems are in Phase 4 ($IDT^* \geq 0.70$) unless artificially uniform. The Rolling Law $2\pi r_p = V_{orb}T_{rot}$ applies fractally.

This paper reinterprets six more foundational contributions to archaeology.

10 Howard Carter – Discovery of Tutankhamun’s Tomb

Carter discovered the nearly intact tomb of Tutankhamun (KV62) in 1922. In POLIS V12, the tomb is a high- K time capsule: artefacts preserved in situ, each with K (material, symbolism). The curse of Tutankhamun (media hype) is a tensional fluctuation (high ϵ). Carter’s meticulous recording (photographs, object lists) preserved ϵ for future research. The gold mask (K very high) symbolises the Pharaoh’s elevated status. The tomb’s discovery was a Phase 4 moment (breakthrough) for Egyptology.

Carter’s association with the 5th Earl of Carnarvon (sponsor) is a tensional partnership: resources (K) combined with expertise.

11 Mortimer Wheeler – Grid Excavation and Wheeler’s Method

Wheeler introduced the box-grid system (square trenches separated by baulks) to record three-dimensional coordinates of finds. In POLIS V12, the grid is a Cartesian K coordi-

nate system for provenience (X, Y, Z). Wheeler's method (for Indian sites like Mohenjo-Daro) allowed reconstruction of stratigraphic sequences. His concept of "single context recording" (layer as a unit) is a tensional layer (solid mesh). Wheeler's "water-worn" pottery classification is a tensional typology.

He also trained a generation of archaeologists (e.g., Kenyon, Ghosh). His "Wheeler-Kenyon" method is a tensional standard for stratigraphy.

12 Vere Gordon Childe – Culture History and Urban Revolution

Childe synthesised European prehistory, defining the Neolithic and Urban Revolutions. In POLIS V12, the Neolithic Revolution (agriculture) is a Phase 5 reorganisation: from hunter-gatherer K to farming K (higher population density). The Urban Revolution (cities, writing, state) is a Phase 4 explosion: new K nodes (temples, palaces) appear. Childe's ten criteria for urbanisation (size, surplus, writing, etc.) are tensional indicators of increased K complexity. His "diffusionism" (ideas spread) is tensional transmission of K .

Childe's Marxism influenced his view of social evolution (class conflict as ϵ). His concept of "self-correcting" archaeological interpretation is a tensional feedback.

13 Dorothy Garrod – Palaeolithic Archaeology and Neanderthals

Garrod became the first female professor at Cambridge and excavated at Mount Carmel (Skhul, Tabun) where Neanderthal and early modern human remains were found. In POLIS V12, her work extended the K range of human prehistory (Middle Palaeolithic). She applied stratigraphic excavation (following Pitcairn-Pitt Rivers) and recovered a sequence of industries (Levallois, Mousterian). The coexistence of Neanderthal ($K_{\text{morphology}}$) with early modern humans (K_{anatomy}) is a tensional overlap in the fossil mesh.

Garrod's "The Upper Palaeolithic" (book) synthesised tensional changes in tool technology. Her discovery of the "Lady of Gibraltar" (Neanderthal skull) added K to the human evolutionary record.

14 Kathleen Kenyon – Stratigraphy at Jericho

Kenyon refined Wheeler's grid method, excavating Jericho (Tell es-Sultan) to unprecedented precision. In POLIS V12, her "Wheeler-Kenyon" method (box-grid with careful section drawing) minimised ϵ of stratigraphic interpretation. She identified the Pre-Pottery Neolithic A and B, and the massive stone tower (earliest monumental architecture). Kenyon's conclusion that Jericho was the oldest town in the world (Phase 4) was controversial but influential. Her publication (the "Kenyon volumes") set a tensional standard for excavation reports.

Kenyon also trained many archaeologists; her influence on biblical archaeology (debates over the conquest of Canaan) is a tensional conflict.

15 Lewis Binford – Processual Archaeology (New Archaeology)

Binford revolutionised theory by advocating scientific method, hypothesis testing, and middle-range theory. In POLIS V12, processual archaeology seeks to explain cultural change through tensional laws (e.g., the Rolling Law). Binford's "new archaeology" rejected atheoretical culture-history, aiming for generalisations (high K theories). Middle-range theory connects the static archaeological record to dynamic human behaviour (inferring $K_{\text{behaviour}}$ from $K_{\text{artefacts}}$). Binford's ethnoarchaeology (Nunamiut Eskimos) studied how K of discard patterns relates to site formation.

His concept of "systemic context" (living behaviour) vs "archaeological context" (buried residues) is a tensional distinction. Binford's debate with "post-processualists" (e.g., Hodder) is a tensional Phase 4 clash over the nature of ϵ (truth).

16 Conclusion

Six additional archaeological pioneers are reinterpreted within the POLIS V12 tensional ontology. Tomb discovery, grid excavation, culture history, Palaeolithic stratigraphy, refined excavation, and processual theory all become natural consequences of the closure condition $\epsilon = \sum K_m(2 + K_m) = 0$ and the fractal hierarchy of archaeological polises. No free parameters are added; the same equations that describe a physical system or a social system also describe the recovery of the human past.

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