

Pipeline 伪像消解公理系统 (v1.0)
Axiomatic Framework for Neutralising Pipeline Artifacts (v1.0)

体系定位声明 (Positioning Statement)

本公理系统是一个结论合法性判据系统（而非研究方法论）。
其目的在于判断某一结论是否具备“系统属性”的解释资格，
而不适用于约束探索性研究、模型试验或方法发明过程。

This axiomatic system is an admissibility framework for claims, not a research methodology.
Its purpose is to determine whether a given conclusion is entitled to be interpreted as a system-level property,
and not to restrict exploratory research, model construction, or methodological innovation.

公理 0：对象-路径分离公理

Axiom 0: Object-Path Separation

系统 S 的存在不依赖于观察路径；
但任何关于 S 的属性性断言，
其解释合法性必须相对于某一观察路径族来判定。

The existence of a system **S** is independent of any observation path;
however, any **attributive claim** about **S** must have its interpretive legitimacy evaluated relative to a family of observation paths.

公理 1：路径显式性公理

Axiom 1: Path Explicitness

任何结论必须显式写为：

$$R=R(S \mid \pi)$$

其中 π 表示一条完整的观察—处理路径。

Any conclusion must be explicitly expressed as:

$$R=R(S \mid \pi)$$

where π denotes a complete observation-processing pipeline.

公理 2：结构判定层级公理

Axiom 2: Structural Tier Specification

中文

所有“不变性”断言必须在明确的结构层级上给出：

Tier I（判定结构）：存在性、峰值存在、可排序性

Tier II（序结构）：排序关系是否保持

Tier III（数值结构）：数值在给定误差界内稳定

未声明层级的结构不变性断言视为未定义。

All invariance claims must be specified at an explicit **structural tier**:

Tier I (Decision structure): existence, peak presence, orderability

Tier II (Ordinal structure): preservation of ranking relations

Tier III (Numerical structure): numerical stability within a tolerance

Any invariance claim without an explicit tier is **considered undefined**.

记号 \equiv_T 表示在结构层级 T 上的判定等价，而非数值相等。

The symbol \equiv_T denotes equivalence at structural tier T , not numerical equality.

公理 3：路径稳定域公理

Axiom 3: Stability Domain

其中 $\Pi^*(T)$ 表示在结构层级 T 上形成判定稳定性的路径稳定域，其存在性而非构造性在本体系中被要求。

Here $\Pi^*(T)$ denotes a path stability domain at structural tier T , whose existence—rather than constructive specification—is required in this framework.

对于给定结论 R 与结构层级 T ,

若存在非空路径族 $\Pi^*(T)$ ，使得：

$$\forall \pi_1, \pi_2 \in \Pi^*(T), R(S \mid \pi_1) \equiv_T R(S \mid \pi_2)$$

则称 R 在层级 T 上具备路径稳定域。

For a given conclusion R and structural tier T ,

if there exists a **non-empty family of paths** $\Pi^*(T)$ such that:

$$\forall \pi_1, \pi_2 \in \Pi^*(T), R(S \mid \pi_1) \equiv_T R(S \mid \pi_2)$$

then R is said to possess a **path stability domain at tier T** .

公理 4：Pipeline 伪像定义公理

Axiom 4: Definition of Pipeline Artifact

若在某一结构层级

T 上不存在任何非空路径稳定域，

则该层级上的差异被定义为 **pipeline 伪像**，

不得解释为系统属性。

If, at a given structural tier T , no non-empty path stability domain exists, then any observed differences at that tier are defined as **pipeline artifacts**, and must not be interpreted as system-level properties.

公理 5：尺度授权公理

Axiom 5: Scale Authorisation

尺度参数 s 仅在以下条件下被允许进入系统描述：

存在某一结构层级 T 及其路径稳定域 使得 $R(S \mid \pi, s)$ 在该域内保持 T -结构不变。

否则， s 被视为路径注入参数。

A scale parameter s is authorised for system description only if:

there exists a structural tier T with a corresponding stability domain $\Pi^{\setminus *}(T)$ such that $R(S \mid \pi, s)$ remains T -invariant within that domain.

Otherwise, s is treated as a path-injected parameter.

公理 6：复杂性存活公理 Axiom 6: Complexity Survival

复杂性 C 被定义为：

在至少一个明确结构层级上，
具备非空路径稳定域的系统属性。

Complexity C is defined as:

a system property that possesses a non-empty path stability domain
at at least one explicitly specified structural tier.

公理 7：不可比较合法性公理 Axiom 7: Legitimacy of Incomparability

若在所有结构层级上均不存在路径稳定域，
则系统间比较被定义为非法但合法的研究状态。

If no stability domain exists at any structural tier,
then comparisons between systems are defined as **illegitimate but methodologically valid research states**.

公理 8：Pipeline 降格公理 Axiom 8: Pipeline Neutralisation

仅当结论在某一结构层级上具备路径稳定域时，
pipeline 才被视为表示变换而非结构生成器。

Only when a conclusion possesses a stability domain at a given structural tier
may the pipeline be regarded as a **representational transformation** rather than a structure-generating mechanism.

终止标记 (Termination Marker)

在本体系中，
任何无法在明确结构层级上建立路径稳定域的结论，
不具备“系统属性”的解释资格。

Within this framework,
any conclusion that fails to establish a path stability domain
at an explicit structural tier
is not entitled to interpretation as a system-level property.

冻结声明 (Freeze Statement)

本公理系统在当前版本中被视为**逻辑一致、结构封闭、接口受控**。
后续工作仅可在应用、实例化或外部对比层面展开，不再修改其公理核心。