

Two Lines of Space and Time: Central-Projective and Central-Affine Anthropology of Perception in Kurpishev Logic

KLT-ANTHROPOLOGY-SPACE-TIME-LINES-RU-EN-v6.0

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Abstract

This paper continues the anthropological line of Monograph 6.0 and assembles it as a philosophical-mathematical study of the perception of space, time, causality and logic. The guiding doctrinal hypothesis is that every stable doctrine of space, time and logic realizes an Ideal-Absolute of a projective geometry group or a Lie-Klein group. A philosophical doctrine does not merely describe the world; it selects an object that must remain invariant under transformations: a center, a horizon, a metric, a cone, a form of intuition, the world-will, an idea, a Reper or FOS.

The paper distinguishes two main lines: the central-projective line, rooted in the Platonic ideal of a center of projection, and the central-affine line, connected with place, horizon, transfer, Newtonian absolute space and Kantian form of intuition. The earlier v5.9 article on doctrines as realizations of Ideal-Absolutes is included here as a special section on the doctrinal-geometric matrix.

The purpose is not to replace the history of philosophy by a geometric diagram, but to introduce a strict KLT/RBD instrument: each doctrine is described through a domain of appearance, a group of admissible transformations, an Absolute, a stabilizer, a FOS reduction operator and a Reper verification.

Keywords

Kurpishev FOS; Reper; KLT; RBD; PN.2; anthropology of perception; Plato; Aristotle; Kant; Newton; Bibler; Bourbaki; Ponarin; Kline; projective geometry; affine geometry; Lie-Klein groups; aporias; dialectics; Enoch; Fold.

1 1. Problem Statement and Relation to Monograph 5.0

Monograph 5.0 fixes the core of the project: the minimal object is event@state $C@C$; then a Reper quadruple $\text{Rep}=(R,I,U;D)$ is introduced; truth normalization is given by the harmonic condition $\text{cr}(U,I;R,D)=-1$. Therefore anthropology in this project must describe not only images of man, but the ways in which cultures assemble $C@C$, Reper, foundation D and an admissible world.

$$\text{Rep}(c) = (R_c, I_c, U_c; D_c), \quad \text{Truth}(c) \iff \text{Dom}(c) \wedge D_c \wedge \text{cr}(U_c, I_c; R_c, D_c) = -1.$$

Ideas of space, time, causality and logic are treated here as anthropological modes of world-assembly. A doctrine is stable if it specifies not only statements, but also a group of admissible transformations: what may change without destroying meaning.

2. Method: Doctrine as a Klein-Reper Package

A doctrine of space, time and logic is written as:

$$\mathcal{D} = (X, G, A, H, \Theta, \text{Rep}, N).$$

Here X is the domain of appearance; G is a group or groupoid of admissible transformations; A is the Ideal-Absolute; $H = \text{Stab}_G(A)$ is its stabilizer; Θ is the FOS reduction operator; Rep is the Reper verification; N is the anthropological regime of perception.

$$H = \text{Stab}_G(A) = \{g \in G \mid g(A) = A\}.$$

Theorem 1 (Theorem 2.1. Doctrinal Stabilizer Theorem). *Every stable doctrine of space, time or logic induces a Klein-Reper package $(X, G, A, H; D)$. If its objects have a Reper quadruple and an admissible domain, then the doctrine acquires a verifiable KLT status.*

3. Source Foundations: Bourbaki, Ponarin, Bibler, Kline

Bourbaki is used as the source of the structural view of mathematics: mathematics is not a mere sum of disciplines, and the axiomatic method searches for hidden common structures. Ponarin provides the geometric basis: affine and projective geometries can be presented as independent disciplines without primary metric notions. Bibler gives the methodological warning against forcing a philosophical text into an alien matrix of understanding. Kline supplies the historical context of the crisis of foundations and the effectiveness of mathematics.

The internal foundation is Monograph 5.0: $C@C$, $\text{Rep}_i = (R_i, I_i, U_i; D_i)$, $\text{Truth}(\text{Rep}) \Leftrightarrow \text{cr}(U, I; R, D) = -1$, λ and δ_{truth} . This base sets the criterion by which a doctrine is not merely symbolic but Reper-verifiable.

4. Plato and Aristotle: the First Geometric Fork

The first anthropological fork of space and time is the split between central-projective and affine-place perception. The Platonic line is oriented toward the center of projection: the visible world is a system of projections from the ideal center. The Aristotelian line preserves place, form, order of bodies and natural position; it is closer to an affine logic of places and transfers.

$$\mathcal{P}_{\text{Plato}} = (\mathbb{P}^n, \text{PGL}(n+1), C_{\text{Idea}}), \quad \mathcal{A}_{\text{Aristotle}} = (\mathbb{A}^n, \text{Aff}(n), L_{\text{place}}).$$

5 5. Copernicus, Newton, Kant: Center, Horizon and Subject

Copernicus performs a central-projective revolution: the center of cosmological projection is changed. Newton radicalizes the affine-metric stage: absolute space and absolute time become the background for motion, force and law. Kant performs a central-affine turn: the center is not the Sun or the Idea, but the subject that sets the forms of appearance.

$$iH_K : \text{FOS} \longrightarrow N_\omega, \quad N_\omega = \sigma_\omega(\text{FOS}), \quad \omega = (\text{where, when, } iH, D).$$

6 6. Affine and Projective Geometries as Forms of Perception

Affine perception preserves parallelism, transfer, horizon and the line at infinity. Projective perception preserves center, perspective, polarity, harmonic relation and the possibility of compressing or unfolding horizons. Therefore affine and projective geometries function here not only as mathematical disciplines, but as regimes of human world-perception.

$$\Theta_{aff}(\text{FOS}; D_{aff}) = W_{aff}, \quad \Theta_{proj}(\text{FOS}; D_{proj}) = W_{proj}.$$

7 7. System of Doctrines as Realizations of Ideal-Absolutes

This section incorporates and extends the v5.9 article on doctrines as manifestations of Ideals of projective geometry groups. Every doctrine must be described through X, G, A, H, Theta and N.

Table 1: Matrix of Doctrines and Absolutes

Doctrine	Geometric regime	Ideal-Absolute A	Stabilizer/group	Anthropological meaning
Plato	central-projective	Idea-center	stabilizer of the center in PGL	truth as return to the center of projection
Aristotle	place-form	natural place and form	admissible transformations of form	world as order of actualizations
Newton	affine-metric	absolute space and time	Euclidean-affine transformations with metric	world as stage of laws of motion

Doctrine	Geometric regime	Ideal-Absolute A	Stabilizer/group	Anthropological meaning
Kant	central-affine	subject, horizon, form of intuition	stabilizer of conditions of experience	world as appearance for the subject
Schopenhauer	variational-volitional	world-will	preservation of necessity of course	world as manifestation of a deep functional
Bibler	dialogic-polyphonic	logical world of culture	stabilizer of dialogue cultures	thinking as conjugation of worlds
Kurpishev KLT	packet-Reper	Reper and FOS	stabilizer of harmonic closure	world as verifiable Reper assembly

8 8. R_{-1}: Track, Spirit, Element, Hunter

The layer R_{-1} describes a pre-rational anthropology of the track. Causality is not yet separated into causal chain and deterministic support connectivity. A hunter following an animal track does not merely reconstruct the past; the track appears here and now as the presence of the soul of the animal, its genus or spirit.

$$\text{Track}(A) = \text{SoulPacket}(A)|_{\text{here-now}}, \quad \text{TrackRep}(A) = (R_A, I_A, U_A; D_A).$$

9 9. Feathers as Skew-Symmetric Tensors of Connection

In R_{-1} there are two domains: spirits-causes and elements-actions. Their relation is not a function. It is skew-symmetric: cause and action are not yet joined by the law $O*S$, but feathers arise between them as tensor links of transition.

$$\Phi_{ab} = P_a \otimes D_b - D_b \otimes P_a, \quad \text{Feather}(a, b) = P_a \wedge D_b.$$

10 10. Causality $\pm P \mp D$ and Determinism $O*S$

Action and consequence must be separated. Action is an act, impulse, change of state. Consequence is already embedded into support connectivity of foundation and result. Language often confuses these layers.

$$D \neq S, \quad \pm P \mp D \neq O * S.$$

Theorem 2 (Theorem 10.1. From Spiritual Causality to Rational Determination). *The transition from R_{-1} to R_{-02} is possible exactly when a sufficient foundation D_0 is found that translates the skew-symmetric relation between causes and actions into support connectivity O^*S . Without D_0 , mythological or demonic gap-nodes remain.*

11 11. Demons as Gap-Nodes of Undefined Sufficient Foundation

A demon in this model is not a being. It is an anthropological name for the rupture between an observed causal picture and unknown determinism. Maxwell-type or Galileo-type demons occupy the place where causal phenomena are visible, but sufficient foundation has not yet been constructed.

$$\text{Demon}(x) = \text{Gap}_D(x).$$

12 12. Achilles and the Tortoise: Metric against Affine

The aporia of Achilles and the tortoise receives a geometric diagnosis. Achilles moves on a metric scale, while the tortoise is held in an affine connectivity. If there is no metrizing morphism from the affine regime to the metric one, the event of catching-up cannot be formulated correctly.

$$A(t) \in W_{met}, \quad T(\lambda) \in W_{aff}, \quad \neg \exists \mu : W_{aff} \rightarrow W_{met} \Rightarrow \neg \exists (t, \lambda) : A(t) = \mu(T(\lambda)).$$

13 13. Kant and Plato: Why One Does Not Catch the Other

The statement that Kant does not catch Plato is not a ranking of philosophers. It is a statement about two incompatible geometric regimes. Kant has the center of the subject, horizon and line at infinity of appearance. Plato has the absolute center where tracks of causes, actions and ideas converge.

$$K = (O_K, H_K, \ell_\infty, \mathbb{A}_K), \quad P = (C_P, \mathbb{P}_P, \text{Idea}), \quad \exists \Phi : K \rightarrow P.$$

14 14. The Riddle of Enoch and the Acceptance of the Fold

The riddle of Enoch is used not as dogmatic theology, but as a mytho-phenomenological model of the transition to the Fold. Enoch accepts the RPLD world as a whole:

memory, possible presents, intuitions and controlled temporal reductions. He becomes a point at infinity of the Melichron/FOS world.

$$E : \text{PreFold} \rightarrow \text{RPLD}, \quad E_{\text{Enoch}} = p_{\infty}(\text{Melichron/FOS}).$$

$$\chi : \text{FOS} \rightarrow \text{Beyond}(\text{FOS}).$$

15 15. Schopenhauer, Variational Principle and PN.2

Schopenhauerian world-will may be read as a philosophical attempt to express a variational principle: the world moves not only by local acts, but through necessity of course. PN.2 formulates a broader real principle: one cannot assemble size and dimensionality simultaneously without a sufficient foundation; one cannot assemble Reper and flag from a triadic paradigm without the fourth harmonic component D.

$$\mathcal{W} \sim \delta\mathcal{S} = 0, \quad \neg\exists \mathcal{M}_{\text{global}} : X \mapsto (\text{size}(X), \text{dim}(X)) \text{ without } D_X.$$

$$(R, I, U) \not\Rightarrow \text{Rep}, \quad (R, I, U; D) \Rightarrow \text{Rep}.$$

16 16. Dialectics as a Bridge of Two PIX-States

Dialectics is not reduced to the school triad of thesis, antithesis and synthesis. It is understood as an operation of building a bridge between two PIX-states that belong to different reductions or different states of one world.

$$C@C_1 = (e_1, s_1), \quad C@C_2 = (e_2, s_2), \quad \mathcal{B}_{12} = \text{Bridge}(C@C_1, C@C_2; D).$$

17 17. Conclusion: Anthropology as History of Reper-World Assembly

The main result is that anthropology in Kurpishev Logic is not an external popular commentary on mathematics. It describes how different epochs and doctrines assemble C@C, Reper, D, group of transformations, Absolute and world. The next task is to extend the matrix of doctrines into a full anthropological atlas of religious, scientific, cultural, physical, mathematical and artistic doctrines as realizations of their Ideals-Absolutes, stabilizers and Reper foundations.

References

References

- [1] Kurpishev I.B. Monograph 5.0: Kurpishev Logic. Master corpus package. 2026.
- [2] Kurpishev I.B. Reper-Projective Architecture of Formula Chains: PILOT-01. 2026.
- [3] Bourbaki N. The Architecture of Mathematics. Russian translation in Mathematical Education, 1960.
- [4] Ponarin Ya.P. Affine and Projective Geometry. Moscow: MCNMO, 2009.
- [5] Bibler V.S. Kant - Galileo - Kant: Reason of Modernity in Paradoxes of Self-Foundation. Moscow: Mysl, 1991.
- [6] Oizerman T.I., Narsky I.S. Kant's Theory of Knowledge. Moscow: Nauka, 1991.
- [7] Rashevsky P.K. Riemannian Geometry and Tensor Analysis. Moscow: Nauka, 1967.
- [8] Kline M. Mathematics: The Search for Truth. Russian translation. Moscow: Mir, 1988.
- [9] Kline M. Mathematics: The Loss of Certainty. Russian translation. Moscow: Mir, 1984.
- [10] Arnold V.I. Geometry of Complex Numbers, Quaternions and Spins. Moscow: MCNMO, 2002.