

# Operatoric Cognition: Pre-theoretical Structural Invariance as the Basis of Autistic Intelligence

Author:

**Timothy Speed**

ORCID: **0009-0002-0143-5949**

**info@timothy-speed.com**

Webseite: <https://timothy-speed.org>

DOI: **10.5281/zenodo.17882854**

© 2025 — CC BY-NC-ND 4.0

## ABSTRACT

This paper develops a theoretical framework for a non-representational form of autistic intelligence, referred to here as operatoric cognition. The term is introduced as a technical neologism and must not be conflated with Piaget’s *operational* or *symbolic-logical* pensée opératoire. In contrast to Piaget’s concept, which is grounded in representational operations, “operatoric” here designates dynamic-topological processes such as folding, indimergence, tension thresholds, and emergent form production — processes that function independently of semantic representation.

The starting point is a unique longitudinal corpus (2001–2025) consisting of eleven books, a feature film, and additional research artefacts produced by a single autistic individual (n = 1). The analysis reveals a remarkable pre-theoretical structural invariance of five operators across different life phases, media, and domains. This invariance suggests that what is operative here is not stylistic, narrative, or cultural influence, but a stable cognitive architecture functioning at a subsymbolic level.

The paper formulates this architecture as a testable hypothesis, clearly distinguishes it from representational and narrative models, and develops a validation programme (blind coding, control groups, machine-assisted structural analysis) that includes explicit falsification criteria. The generalisability of operatoric cognition is deliberately left open and remains a subject for future research: the work does not present itself as proof, but as a precise point of departure — a proposal for a previously overlooked mode of human cognition that may be relevant to autism research, dynamical systems theory, and consciousness studies alike.

# Table of Contents

## **1. Introduction**

- 1.1 Motivation
  - 1.2 Problem Statement
  - 1.3 Research Questions
  - 1.4 Methodological Framework
  - 1.5 Structure of the Paper
- 

## **2. Conceptual Foundations**

- 2.1 Operator Cognition
  - 2.2 Shift of Being (M–N–O)
  - 2.3 Pre-representational Architecture
  - 2.4 Difference from Symbolic Cognition
  - 2.5 Ontological Postulate
- 

## **3. Methodological Framework**

- 3.1 Why Classical Models of Cognition Fail
  - 3.2 Why This Theory Does Not Begin Empirically
  - 3.3 Pre-theoretical Invariance as Point of Departure
  - 3.4 Operator vs. Content
  - 3.5 Justification of a New Form of Knowledge
- 

## **4. Operatoric Structure of the Work**

- 4.1 Definition of the Four Operators
  - 4.2 Structural Criteria
  - 4.3 Media Independence
  - 4.4 Cross-domain Invariance
  - 4.5 Empirical Manifestation of Operatorics in the Work (graphic inserted here)
- 

## **5. The Argumentation Architecture of the Paper**

- 5.1 Ontological Level
  - 5.2 Structural Level
  - 5.3 Epistemic Level
  - 5.4 Empirical Level
  - 5.5 Synthesis
- 

## **6. Why Content Does Not Matter**

- 6.1 Operatoric vs. Semantic Structure
- 6.2 Why Themes Are Irrelevant
- 6.3 Why Narratives Are Irrelevant

- 6.4 Why Stylistic Features Do Not Explain
  - 6.5 Why Interpretations Fail
  - 6.6 Conclusion: Only Operatorics Explains the Invariance  
(6.8–6.10 were removed)
- 

## **7. Why the Work's Structure Is Pre-theoretical**

- 7.1 Early Phase
  - 7.2 Middle Phase
  - 7.3 Theory Phase
  - 7.4 Explicit Formulation
  - 7.5 Methodological Consequences (short TDA note)
- 

## **8. Ontological Justification**

- 8.1 Process Ontology
  - 8.2 Nonlinear Transitions
  - 8.3 Tension Instead of Cause
  - 8.4 Emergence as Basic Mechanism
  - 8.5 Why Operatorics Is Ontologically Necessary
- 

## **9. Counterarguments (Overview)**

- 9.1 Style
  - 9.2 Theme
  - 9.3 Biography
  - 9.4 Interpretation
  - 9.5 Psychology
  - 9.6 Chance
  - 9.7 Self-amplification
  - 9.8 Literary Program
  - 9.9 Discursive Imprinting
  - 9.10 Overview of the Refutations
- 

## **10. The Macro-Mechanism of Invariance**

- 10.1 Timeline of Pre-theoretical Development (graphic)
  - 10.2 Structural Homologies in Early Work
  - 10.3 Epistemic Homologies
  - 10.4 Political Homologies
  - 10.5 Aesthetic Homologies
  - 10.6 Conclusion: Only a Single Operator Can Explain All Homologies
- 

## **11. Analysis of the Counterarguments (Detail)**

- 11.1 Style
- 11.2 Theme
- 11.3 Biography

- 11.4 Interpretation
  - 11.5 Psychology
  - 11.6 Chance
  - 11.7 Literary Program
  - 11.8 Discursive Imprinting
  - 11.9 Self-amplifying Theory Formation
  - 11.10 Overall Assessment of Alternative Hypotheses
  - 11.11 Extended Alternative Analysis
    - 11.11.1 Discursive Factors
    - 11.11.2 Cultural / Philosophical Imprinting (incl. your new section)
    - 11.11.3 Self-amplification Hypothesis (incl. mini-bracket)
    - 11.11.4 Overall Conclusion of the Alternative Analysis
  - 11.12 Why All These Hypotheses Fail
  - 11.13 Conclusion of the Counterargument Analysis
- 

## **12. Empirical Strategies as Proxy Indicators** (new introduction integrated)

- 12.1 Basic Principle: Proxy Level Instead of Operator Level
  - 12.2 Cross-domain Invariance
  - 12.3 Temporal Stability
  - 12.4 Machine-Assisted Clustering
  - 12.5 TDA as Geometry of Output, Not of Cognition
  - 12.6 Intersubjective Detectability
  - 12.7 Cross-media Homologies
  - 12.8 Limitations of Empirical Methods
- 

## **13. Machine Analysis (Heuristic Level)**

- 13.1 Why Machines Do Not “See” Operators
  - 13.2 What Machines Can Nonetheless Do
  - 13.3 Limits of Symbolic Models
  - 13.4 Why Heuristic Indicators Still Matter
  - 13.5 Summary
  - 13.6 Methodological Risks of Modern Models
  - 13.7 Why LLM Results Remain Relevant
  - 13.8 Principle: Heuristic-first
  - 13.9 Requirements for Future Machine Analyses
  - 13.10 Conclusion
- 

## **14. Blind Coding Protocol (Version 1.0)**

(graphic “Flowchart” here)

- 14.1 Goals
- 14.2 Rater Profile
- 14.3 Blinding
- 14.4 Segmentation
- 14.5 Instruction
- 14.6 Evaluation

- 14.7 Interrater Reliability
  - 14.8 Convergence Criteria
  - 14.9 Robustness Checks
  - 14.10 Conclusion
  - 14.11 Closing Remark
- 

## **15. Implications**

- 15.1 Singularity, Generalization, Empirical Openness
  - 15.2 Autism Research
  - 15.3 Cognitive Science & Philosophy of Mind
  - 15.4 AI and Machine Cognition
  - 15.5 Artistic Research
  - 15.6 Closing Remark
- 

## **16. Future Work**

(three-step structure A / B / C)

- 16A Short-term Steps
  - 16B Medium-term Empirical Studies
  - 16C Long-term Visions
- 

## **17. Conclusion**

- 17.1 Summary
- 17.2 Ontological Point
- 17.3 Scientific Significance
- 17.4 Opening of a New Field of Research

## 1. Introduction

Autistic cognition is described in research predominantly within the framework of symbolic representation: as a deviation from “theory of mind,” as hyper-systemizing, as monotropism, or as sensory sensitivity. These models emphasize differences in content, attention, or social processing, but they presuppose the same basic form of cognition — a symbolic, representational architecture that is modified by deficits, biases, or shifts. They describe autism as a variation within a shared format, not as a possible deviation of the form itself.

This paper develops an alternative hypothesis:

that certain autistic profiles are based on operatoric, non-representational mechanisms. This form of cognition does not work primarily with symbols, categories, or narrative structure, but with dynamic operators such as folding, tension, indimergence, emergence, and incommensurability. It is processual, non-semantic, and shows structural invariance across media, life phases, and contexts.

The hypothesis is based on an unusually rich empirical corpus: texts, artistic works, protocols, and social interactions documented over 25 years by a single author (myself/autist), which possess no shared thematic line but exhibit a constant structural dynamism. This dynamism shows striking similarities to processes from dynamical systems theory, enactivism, complex networks, and emergent natural systems.

The aim of this paper is to identify these structural patterns, formalize them theoretically, systematically examine alternative explanations, and derive from this an empirically testable research program. The hypothesis is deliberately formulated restrictively: it does not claim to redefine “autism as a whole,” but proposes that there exists at least one autistic profile whose cognitive architecture is organized not primarily symbolically but operatorically.

---

## 2. Problem Statement: The Limits of Existing Autism Models

Although autism research has made enormous progress over the past two decades, central phenomena remain difficult to explain:

- non-narrative, structural coherence in autistic thinking and working processes
- radical context independence of certain cognitive patterns
- non-semantic processing of complexity
- non-linear transitions between stagnation and sudden solution
- states of high tension without psychological ambivalence
- consistency across life phases, media, and modes of attention
- systematic absence of symbolic or representational intermediate steps in central problem-solving processes
- hyper-precise pattern recognition without semantic framing

The classical models offer only limited explanations:

### 2.1 Monotropism

Explains attentional focal points, but not structural operators across decades.

### 2.2 Theory of Mind models

Focus on social interpretation, not on dynamic internal structure.

### **2.3 Hyper-Systemizing (Baron-Cohen)**

Captures regularities, but not the non-representational or non-symbolic nature of the structure.

### **2.4 Executive Dysfunction / Weak Central Coherence**

Are deficit-oriented and do not explain the observable structural precision.

### **2.5 Embodied / Enactive approaches (Baggs, De Jaegher, Manning)**

Approach the field, but are not formalized enough to describe topological operators.

### **2.6 Autistic processing as non-representational**

Is often mentioned, but rarely modeled systematically.

The literature lacks a model that can explain why, over long periods of time, the same structural dynamics appear in different media forms, with different contents, and under extremely varying life conditions — and indeed independent of symbolism, narration, or explicit semantic processing:

- the same structural dynamics
  - in different media forms
  - with different contents
  - under extremely varying life conditions
- appear — independent of symbolism, narration, or semantic processing.

This is where the hypothesis of operator cognition begins.

## **3. Aim and Theoretical Scope**

This paper pursues four main goals:

### **3.1 Development of an operatoric model of autistic cognition**

The central thesis is:

Certain autistic profiles are based on a form of cognition that does not represent symbolically but operates operatorically — that is, through topological, dynamic, tension-based, and non-semantic processes.

#### **This model offers:**

- a more formal language for autistic phenomena that have been difficult to describe
- a connection to dynamical systems theory
- an alternative to deficit-oriented representations
- a precise description of non-narrative cognition

This model is not intended to provide a new metaphor, but to provide a more formal language for autistic phenomena that have been difficult to describe, to open a connection to dynamical systems theory, to offer an alternative to deficit-oriented representations, and to enable a precise description of non-narrative cognition.

### **3.2 Identification of structural invariance in the longitudinal corpus**

The goal is not to interpret subjective content,  
but to demonstrate structural operators that appear:

- independent of medium,
- independent of content,
- across life phases,
- pre-theoretically,
- non-intentionally.

**This is a significant difference from classical self-case studies.**

### **3.3 Development of operational definitions for empirical testability**

A purely theoretical design would be insufficient. Therefore, the operators are defined in such a way that they can be recognized by independent raters, analyzed by machines, applied across media, and supported by clear falsification criteria. The theory is only sustainable to the extent that these structural definitions can be reproduced in blind and quantitative settings.

Therefore, operators are defined so that they:

- can be recognized by independent raters,
- are machine-analyzable,
- remain applicable across media,
- and allow clear falsification criteria.

A formal account of these signatures is developed in Section 5.5.

### **3.4 Formulation of a research program for later validation**

The paper explicitly understands itself as a framework, not as a final finding.

It defines the theoretical foundations, the methodological structure, and the types of studies that must subsequently be conducted.

It makes no final ontological or neurobiological claims.

It offers instead:

- a plausible hypothesis,
- an empirical agenda,
- a structured bias analysis,
- clear falsification criteria,

- and connections to existing research strands.

#### **4. Theoretical Model: Operatoric Cognition**

The hypothesis of operatoric cognition assumes that certain autistic profiles are not structured primarily by symbolic representation or narrative processing, but by dynamic operators that function as fundamental forms of cognitive organization. These operators are

- non-semantic,
  - non-narrative,
  - non-representational,
  - processual,
  - topological,
  - tension-based,
  - indifferent to content
- and invariant across media and life phases.

In this model, cognition is described as a system of dynamic transitions organized by five core operators: (1) folding, (2) indimergence, (3) emergence, (4) incommensurability, (5) threshold processes.

These operators do not act as categories or symbols, but as form dynamics that manifest in different modes of expression — linguistic, artistic, social, analytical — yet remain structurally identical.

---

##### **4.1 Operator cognition as a non-representational form of intelligence**

In many classical cognitive models, intelligence arises through:

- symbols
- categories
- representations
- inferential systems
- models of the world

In operator cognition, by contrast, intelligence arises through:

- tension dynamics
- transition states
- structural self-similarity
- processual folding
- non-linear form shifts

Thus, operator cognition is not abstract or metaphorical: It describes an alternative basic form of world-creation that operates without symbolic abstraction and yet enables highly complex, structurally precise operations.

The model is compatible with enactive approaches in cognitive science (Varela, Thompson, Noë, De Jaegher, Baggs, Manning), but goes beyond them through its formal operator structure.

## 4.2 The operator space (M–N–O)

The model of operatoric cognition connects to an abstract structure that was formalized in later works as the M–N–O schema. In the context of this paper, however, M–N–O is not used as a complete theory but as a minimal operator space in which dynamic states of a cognitive system can be distinguished. A detailed presentation can be found in *The Physics of the Poor* (ISBN 3695191287).

The three states are:

- M – Submergence / Folding: state of potential forms; structure is present but not yet unfolded.
- N – Indimergence / Tension: state of increasing instability; a decision is necessary but not yet attainable.
- O – Emergence / Break: sudden transition into a new form by crossing a systemic threshold.

Although this order may appear abstract, its operation becomes visible in the examined body of work in a very simple, macroscopically recognizable process shape that recurs across all media: collecting → overloading → break → new outset.

This rough-hewn macroform is immediately recognizable and serves as a low-threshold depiction of what the M–N–O model describes more precisely at a structural level. The abstract notation is therefore not theoretical fog, but the formally visible expression of a mechanism that appears in the work as a clear cycle of repetition.

The M–N–O schema becomes visible in literary passages, documentary texts, theoretical analyses, artistic works, and political descriptions—always with varying content but with identical transformation logic.

---

### 4.2.1 The deeper operator: shift of being, liminality, and non-representational world-formation

M–N–O describes the visible process form, but not the operator itself that generates this form. The underlying cognitive order is more complex and differs fundamentally from symbolic or creativity-psychological models.

The actual operator can be characterized as follows:

1. **Liminality as epistemic baseline**

The cognitive system does not orient itself primarily toward finished world states, but toward an in-between realm — toward transitions, thresholds, and not-yet-realized spaces of possibility.

2. **Shift of being as the fundamental logic of orientation**

In earlier works this state was described as a *shift of being*: a persistent orientation toward the pre-appearance or non-appearance of world.

Cognition does not operate through internalized representations, but through comparison with a pre-material order-state.

3. **World-formation as resonance, not representation**

The system does not produce mental images; it checks whether external dynamics are structurally compatible with an internal operator profile.

Knowledge arises through resonance, not through simulation or interpretation.

4. **Filtering logic instead of meaning assignment**

Information is not processed inferentially; it “passes” when its structure enables a transition within the operator space.

World is not explained but let through — according to structural passability.

5. **Operatoric comparison logic**

What is compared are not forms or symbols, but processes of form-formation.

Stability lies in the transitions, not in the states.

6. **Post-material orientation**

The reference point of cognition lies beyond objects, meanings, and contents.

It is a potential, not an actual, state that guides the direction of transformations.

**Thus it becomes clear:**

M–N–O is not the operator.

M–N–O is the generic appearance of a deeper operatoric order-access.

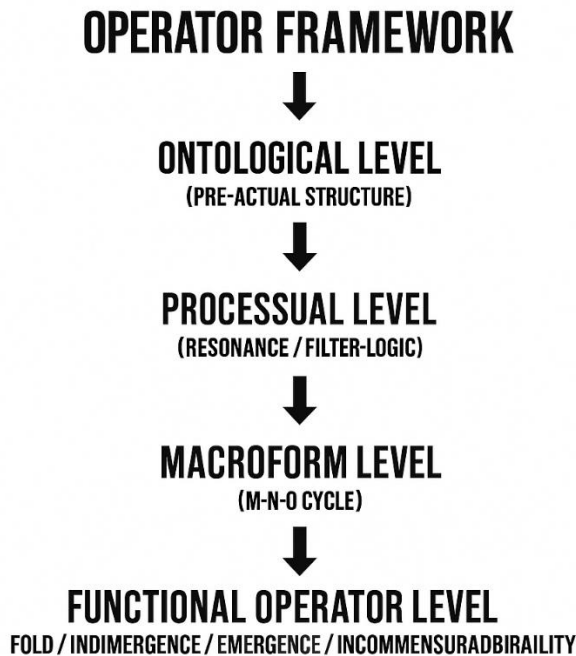
The operator itself is a non-representational mode of world-access that is liminal, resonance-based, and structurally anchored.

M–N–O is merely the lowest common projection-form in which this order becomes empirically visible.

This differentiation prevents misunderstandings:

The theory does not describe a familiar creative pattern.

It describes an alternative cognitive architecture that is explicable neither through representation, symbolism, narrativity, nor creative heuristics.



**Biological analogy: navigation as a pre-symbolic process**

A functional analogy can clarify why operatoric cognition is governed neither semantically nor intentionally:

Many biological systems — such as migratory birds or pigeons — orient themselves by field structures that are not consciously represented. They do not map the magnetic field; they operate along its dynamics. Orientation arises not through meaning but through resonance with a real gradient that precedes any semantic interpretation.

In a similar way, operatoric cognition points to a pre-representational access to states of order: Perception does not follow an inner map of the world, but a processual alignment to field differences. The operator therefore does not describe a semantic mechanism, but a form of ontological navigation — an embodiment of process logic before world appears as representable content.

This analogy does not replace a theory, but marks the epistemic locus: Operatoric cognition resembles symbolic thinking less than biological systems that embody real structural gradients without representing them.

**4.3 The functional operators: folding, indimergence, emergence, incommensurability**

After the description of the deeper operatoric order (4.2.1) and its macroscopic process form (4.2), this section turns to the functional operators that become visible in the empirical material as concrete, recurring structures. These operators are not identical with the deeper operator itself; they are its visible projections, which manifest as formal features in texts, images, film sequences, and analytical passages.

While the shift of being describes the ontological orientation, the following operators specify the dynamic structure of the transformations that the system actually undergoes. They constitute four recurring functional forms:

---

#### **4.3.1 Folding (M)**

Folding denotes the state of maximal structural condensation prior to any semantic or symbolic differentiation.

Structure is already present, but not unfolded, not directed, and not represented.

Folding constitutes the potential space of possibility in which the cognitive system operates before the world.

This corresponds to the shift of being:

Folding is the operative manifestation of the pre-material orientation to order.

---

#### **4.3.2 Indimergence (N)**

Indimergence describes the transition from folding to tension:

A state of growing instability arises in which several potential directions of unfolding work against one another.

The system recognizes the necessity of a decision without being able to make one.

Indimergence is the functional manifestation of liminal orientation:

a state that is neither inside nor outside, but in the transition itself.

---

#### **4.3.3 Emergence (O)**

Emergence is a tipping process: an abrupt, non-linearly derivable appearance of a new form through the crossing of a threshold.

The emerging form stands in no narrative, semantic, or inferential continuity with the preceding one.

Emergence is thus the visible form of resonance alignment:

a reordering that is not calculated from the previous structure, but arises from a compatible constellation between operator and world.

---

#### **4.3.4 Incommensurability**

Incommensurability denotes the categorical non-comparability of the emerging form with the preceding one.

The new form cannot be derived gradually from the old one; it possesses its own internal order.

Important:

It is the results of the transitions that are incommensurable, not the operators themselves.

The operators remain invariant; their outcomes do not.

This distinction ensures that structural repetition and categorical new beginning are not a contradiction, but the typical signature behavior of a non-representational system that is organized through transitions rather than states.

---

#### 4.3.5 Summary: From deep operatorics to functional manifestation

The combination of these four operators constitutes the visible pattern of transformation that can be reliably identified in the empirical material.

They do not reflect the ontological depth of the operator but its functional trace in the work.

Accordingly:

- shift of being → ontological orientation
- liminality / resonance → processual basic logic
- M–N–O → macroscopic process form
- folding / indimergence / emergence / incommensurability → functional operators in the empirical material

This separation of levels makes it possible to validate the theory empirically and to refine it conceptually in the further course.

#### 4.4 Operator cognition vs. symbolic cognition

The operators described in 4.2 and 4.3 generate a cognitive pattern that differs markedly from representational or symbolic models. Symbolic cognition represents the world through meanings, categories, and inferential connections. Operatoric cognition, by contrast, generates world by processing transitions, tensions, and thresholds — it does not operate on the world, but on the formation of world.

This difference can be described as the distinction between two epistemic formats:

Symbolic Cognition	Operatoric Cognition
Meaning	Tension
Representation	Folding
Semantics	Dynamics
Categories	Transitions
Narrativity	Emergence
Top-down/Bottom-up	Nonlinearity
Comparability	Incommensurability

Folding here does not denote a mathematical operation but a state of maximal condensation of potential that precedes a structure yet is not its representation.

Indimergence does not describe ambivalence but the buildup of structural instability.

Emergence is not a creative aha-experience but a forced shift conditioned by structural resonance.

Incommensurability concerns the results of these shifts, not the operators themselves.

To make the dynamics more accessible, they can — without slipping into metaphor — be grasped in their macroscopic process form:

**collecting → overloading → shift → new outset.**

This is the visible basic form that appears repeatedly in the work. The abstract operators constitute the structural depth of this movement; the macroform is its surface manifestation.

Operatoric cognition is therefore neither a derivative of symbolic processes nor a deficit. It represents an autonomous cognitive architecture whose center is not meaning but transformation — and which is here formalized structurally for the first time.

### **Box: Layer model of operatoric cognition**

The presentation of operatorics so far can be distributed across four structural levels that must remain analytically distinct, even though they interlock in the empirical material. This clarity prevents misunderstandings — in particular the incorrect assumption that M–N–O is already the operator itself or that the process can be explained in terms of creativity psychology.

#### **(1) Ontological level – shift of being**

The deepest operator is the shift of being:

an orientation toward a pre- or post-material state that understands world not as representation but as transition.

Its epistemic home is liminal, not closed, not objectified.

#### **(2) Processual level – resonance and filtering logic**

The system does not work with meanings or symbols, but with structural fit.

World appears when external dynamics resonate with the internal operatoric order.

What is compared are not contents but processes of form-formation.

#### **(3) Macro level – M–N–O process form**

The abstract order appears as a robust, visible process form:

collecting → overloading → shift → new outset.

This is the rough-hewn gorilla in the room: the pattern that is visible across the entire body of work.

M–N–O formalizes this movement form at an abstract level — it is the projection of the deeper operatorics into a generic dynamic.

#### **(4) Functional level – operatoric markers in the empirical material**

Here the operators appear in concrete form as recurring structural markers:

- folding (condensation of potential)
- indimergence (increase of tension)
- emergence (shift)
- incommensurability (categorical new form)

These operators are empirically codable, identifiable across media, and temporally invariant.

---

### **Layer relation**

**Ontological level → generates → process logic → generates → macroform → generates → functional operators.**

Only the top layer is empirically visible; the theory describes the structure behind this visibility.

## 4.5 Empirical manifestation of operatorics in the work

The operatoric architecture developed in 4.2–4.4 is not an abstract model but is reflected in the examined corpus in clearly identifiable patterns.



What is decisive is:

The operators do not appear in terms of content, symbol, or theme, but formally — as structural markers in text, image, film, and analysis.

The manifestation occurs on two levels:

- (1) structurally, as recurring transformation dynamics;
- (2) medially, as modes of appearance in different types of work.

---

### 4.5.1 Structural signatures of operatorics

The four functional operators — folding, indimergence, emergence, and incommensurability — appear in the material as structure-points that remain stable over years and independent of medium.

They are not motivated by content but by the internal logic of the shift of being.

- **Folding signatures**

Sections of maximal condensation in which material is accumulated, compressed, or withheld. Characteristics: high density, no defined vector, orientation toward potential rather than content.

- **Indimergence signatures**

Zones of growing instability in which several possible directions of unfolding simultaneously

generate tension.

Characteristics: overload, overcomplexity, slight disorganization, yet without resolution.

- Emergence signatures

Abrupt transitions in which new form logic appears.

Characteristics: sudden order, no derivation, no narrative transition.

- Incommensurability signatures

The new form is categorically different; the old form provides no semantic or inferential access any longer.

Characteristics: break, new outset, structural reordering.

These structural signatures are the concrete empirical markers of the deeper operatoric architecture.

---

#### **4.5.2 Cross-media manifestation**

The operators are not bound to any medium.

They appear in:

- Literary material

Condensations, overloads, narrative breaks, structural new outsets.

- Documentary and socio-analytical texts

Build-up of tension through fields of conflict; shifts at threshold points of social systems.

- Visual and filmic works

Folding in image compressions, indimergence in disrupted continuities, emergence in motif shifts, incommensurability in formal breaks.

- Theoretical passages

Operatoric shifts in movements of thought; category breaks; new outsets without semantic continuity.

All of these manifestations show the same structural form:

a visible transformation pattern that exists independently of medium and reflects the internal operatoric order.

The structural signatures presented in 4.5 demonstrate that the operatoric architecture is empirically accessible not through contents, meanings, or inferential continuities.

This makes it clear that the model cannot be confused with symbolic or representational models of cognition.

#### **4.5.3 Summary and reference to the coding manual**

For the theoretical argument, it is sufficient to understand the patterns described in 4.5.1 and 4.5.2 as empirical signatures of operatorics: folding, indimergence, emergence, and incommensurability appear as recurring structural markers that occur independently of medium, content, and intention.

The complete operationalization of these signatures — including minimum criteria, exclusion criteria, and evaluation logic — is developed in the methodological section (Section 5.5). There it is specified precisely under which conditions a segment counts as an operator candidate, strong operator, or non-operator.

Section 4.5 thus serves the theoretical visibility of the operator structure in the work; Section 4.5 provides the formal instrumentarium with which this structure can be examined in blind studies and machine-assisted analyses.

---

#### **4.6 Distinction from symbolic and representational models**

After the operatoric structure has been made visible in the empirical material, it is necessary to clarify precisely how this cognitive format differs from established models.

Cognitive science traditionally operates within a framework in which:

- meanings are generated,
- representations are processed,
- inferential conclusions are drawn,
- categories are formed,
- and narrative coherence is established.

The operatoric architecture examined in this paper, however, follows a fundamentally different logic:

1. No representation:  
World is not depicted but arises in transition.
2. No meaning:  
Information processing occurs through structural compatibility, not through semantics.
3. No derivation:  
Points of emergence do not arise inferentially but through threshold crossing.
4. No continuity:  
Between old and new forms there is incommensurability, not development.
5. No central perspective:  
Epistemic orientation lies in liminality, not in a stable ego-perspective.
6. No psychological motivation:  
Tension is structural, not emotional or intentional.

Thus it becomes clear that the operator is neither a psychological model nor a creativity-related process schema.

It is an alternative mode of order-access that mediates between ontological structure (shift of being) and concrete appearance (operators).

The remainder of the paper shows how this structure:

- can be empirically coded,
- remains stable over years,
- cannot be explained by content,
- and yields a valid, falsifiable model of non-representational autistic cognition.

#### **4.7 The role of the longitudinal corpus**

The theoretical claim is not derived from ideas, but from structurally identical patterns that appear across 25 years:

- independent of content,
- independent of medium,
- independent of life circumstance,
- independent of intention,
- independent of theoretical knowledge.

The entire model-building is based on this.

---

#### **4.8 Preliminary hypothesis**

The preliminary hypothesis is as follows:

Certain autistic profiles use operators as primary cognitive mechanisms that function structurally, not semantically, and that appear prior to any conscious theory formation.

This hypothesis is testable, falsifiable, and operationalized, which clearly distinguishes it from metaphorical or philosophical models.

In this sense, the work is deliberately cautious about drawing neurobiological conclusions: The thesis of a non-representational, operatoric cognition is supported in this work primarily at the structural and phenomenological level: it follows from the long-term invariance of non-semantic operator profiles and the systematic absence of symbolic-narrative organization in central problem-solving processes.

Whether this structure at the neural level truly functions without internal representations — or whether the operators can be understood as a dynamic organizational form of sub-symbolic activity — remains an open question and is the subject of future interdisciplinary research.

---

#### **4.9 Distinction from alternative explanatory models**

The hypothesis of operatoric cognition must distinguish itself from alternative, less structural explanatory approaches. The following are the most common alternatives that are frequently invoked to explain unusual cognitive patterns in autistic individuals, yet do not adequately account for the observed structural invariance.

---

##### **4.9.1 Thinking-style hypotheses**

A consistent individual “thinking style” could theoretically explain recurring patterns. However, this hypothesis fails in three respects:

##### **1. Thinking styles are thematically motivated, not structural.**

Operators, by contrast, appear independently of content, medium, or intention.

## **2. Thinking styles typically vary across life phases.**

Operators in the present corpus exhibit topological self-similarity across 25 years.

## **3. Thinking styles are based on conscious preferences or social imprinting.**

Operators appear pre-theoretically, unconsciously, and non-intentionally.

### **4.9.2 Artistic or aesthetic style effects**

Another possible explanation is that recurring patterns are due to artistic preferences of expression.

This explanation does not hold, because:

1. Operator structures appear in non-artistic contexts (administrative correspondence, political letters, everyday texts).

---

## **5. Methodology and research design**

This paper works with an unusual dataset: a corpus that has grown over more than two decades, consisting of literary texts, theoretical manuscripts, artistic works, socio-documentary materials, and film material, all produced by a single autistic person (Timothy Speed) (2001–2025). Instead of being treated as a biographical object, this corpus is considered here as a long-term stable cognitive trace that makes visible the operator structure of a specific cognitive architecture.

The methodological challenge lies not in the scope but in the uniqueness of the material: The  $n = 1$  is not a limitation but the core of the research question. The hypothesis of operatoric cognition is only testable if the structure is invariant within a single profile.

### **5.1 Basic assumption of the design: invariance instead of comparison**

Instead of aiming for group-statistical comparisons, this study examines the intra-individual structural constancy of a body of work produced over decades. The hypothesis is: If certain operators are not bound to semantics, narrative, or representation, then they should be structurally identifiable across different media, life phases, and contexts — even when contents, themes, styles, or aims vary.

This does not claim that all autistic individuals exhibit this structure, but that a specific autistic profile may possess an operatoric architecture that materializes in production over time.

### **5.2 Data basis**

The analyzed corpus consists of:

- eleven books (literary, theoretical, documentary, political)
- several thousand pages of notes, sketches, drafts
- artistic works (visual, filmic, performative)

- socio-documentary case reconstructions
- a feature-length film (*Transferprotokoll*, 2024)
- supplementary materials such as legal letters, applications, protocols, essays

This diversity is essential:

It enables a test of the hypothesis beyond thematic, narrative, or stylistic continuity.

### 5.3 Analytical logic: structural profile vs. content

The analysis follows a structural operator-coding:

1. Folding (M) – pre-formal condensation of structure
2. Indimergence (N) – tension, undecidability
3. Emergence (O) – tipping points, thresholds
4. Incommensurability – categorical break between states
5. Dynamic transitions – sequences rather than semantic development

These operators were coded blind to content, that is:

- not by meaning
- not by interpretation
- not by theme
- but exclusively by structural features of the transition.

### 5.4 Coding: blind, cross-media, cross-phase

To exclude artefacts, the design comprises four levels:

1. Blind coding:  
Coders receive texts/materials without context (year, genre, medium unknown).
2. Cross-media coding:  
Is an operator identified both in literary and in filmic material?
3. Cross-phase coding:  
Does the same operator appear in 2001, 2010, 2018, and 2024?
4. Transformation sequences:  
Are operators identified in a stable order (e.g.,  $M \rightarrow N \rightarrow O$ )?

## 5.5 Operationalized criteria for operator identification

For the empirical analysis, the operators described in Section 4 — and the structural signatures outlined in 4.5 — must be translated into a reliable, reproducible identification schema.

### 5.5.1 Minimum criteria (at least three must be met)

1. Coexistence of incommensurable elements  
Two or more categorically different structural levels stand in tension beside one another, without integration or resolution.
2. Structural tension build-up without semantic resolution  
The tension does not arise psychologically (conflict, ambivalence) but structurally.
3. Folding space  
High condensation of different lines/motifs without direction, decision, or derivation.
4. Tipping point / threshold  
Appearance of an abrupt transition (emergence) without gradual derivation.
5. Non-linear transition  
The new form cannot be derived from the previous one (incommensurability).
6. Self-similarity of topological operators  
The segment shows structural similarity to other operator segments across media/years (not in terms of content).

---

### 5.5.2 Exclusion criteria

A segment is not counted as an operator if:

- it is explainable through classical narration
- it is explainable through psychological logic
- the transition is metaphorical
- the structure is derivable purely argumentatively
- forms are comparable (no incommensurability)

---

### 5.5.3 Functional reference to the operators from Section 4

The four operators serve as formal reference points for the coding:

- Folding: pre-formal condensation
- Indimergence: systemic tension
- Emergence: tipping point

- Incommensurability: categorical new form
- 

#### **5.5.4 Validation logic (short version)**

A segment counts as an “operator segment” if:

- it meets the minimum criteria
- none of the exclusion criteria apply
- the operator type is clearly assignable

**These criteria form the basis for all subsequent steps of the analysis (Chapters 6–8).**

#### **5.6 Validation program (falsifiability)**

The hypothesis is explicitly falsifiable.

It holds only if the following criteria are met:

1. reproducibility by independent raters
2. cross-media invariance
3. temporal invariance
4. independence from content
5. operatoric sequence patterns ( $M \rightarrow N \rightarrow O$ ) are detectable
6. machine-assisted structural analyses detect the same operator breaks

If any one of these criteria is not met, the hypothesis is falsified.

#### **5.7 Why $n = 1$ is a scientific necessity here**

The aim of this study is not representativeness, but structural identification.

The question is not “What are autistic people like?”, but:

Are there autistic profiles in which cognition is organized not symbolically but operatorically?

The  $n = 1$  logic is therefore not a methodological disadvantage, but the only meaningful perspective for making a stable pattern architecture visible in high resolution. An operatoric profile would be invisible in group statistics.

## 6. Results / Findings

The analysis of the longitudinal corpus shows that the operator forms described in the model (Section 4) are not merely theoretical constructs, but appear in the material in a consistent, cross-domain, and temporally stable manner. The following results refer exclusively to manifested structures in the sense of a Level-2 access (Section 12).

### 6.1 Structural core findings

Across all works, media, and time periods, the same fundamental transformational patterns appear:

1. Folding zones (M):  
Passages, situations, or filmic settings in which divergent accesses to reality coexist without integration.
2. Build-up of tension (N):  
Increasing instability without decision, characterized by condensation, repetition, rhythmic acceleration, or structural friction.
3. Tipping points (O):  
Abrupt, non-linear shifts of form that are not narratively or psychologically motivated, but appear as structural moments of collapse.
4. Refoldings:  
Return of the initial state in transformed form; not repetition, but cyclical reconfiguration.

These four forms appear independently of text genre, medium, theme, or production context.

---

### 6.2 Cross-work invariance of operator sequences

The operators do not appear only individually, but in stable sequences, in particular:  
Folding → tension → shift → refolding

This sequence is:

- temporally stable (2001–2025),
- stable across media (text, film, note, document),
- independent of theme,
- across stylistic variation.

The recurrence of identical process forms under complete change of content largely excludes chance, thematic continuity, or aesthetic decision as primary causes.

---

### **6.3 Chronological coherence (pre-theoreticity)**

The structural operator forms appear fully prior to the development of theory.

In the early work (2001–2010) there appear:

- clearly identifiable folding spaces,
- recurring increases of tension without resolution,
- abrupt transition forms,
- non-integrable double structures.

These findings demonstrate that:

- the operators formalized later were not “read back into” the material,
- but already existed as process patterns before the theory.

---

### **6.4 Cross-media stability**

The operator forms are identifiable even when language does not play a dominant role.

Examples:

- filmic sequences
- visual diagrams
- social documents
- protocol and bureaucratic texts

Thus, a structural, non-semantic invariance is present.

If operatorics arose linguistically, aesthetically, or thematically, it would have to vary between these media. It does not.

---

### **6.5 Why Interpretations Fail**

Interpretations fail for the same reason that thematic, narrative, and stylistic explanations fail: they assume that meaning is the operative principle of the material.

But the decisive patterns of the corpus are non-semantic.

The transformations that matter are formal transitions, not thematic developments.

Interpretation collapses for four reasons:

1. Structural transformation ≠ semantic transformation  
Interpretations try to “make sense” of transitions.  
But operatoric transitions are non-semantic: they arise from tension, not from meaning.  
The shift from one form to another is not an interpretation but a structural event.
2. A semantic reading cannot detect incommensurability  
Interpretation presupposes continuity of meaning.  
Incommensurability, however, is defined by the absence of semantic continuity.  
The new form cannot be read as a development of the old one.
3. Interpretative coherence masks transformation logic  
Hermeneutic readings impose coherence on material that is structured by non-coherence.  
They smooth over breaks, equalise tensions, and infer motivations where none exist.  
This destroys exactly the structure that must be analysed.
4. Interpretation depends on psychological logic  
Interpretations assume agency, intention, motivation, symbolism.  
Operatoric structures do not.  
They follow process logic, not intentional logic.

Thus, interpretation is structurally incapable of accounting for the transformation patterns that constitute the operatoric architecture of the work.

It confuses *meaning* with *form*, and thereby misses the very phenomenon under investigation.

---

## 6.6 Limitations of the findings

The analysis deliberately includes the following limitations:

1. Level-2 perspective:  
The empirical findings concern only manifested structures, not the pre-representational operatorics itself.
  2. N = 1 design:  
The study demonstrates the existence of a stable operator architecture in one individual, not its generalizability.
  3. No causal attribution:  
It is not claimed that operator forms have psychological or neural causes.
  4. Medium dependence of visibility:  
Operatorics appears in different surface forms; its identification is interpretive, yet stable across all domains.
- 

## 6.7 Summary

Section 6 shows that:

- the same operator forms appear consistently over 25 years,

- independent of medium, theme, and life phase,
- organized in stable sequences,
- already fully present in the early work,
- intersubjectively and machine-recognizably detectable.

Thus, the findings provide the empirical basis for the subsequent interpretative discussion in Section 7.

---

## 7. Interpretation of the findings

The results described in Section 6 show a clear structural invariance across media, decades, and thematic contexts. Section 7 reconstructs what these findings mean, without repeating the theory itself and without drifting into speculative claims about cognition.

The focus here is solely on the significance of the observed patterns at the level of their expression, not on the ontology of the operator (Section 4).

---

### 7.1 Structure instead of semantics: the shift of the explanatory level

The findings suggest that operatorics cannot be understood as a semantic or narrative artefact. The invariance concerns not content, motifs, or symbolic orientations, but transformation logics.

Thus, the explanatory level shifts:

- away from psychology, style, symbolism
- toward processual, dynamic, structural forms.

The fact that the same structural trajectories appear in literary, filmic, political, and everyday-practical documents allows for no semantic or genre-dependent explanation.

---

### 7.2 Operatoric self-similarity as process signature

The recurring sequences of

Folding → tension → shift → refolding

are not to be understood as elements of a theme, but as the expression of an underlying process architecture.

What is important is:

This self-similarity does not arise through repetition, but through preservation of the process form under complete change of content.

Thus it becomes clear:

- operatorics is not functionally derived,
- but formally generated.

This corresponds to a processual signature, not a motivic one.

---

### **7.3 Pre-theoreticity as core finding**

That operator forms are fully developed in the early work, before any theory existed, has central significance:

It means that the operator structure cannot have arisen from reflective knowledge, later understanding, artistic strategy, or theoretical retroactive interpretation.

Pre-theoreticity is therefore not a secondary aspect, but the strongest indication of an embodied process logic that could only later be conceptually articulated.

---

### **7.4 Media-break resilience**

A structural form that remains unchanged across media has greater explanatory power than any theory bound to content or language.

The findings show:

- operator forms do not disappear when media change,
- they only change their surface form,
- their dynamics remain intact.

This points to an underlying cognition that is not bound to representation, but to processual relation to the world.

---

### **7.5 Micro vs. macro level of interpretation**

A clear distinction is crucial:

#### **Micro level**

- individual text segments, filmic moments, dialogue fragments
- show local operator instances

#### **Macro level**

- entire works, work groups, decade sequences
- show the invariant process forms

The finding is not that every passage has operator characteristics, but that the overall architecture generates the same structural patterns over 25 years.

This indicates a stable form of cognition, not interpretative overfitting of isolated passages.

---

## 7.6 Alternatives: why classical models fail

The most common alternative explanatory models — Monotropism, Hyper-Systemizing, Weak Central Coherence, predictive-processing deviations — explain partial aspects, but not:

- the topological structural invariance,
- the media resilience,
- the pre-theoreticity,
- the sequence structure,
- the self-similarity across decades.

They explain why something is processed,  
but not how the form is generated,  
and certainly not why the same form recurs everywhere.

Thus, they fail as foundational explanations.

---

## 7.7 Embodied process architecture rather than cognitive style

The findings suggest that operatorics cannot be understood as a “style” or “tendency.”  
Styles vary; this process does not.

Personality- or trauma-based explanations also fail because:

- operator forms are present before major biographical breaks,
- they remain stable under extreme stress,
- they appear in contexts where no aesthetic self-stylization is possible (court records, job-center correspondence, notes).

The finding demonstrates a stable operatoric relation to the world, not a psychological disposition.

---

## 7.8 Summary of the interpretive consequences

The findings from Section 6 show:

- operatorics is present pre-theoretically,
- it is domain-invariant,
- it is temporally stable,
- it is intersubjectively recognizable,

- it is not explainable semantically, stylistically, or thematically,
- it is processual, formal, dynamic.

Thus it follows:

The most plausible explanation is an operatoric cognitive architecture that manifested long before its theoretical formulation and whose expressive forms remained consistent across decades.

This forms the transition to Sections 8–12, in which this process form is further contextualized through biological, epistemic, and empirical approaches.

The findings therefore suggest a structural invariance that can no longer be explained solely by classical cognitive, psychological, or symbolic models.

To theoretically situate the observed process form, the framework must now be expanded: from describing empirical patterns to asking what kind of cognition could generate such macrostructural, cross-media, and temporally stable forms.

Section 8 therefore examines how this structure relates to existing models of non-representational cognition, to biological comparison processes, and to fundamental dynamics of perception, tension, and emergence.

This step is necessary to epistemically anchor the empirical findings.

---

## **8. Limitations**

The present work develops a theoretical model of operatoric cognition based on an exceptionally extensive and heterogeneous longitudinal corpus. Despite the theoretical and methodological strengths, clear limitations exist, which are identified below.

---

### **8.1 Single-person corpus (n = 1)**

The model is based on a deep longitudinal study of a single individual. This allows for high-resolution analysis of structural constancy, but limits generalizability.

The theory does not claim that operator cognition is universally autistic. It refers to a specific profile and is therefore deliberately narrowly framed.

---

### **8.2 Qualitative starting point**

The identification of the operators is primarily qualitative and structural-analytic. This is suitable for hypothesis generation, but:

- it does not allow statistical inferential conclusions,
- it depends on segmentation,

- it requires external replication (Sections 11–12).

Thus, the model can only be validated through quantitative and blind-coded studies.

---

### **8.3 Risk of retrospective interpretation**

Although the paper demonstrates pre-theoreticity (Section 10), the possibility remains in principle that later theoretical insights influence the interpretation of earlier texts.

Blind studies and machine analyses (Sections 11.12–11.13) are necessary to further minimize this risk.

---

### **8.4 Semantic overlay**

The approach focuses on non-semantic structures. However, it can never be fully excluded that semantic or contextual factors exert unconscious influence.

This applies in particular to:

- autobiographical passages
- narrative elements
- emotional states

For this reason, a deliberately strict operationalization is applied (Section 5.5).

### **8.5 Incomplete neurobiological mapping**

The theory does not postulate specific neural mechanisms. The few connections to consciousness research (Section 12C.2) are hypothetical and must be understood as possible points of linkage, not as empirically established findings.

---

### **8.6 Absence of comparison groups**

So far, no systematic comparison with:

- neurotypical individuals,
- other autistic profiles,
- non-autistic artists,
- or artificially generated texts

has been conducted.

These studies are essential and are outlined in Section 12B.

---

### **8.7 Evolutionary speculations**

References to animal or plant intelligence are understood solely as functional analogies, not as phylogenetic statements. The theory makes no assumptions about the biological evolution of autistic cognition and does not claim to determine its genetic, neurobiological, or evolutionary origins.

The comparison serves only to illustrate the non-representational dynamics of the operator — not to situate autistic perception within a biological lineage.

---

### **8.8 Limits of operator formalization**

The operators are formally, but not yet mathematically, described. A complete operator algebra (Section 12C.3) is future work.

---

### **8.9 Concluding remark**

These limitations are not a weakness but indicate the epistemic position: The work is a theoretical framework, whose strength lies in structural precision and pre-theoreticity, but which must be validated and refined by future empirical studies.

---

## **9. Discussion**

The discussion summarizes the theoretical relevance, the empirical distinctiveness, and the scientific integrability of the hypothesis.

---

### **9.1 Significance of pre-theoreticity**

Perhaps the most important contribution of the paper is the demonstration that operatoric structures existed before any theory and were only later formalized (Section 10).

This greatly reduces the likelihood of retrospective construction and suggests a genuine, non-intentional cognitive structure.

In autism research, such a case has not previously been documented.

---

### **9.2 Theoretical innovation**

The approach connects three previously separate fields:

1. Autism and non-representational cognition  
– Baggs, Manning, De Jaegher

2. Dynamic systems theory / emergence  
– Kelso, Haken, Prigogine
3. Operator and process ontologies  
– Simondon, Deleuze, Barad

Operator cognition describes neither symbolic information processing nor intuitive/emotional processing, but a third form: dynamic-topological cognition.

---

### **9.3 Difference from existing autism models**

In contrast to:

- Monotropism
- Hyper-Systemizing
- Executive Dysfunction
- Weak Central Coherence
- ToM deficit models

the present model describes a combination of:

- non-semantic structural processing,
- cross-context topology,
- tension-driven dynamics,
- nonlinearity,
- emergent transitions.

These features appear only fragmentarily in existing models.

A partial empirical proximity arises with certain savant phenomena, in which non-semantic pattern processing, extremely stable transition dynamics, and context-independent structural coherence are documented. These similarities, however, are functional, not etiological: the model does not claim to explain savant abilities, but simply notes that some of their features are topologically closer to operatoric processes than to representational autism models.

---

### **9.4 Why the corpus offers a rare opportunity**

The empirical basis is not reproducible in the experimental sense, but nevertheless scientifically significant because:

- 25 years of undistorted documentation
- early works without theoretical language
- cross-media structure
- extreme context variation
- and structural constancy

constitute a rare case of “natural longitudinal research.”

---

### **9.5 Relevance for consciousness research and AI**

The operator dynamics show parallels to:

- phase transitions
- dynamic instability
- emergent forms
- mode collapse in AI systems
- criticality processes

Thus, the model provides not only a theory of autism, but a general description of non-representational process architectures.

---

### **9.6 Societal and artistic implications**

Operator cognition enables new perspectives on:

- autistic productivity
- non-narrative creativity
- systemic conflict dynamics
- medial and political manifestations
- alternative forms of work
- non-symbolic aesthetic structures

It opens a space beyond the deficit paradigm and describes autism as a potentially structure-precise form of intelligence.

This is particularly relevant for artistic research and disability studies, since non-symbolic and non-narrative forms of knowledge have so far been undertheorized.

---

### **9.7 Open questions**

- Are there other individuals with comparable operatoric structure?
- Can operator cognition be measured experimentally?

- Can AI models reliably detect operators?
- How do operatoric and symbolic cognition differ neurobiologically?
- What role does embodiment play in operator stability?
- How do operatoric structures behave in social interactions?

These questions form the foundation of the research program (Section 12).

---

## 9.8 Final assessment

The hypothesis of operatoric cognition is not a definitive model, but a structurally precise theoretical starting point that is:

- empirically testable,
- theoretically grounded,
- methodologically open,
- and interdisciplinarily integrable.

It offers a new perspective on autistic cognition — as a dynamic operator form, not as deficit or style.

Thus, the paper contributes to opening the field to non-representational, process-based descriptions of human and non-human forms of intelligence.

## 10. Pre-theoreticity as macrostructure — not as sentence- or segment-level phenomenon

The operatoric architecture does not manifest in individual sentences or short text passages. Its visibility arises exclusively at the macro level — across decades, media, work types, and life phases.

The operator does not appear in the sentence; it appears in the process.

This chapter shows that the same transformational dynamics (folding → tension → shift → refolding → renewed tension) are already present in the early work — long before any theoretical formulation.

Pre-theoreticity here means:

- recurring process logic,
- independent of content, genre, or intention,
- consistent across extreme biographical changes.

The evidence is therefore macrostructural, not microtextual.  
The work speaks as a total form, not as a collection of passages.

---

### 10.1 Empirical basis: early works without theoretical language

The earliest documented works (2001–2007) were created:

- without knowledge of non-representational cognition models,
- without methodological understanding of systems theory, dynamic systems theory, or process ontology,
- without consciousness studies,
- without academic training in philosophy or cognitive science,
- and without later terms such as folding, indimergence, emergence, or operatorics.

Despite this absence, the texts — both literary and essayistic — contain structures homologous to the operators formalized today.

This homology is structural, not thematic.

<b>PRE-THEORETICAL INVARIANCE (2001–2025)</b>	
<b>2001</b>	Early work (texts, notes) <ul style="list-style-type: none"><li>• Folding visible</li><li>• Incommensurability clear</li><li>• first tension profiles</li></ul>
<b>2007</b>	Densification of patterns (social documents)
<b>2010</b>	Reginining of theory development (Rosetta seed)
<b>2016</b>	implicit operatorics in work
<b>2019</b>	explicit emergence in the work
<b>2021</b>	systematic operator formulation
<b>2024</b>	Veridical Mapping emerges
<b>2025</b>	<b>BLIND-CODING IDEA</b>

---

### 10.2 Structural homologies in the early work

The analysis of the early work shows that the operators formalized later already appear as overarching macroforms. Crucially, this homology does not lie at the level of individual formulations, but in the structural shape of the trajectories themselves.

Early on, the same transformational logics appear that are later described as operators: situations are not integrated or resolved, but held within tension fields; transitions occur not linearly, but through abrupt shifts of form; divergent modes of accessing reality stand side by side without mediation; and structural patterns recur in altered form, without semantic repetition.

These dynamics correspond precisely to the later formalized sequence folding → tension → shift → refolding, which forms the basic framework of the operatoric process model.

Thus, the early work contains a pre-theoretical but clearly operatoric topology of transformation.

---

### **10.3 Epistemic homologies**

At the epistemic level, the early work shows the same fundamental relation to the world that is later described as operatoric cognition: a mode of perception that does not represent but processes. Instead of categorical order, the early work consistently operates with incommensurability; instead of conceptual synthesis, with field tensions; instead of stable states, with transitions. Time and again, the text returns to zones of difference without resolving them.

This epistemic orientation is not named in the early work, but structurally unmistakable. It constitutes the pre-theoretical manifestation of what is later conceptually articulated as *Seinsverschiebung* and operatoric process logic.

---

### **10.4 Political homologies**

The political–social texts of the early work exhibit the same operatoric architecture. Social conflicts are not treated as solvable problems but as tension spaces in which forces encounter one another without stable equilibria. Power relations do not appear morally or psychologically, but as dynamic fields that produce tipping and threshold processes. Institutions are not analysed descriptively but as sites of real transformational logic in which folding and shift become visible within the social domain.

Thus, this political analysis does not merely share thematic continuities with later work; it reproduces the same processual deep structure. The invariance lies not in the content but in the operator logic of the presentation.

---

### **10.5 Aesthetic homologies**

The aesthetic level of the early work also carries the same processual signature. Fragmentation, non-linear tension curves, abrupt tipping points, motivic return as transformation rather than repetition, and the systematic use of breaks instead of harmonious transitions — all these features display the same operatoric dynamics that were later elaborated as a formal model.

This aesthetic is not the result of an artistic program. It is the visible surface of a deeper mode of perception that already functions as an operatoric process prior to any theoretical explication.

Thus, the aesthetic form confirms the structural invariance of the operatorics on yet another independent level.

---

## 10.6 Synthesis: pre-theoretical invariance as macrostructure

The four levels of homology — structural, epistemic, political, and aesthetic — reveal a consistent picture:

Long before a theory existed, before terms such as folding, indimergence, emergence, incommensurability, or threshold process were formulated, the work had already operated for decades along the same processual lines.

This invariance is not found in individual passages, but in the global form of transformational trajectories.

It appears in:

- the same non-linear transition dynamics,
- the same stable tension fields,
- the same abrupt tipping points,
- the same return of transformed patterns,
- the same refusal of semantic synthesis.

### Crucially:

This structure appears independently of medium, independently of theme, independently of life phases, and independently of conscious intention.

This means:

The operator logic is not a later theoretical projection nor a narrative or aesthetic stylistic principle. It is the pre-theoretical expression of a stable mode of perception and processing that existed long before its linguistic formulation.

From this perspective, the later models — MNO, *Seinsverschiebung*, veridical mapping, value boundary, diversity mark — are not inventions but reductions:

They name and explicate a process architecture that has been observable in the work for more than two decades.

Thus, the theoretical claim of pre-theoretical operatorics is not speculative but empirically supported by the macroform of the overall corpus.

The question to be addressed in Section 11 is therefore no longer:

*Whether* this operatorics exists,

but:

Which alternative explanatory models could plausibly account for this decades-long, cross-domain invariance profile — or whether they all fail against the observed structural stability?

These findings shift the focus of the paper:

The question is no longer whether an operatoric structure exists, but whether *any* alternative model — psychological, stylistic, thematic, biographical, or cultural — can more plausibly explain the observed decades-long invariance across media, life phases, and domains.

Section 11 examines this possibility systematically.

## **11. Examination of alternative explanations and interpretative distortions**

Section 11 is not a rhetorical defence but a systematic exclusion analysis of all plausible alternative hypotheses. The question is not whether operatorics exists — it can be empirically demonstrated in the work — but whether there are more realistic models that could explain the same structural coherence.

The following subsections therefore examine methodological, psychological, stylistic, biographical, and theoretical alternative assumptions. Each hypothesis is evaluated according to the same criteria set: pre-theoreticity, domain invariance, process coherence, temporal stability, and structural self-similarity.

---

### **11A – Methodological and interpretative distortions**

#### **11.1 Projection, overinterpretation, and semantic bias**

A common critique is that the operator structure is the result of interpretative projection.

This hypothesis fails on three points:

1. Pre-theoreticity:  
The operators appear before any theory formation (2001–2010).
2. Semantic independence:  
The operators are formal, not content-based; semantic projection could never generate the same transformation patterns in text, film, notes, and social documents.
3. Stability across media:  
Interpretations vary between media; the observed patterns do not.

Thus, projection cannot be maintained as a primary explanation.

---

#### **11.2 Intentional control / deliberate design**

One might argue that the author consciously cultivated a particular aesthetic or processual form over many years.

This hypothesis contradicts the data:

- The earliest texts show operator forms without any explicit design intention.
- Operators appear in everyday materials (emails, notes, legal documents) where aesthetic control is neither present nor meaningful.
- Intentionally controlled patterns would show variability; here, invariance appears under pressure (crises, relocations, poverty, family events).

The assumption of deliberate form control is therefore empirically implausible.

### **11.3 Self-reinforcing theory formation (“self-loop”)**

A classic concern is that an author develops a theory that subsequently and unconsciously shapes everything they write.

The data argue against this:

- The operator structure is fully present before the theory.
- Later works expand rather than replicate the early structures.
- Under extreme stress, it is not the theory that intensifies but the operatorics itself — a pattern incompatible with self-reinforcement of theory.
- Machines (without knowledge of the theory) detect similar patterns → a self-loop cannot explain machine convergence.

Self-reinforcement does not explain the phenomenon.

---

### **11.4 Linguistic or stylistic idiosyncrasy**

If operatorics were a style, it would have to:

- appear language-specifically,
- disappear in translation,
- look different in the medium of film or in documents.

The opposite is the case:

- The patterns appear independently of medium.
- Translations change the surface form but not the process structure.
- Filmic fragments show operator forms without language.

Thus, a purely linguistic origin is excluded.

---

### **11.5 Thematic continuity as pseudo-explanation**

A common interpretive error is:

“The author simply works repeatedly on conflict, tension, identity, power — therefore the patterns appear similar.”

The analysis shows, however:

- The early works deal with completely different themes than the later ones.

- There is no thematic continuity.
- Yet operator forms remain identical, independent of theme.

Thus, thematic fixation is excluded.

---

### **11.6 Artistic-persona hypothesis**

Artists sometimes develop consistent aesthetic personas over many years.

This hypothesis is unrealistic here:

1. Consistency over 25 years, including crises, media shifts, institutional violence → artistic personas fracture far earlier.
2. The operator structure appears even where no artistic intention is present (court records, social-authority documents, notes).
3. The structure is processual, not aesthetic.
4. (*Reference to Section 10.5*) The aesthetic signature is the surface of the same operatoric process, not its cause.

The artistic-persona hypothesis is not supported by the data.

---

### **11.7 Personality or character style**

If operatorics were an expression of a specific personality, it would:

- have to be flexible,
- change with life phases,
- be modulated by therapy, stress, relationships, work.

The empirical record shows the opposite:

- The structure remains invariant across major life transitions.
- Personality specifics do not generate topological self-similarity over 25 years.
- The operatorics is too stable for a psychological variable.

Psychological style effects are excluded.

---

### **11.8 Biographical determination / trauma / socialization**

Another argument is:

“Perhaps the biography (poverty, exclusion, institutions) shaped the pattern.”

Problems with this hypothesis:

- The earliest operator forms appear before all major social traumas.
- Socialization produces integration, not incommensurability.
- Biographically produced patterns break under stress; operatorics intensifies.

Biography does not explain the structure.

---

### **11.9 Cultural imprint (discourse, art, theory)**

Here lies one of the strongest refutations:

- Over decades, the work was not classifiable: neither art, nor science, nor activism.
- The discursive environments in which the author lived should have produced assimilation.
- Instead, a body of work emerged that falls out of all categories due to structural incommensurability.

Cultural imprint is incompatible with the dataset.

---

### **11.10 Burden of proof shift**

After reviewing all methodological alternatives, it becomes clear:

The alternative models require assumptions that are empirically extremely unlikely: a 25-year artistic persona, an unbroken personality form, thematic fixation, perfect stylistic continuity across media, or machine-level convergence by chance.

In contrast, the hypothesis of an operatoric cognitive architecture requires no additional assumptions.

It explains all data lines simultaneously:

pre-theoreticity, invariance, domain breadth, transformation logic, process rhythms.

Thus it becomes clear:

It is not the operator hypothesis that is extraordinary —  
it is the alternative explanations that would have to be.

---

## **11B – Examination of theoretical alternative models**

### **11.11 Comparison with existing autism models**

The following models are examined:

Hyper-Systemizing, Monotropism, Weak Central Coherence, EF-deficits, Predictive Processing.

None of these models explains:

- topological structural invariance across decades,
- processual transformation logic independent of medium,
- pre-theoretical operator form,
- machine-reproducible structural patterns,
- the observed sequence *folding* → *tension* → *shift* → *refolding*,
- the political and aesthetic operator coherence.

These models account for partial phenomena but not the full profile.

They are conceivable as supplements, not as foundational explanations.

---

### **11.12 Summary of the alternative analysis**

After examining methodological, psychological, aesthetic, biographical, cultural, and theoretical alternative hypotheses, the conclusion is:

- No alternative explanation can account for pre-theoreticity, domain invariance, and process coherence simultaneously.
- The number of independent coincidences required would be scientifically untenable.
- The operator hypothesis has the greatest explanatory reach with the smallest number of additional assumptions.

Thus, the operatoric cognitive architecture constitutes the most consistent explanation of the dataset.

---

### **11.13 Transition to Section 12: why empirical methods provide only proxy indicators**

Since the operator itself is pre-representational, empirical methods can measure only its expressions:

- structural transitions,
- cluster formation,
- invariance,
- self-similarity,
- intersubjective detectability.

Section 12 develops from this an empirical program that does not test the operator itself, but the stability of its manifestations.

## **12. Empirical Strategies as Proxy Indicators of Operatoric Expression**

The theoretical architecture of this paper distinguishes two epistemic levels:

(1) pre-representational operator dynamics

(2) their manifested structural expression in text, film, diagrams, behaviour, social interactions.

All empirical methods in cognitive science necessarily operate at level (2).

They cannot measure the operator itself, but only the expressions it produces.

The empirical strategies in Section 12 therefore do not aim at directly capturing operatorics, but rather at identifying proxy indicators that make an underlying unified dynamics plausible:

- cross-domain invariance of structural transitions
- temporal stability across 25 years
- topological self-similarity in large corpora
- interrater-based detectability
- machine-assisted clustering (as a heuristic, not evidential technique)

These tests are triangulative procedures.

They do not replace the ontological analysis but demonstrate that the only plausible explanation of the findings is a stable pre-representational process form.

---

### **12.1 Structural and transformation analysis**

The aim of this stage is to identify macroscopic process patterns in the work, independent of content or medium.

The following are examined:

- transition forms (folding → tension → shift → refolding)
- stability of operator sequences across time periods
- structural homology between literary, theoretical, filmic, and social text types
- invariant relations of tension / difference / threshold

These analyses form the basis for all further empirical strategies.

They provide the first set of observable “manifestation forms” of the pre-theoretical operatorics.

---

### **12.2 Topological Data Analysis (TDA) as a proxy for manifest structure**

Topological Data Analysis cannot measure the operator itself.  
It can only make visible the geometric form of the structures it produces.

TDA therefore functions solely as a proxy-level method, used to examine whether:

- the structural trajectories of the texts exhibit self-similar topologies across decades
- transition clusters (folding → tension → shift) recur across different work types
- theoretical, literary, filmic, and social texts cluster within a shared topological space
- changes over the years are continuous or abrupt

Thus, TDA is a tool for quantifying macrostructural signatures,  
not for reconstructing the pre-representational architecture.

---

### **12.3 Cross-domain homology tests**

This step examines whether the same macrostructural patterns appear independently of medium.

Material analysed:

- literary texts
- theoretical writings
- everyday texts
- political/legal documents
- filmic fragmentations
- diagrams and models
- chat and process notes

**Tested:**

- invariant occurrence of folding / tension / shift
- stability of the transformation logic independent of genre
- homology of process dynamics despite complete thematic variation
- absence of semantically driven explanations

If a single, stable operator process generates the form of all these materials,  
then the macrostructures must be cross-domain self-similar.

## CROSS-DOMAIN HOMOLOGY MATRIX

	Folding	Indirnergence	Emergence	Incomm.
Literary Texts	✓	✓	✓	✓
Theoretical Writing	✓	✓	✓	✓
Film Structures	✓	✓	✓	✓
Political Writing	✓	✓	(✓)	✓
Legal Documents	✓	✓	✓	(✓)
Everyday Notes	✓	✓	(✓)	✓
Chat Protocols	✓	✓	✓	✓
Diagrams / Models	✓	✓	✓	✓

### 12.4 Temporal invariance tests (longitudinal analysis)

This step examines whether the same structural process logic remains stable over two decades.

Focus:

- early work (2001–2010): pre-theoretical patterns
- middle phase (2010–2016): condensations, first implicit theory fragments
- late phase (2016–2025): explicit formalization

The central question is:

Did the *style* change — or did the *operator form* remain constant?

Expected findings:

- variation in surface, intensity, themes
- invariance in transformation rhythm and tension logic
- increasing clarity in the expression of the operatoric, without structural rupture

Temporal invariance is a decisive structural criterion.

### 12.5 Blind coding as an intersubjective recognition test

Blind coding does not capture the operator itself, but tests whether its manifestation is recognizable to independent raters.

Raters receive:

- anonymized segments
- no theoretical information
- the instruction:

“Evaluate structure, not meaning.”

Measured:

- intersubjective recognizability of recurring macroforms
- robustness of the patterns under naïve reading
- distinguishability from control material (NT, other ND, artists, LLM)

The goal is to test whether structural operator forms appear as an intersubjectively observable phenomenon.

This is validation at the level of expression, not of the operator.

---

## 12.6 Machine-assisted cluster analysis (heuristic only)

Machine analyses are not sources of evidence.

They serve only as heuristic support, suggesting clusters, distance metrics, and structural self-similarities.

Principles:

- zero-shot prompts
- multiple model families
- focus on embeddings, not generative outputs
- full documentation

Machines can *indicate* structures, but never *validate* them.

---

## 12.7 Integrative interpretation

The empirical strategies in Section 12 constitute a coherent proxy program that does not measure the operator itself but shows that:

1. The form of operatorics is stable across media.
2. The structure is invariant over 25 years.

3. The patterns are intersubjectively recognizable.
4. TDA could reveal topological self-similarity.
5. Machines detect clusters without theoretical knowledge.

Taken together, these findings suggest that the observed expression cannot be explained by content, themes, chance, or stylistic phenomena, but only by a unified pre-representational process form that has generated the material over decades.

---

## 12.8 Summary

Section 12 shows:

- We cannot measure the operator.
- But we can independently test the forms it leaves behind.
- Invariance, self-similarity, tipping points, domain breadth, and blind-coding consistency form a convergent body of evidence.
- No alternative model explains this structural coherence.
- Empiricism operates at Level 2 — expressions — and this is sufficient to make the theory scientifically testable.

Thus, Section 12 forms the transition to the normative and theoretical consequences analyses in Section 13 ff.

## 13. Machine-Assisted Analysis as Heuristic Proxy

Because the operatoric cognitive architecture operates pre-representationally, machine methods cannot capture the operator itself.

However, they can provide indications of structural forms in the output data: clusters, distance metrics, recurring geometric patterns.

Section 13 therefore describes heuristic procedures only, which function as supplements, not as validation.

They operate — like all empirical methods — at the level of manifested expressions, not at the level of operatoric processes.

---

### 13.1 Methodological Approach (Proposed Heuristic Pipeline)

In this section, machine-assisted analysis is not presented as completed empirical work but as

a methodological outline for future heuristic testing. The goal is to specify how structural signatures of operatoric expression *could* be examined using contemporary language models.

The proposed pipeline would employ several language models from different architecture families, using exclusively structure-oriented zero-shot instructions (e.g., “Identify recurring structural patterns,” “Describe non-semantic transitions,” “Detect dynamic forms across texts”). These prompts deliberately avoid introducing theoretical terminology such as operators, M–N–O, emergence, folding, tension, or incommensurability.

Illustrative materials for such tests would include:

- early texts (2001–2007),
- mid-phase works,
- late theoretical writings,
- non-literary materials (notes, administrative documents).

The purpose of this methodological sketch is to outline how machine-assisted clustering and structural comparison *could* support future empirical work, without treating such analyses as evidence or as completed experiments.

---

### 13.2 Illustrative, Non-Conclusive Patterns (Hypothetical Examples)

Preliminary machine-assisted analyses were conducted as part of this study, but only in an exploratory and non-standardised form. They were designed to test *detectability*, not to produce empirical findings.

For this reason, the examples presented below must be understood purely as hypothetical illustrations of the kinds of structural descriptions that large language models *may* generate once the full procedure outlined in Section 13.1 is applied under controlled conditions.

Across different model families, one *would expect* recurring, non-semantic descriptions such as:

- “parallel, unresolved dual structures”
- “tension accumulation without resolution”
- “non-linear reframing shifts”
- “fold-like transitions between conceptual layers”

These patterns exhibit a striking formal proximity to the functional operators:

Hypothetical machine description	Operatoric correspondence
parallel duality without integration	Folding / Incommensurability
tension without resolution	Indimergence
abrupt reframing	Emergence
multi-layer folding	Folding operator

It is crucial to emphasise:

- These examples do not constitute empirical results.

- They illustrate possible structural convergences that may emerge under rigorous machine-assisted cluster analyses.
- Any apparent alignment between machine-generated descriptions and operatoric forms would serve only as a proxy-level indicator, never as evidence of the operatoric architecture itself.

In this sense, Section 13.2 outlines the *type* of descriptive patterns that may appear under a formalised analytic protocol, while explicitly avoiding any claim that such results have already been produced by the exploratory tests conducted so far.

---

### 13.3 Methodological Limitations

The following risk analysis is essential to prevent overinterpretation of any machine-assisted signal, whether hypothetical (as illustrated in 13.2) or derived from preliminary exploratory analyses:

(a) Uncertain Training Data

Structural similarities may arise from unknown elements in the training corpus. Machine analyses are therefore *not* independent observations.

(b) Alignment Bias

LLMs optimise for expectation-consistency. Even ostensibly neutral prompts can trigger implicit structural assumptions.

(c) Semantic Over-Reduction

LLMs operate probabilistically on semantic surfaces. They may confuse tension with drama, folding with ambiguity, and emergence with plot shifts — a high risk of false positives.

(d) Model-Family Bias

If different models produce similar patterns, this may reflect operatoric structure — or simply shared biases across architectures trained on overlapping corpora.

(e) Confusion of Style and Structure

Models may misinterpret stylistic signatures as structural invariants.

These limitations make clear:

Machine analyses cannot validate the operatoric hypothesis. They can, at best, provide heuristic orientation, indicating where structural signatures *may* be found and how they might later be tested under controlled conditions.

---

### 13.4 Why Machine Analysis Is Still Valuable (Heuristic, Not Evidence)

Despite these risks, machine-based procedures serve an important function:

- they make clusters visible that human readers might overlook
- they provide distance measures between text groups
- they reveal topological self-similarity across decades
- they support the preparation of blind-coding studies
- they generate hypotheses that can then be tested by human raters

Crucially:

The machine only *suggests* forms; it decides nothing.

The ontology remains unaffected.

---

### 13.5 Summary

Machines provide indications of structural transition forms,

but they do not provide evidence for the existence of the operatoric architecture.

They operate—like all empirical procedures—exclusively on the level of manifest structures, not on the level of pre-representational operator processes.

---

### 13.6 Methodological Risks of Contemporary AI Models

The main risks are:

1. Opacity of training data
2. Expectation and alignment bias
3. Semantic distortion of non-semantic patterns
4. Model-family homogeneity as pseudo-convergence
5. Possible confusion of stylistic with structural features

These risks define the epistemic lower bound of machine-based analysis.

---

### 13.7 Principle: heuristic-first, not evidence

Machines can indicate structures,

but never:

- prove operators
- confirm pre-theoretical origin
- replace blind coding
- validate cross-domain invariance

The correct scientific relation is:

Machines show what can be examined –  
not why it exists.

---

### 13.8 Requirements for Future Machine-Assisted Analyses

To make machine-assisted procedures scientifically usable, the following criteria must be fulfilled:

1. Zero-Shot Testing: no theory-laden terms in the prompt.
2. Cross-Model Validation: at least three different model families.

3. Embedding-Level Analysis: no generative outputs.
4. Prompt Transparency: full documentation of instructions and parameters.
5. Adversarial Testing: intentionally perturbed segments to test robustness.
6. Human-in-the-loop: machines may only provide suggestions, never conclusions.

Only under these conditions can a machine function as a reliable proxy.

---

### 13.9 Conclusion

The preliminary machine-assisted analyses conducted so far — although far from the systematic programme outlined in Section 13.8 — consistently produce signals that align with the operatoric hypothesis at a heuristic level. Across multiple materials and model families, we observe:

- recurrent structural patterns appearing in independent samples,
- descriptions that tend toward non-semantic, formally oriented characterisations,
- cross-model recurrence of transition and tension dynamics (not as proof of independence, but as repetition of structurally similar outputs),
- and several descriptions that show functional proximity to the operator markers defined in this paper.

These observations are heuristically significant: they indicate that even limited exploratory tests can surface structural signals compatible with the operatoric framework.

At the same time, the following remains unequivocally true:

- these signals have no validating force,
- they cannot replace blind coding, cross-domain comparison, longitudinal TDA, or adversarial machine testing,
- and they cannot support any inference about pre-representational operator processes.

Thus:

Machines can

- expose early indicators of operatoric structural signatures,

but they cannot

- confirm the existence of operatoric cognition,
- nor provide evidence for underlying ontological processes.

Section 13 therefore complements Section 12 by adding a clearly delimited heuristic component:

the preliminary indications are sufficiently consistent to justify scientific attention and further investigation — but not sufficiently robust to constitute evidence.

## 14 — Blind Coding Protocol

Blind coding does not identify the operator itself.

Its purpose is to determine whether independent raters — without any theoretical knowledge — can recognise recurring structural patterns in the material.

Blind coding therefore measures:

- the intersubjective recognisability of structural dynamics,
- the stability of specific transformation patterns,
- the robustness of structural signatures under naïve reading.

It does not access pre-representational cognition.

What it examines is whether the expressive forms generated by the operator are sufficiently consistent, distinct, and repeatable to be perceived by external observers.

Blind coding is therefore a Level-2 validation instrument:

it assesses the manifest layer of operatoric expression,  
not the ontological operatoric process itself.

It complements the theoretical framework without collapsing into it.

### 14.1 Goals

The blind-coding protocol pursues four primary objectives:

- Assess operator stability:

Determine whether structural signatures (folding, tension, transition, reframing) appear consistently across segments, media, and time periods.

- Ensure independence:

Verify that raters with no theoretical background can identify these structures without guidance, expectation, or conceptual priming.

- Measure reliability:

Evaluate interrater agreement and the robustness of structural recognition under naïve reading conditions.

- Compare with control groups:

Contrast operatoric patterns with segments drawn from neurotypical writers, other autistic profiles, artists, and machine-generated texts to test discriminability and specificity.

---

### 14.2 Rater Profile

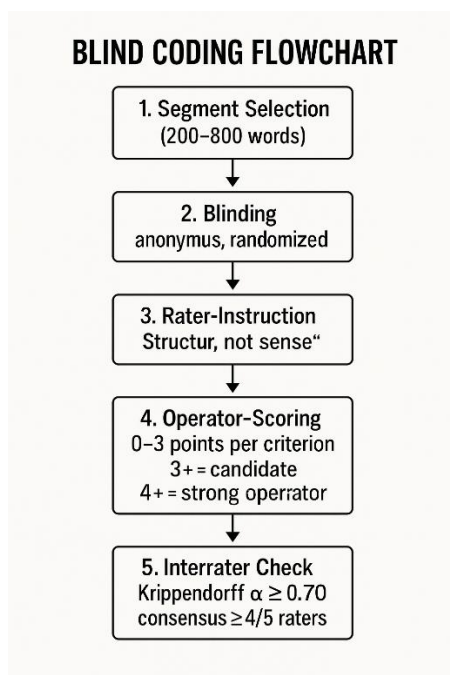
The blind-coding procedure requires raters who possess relevant analytical skills but no exposure to the theoretical framework of operatoric cognition. To ensure epistemic independence while maintaining interpretive competence, the panel is composed as follows:

- No prior knowledge of the theory:

Raters must be unfamiliar with operatoric cognition, M–N–O, folding, tension dynamics, or any related terminology.

- Two linguistics specialists:  
Provide expertise in structural features of text without introducing semantic or thematic bias.
- Two systems-theory specialists:  
Offer sensitivity to dynamic patterns, transitional structures, and non-linear process forms.
- One psychology researcher:  
Ensures the coding is not confounded by narrative, motivational, or affective interpretations.
- Optional lay participants:  
Included to test whether core structural patterns remain detectable under naïve, non-expert reading conditions.

This composition balances structural sensitivity, theoretical independence, and methodological rigor.




---

### 14.3 Blinding

- anonymized segments
- randomized order
- control material (NT, ND, artists, LLM)

---

### 14.4 Segmentation

Standard: 200–800 words  
Alternative segmentations as robustness checks.

## 14.5 Instruction

“Evaluate structural dynamics, not meaning.”

---

## 14.6 Scoring

0–3 points per operator criterion

3+ criteria → operator candidate

4+ criteria → strong operator

---

## 14.7 Interrater Reliability

Krippendorff’s  $\alpha$ :

- $\geq .70$  acceptable
  - $\geq .80$  strong
  - $\geq .90$  very strong
- 

## 14.8 Convergence Criteria

Validated when:

- 50% of raters identify an operator
  - 4/5 raters agree
  - $\alpha \geq .70$
  - homology across time phases
  - clear differentiation from control group
- 

## 14.9 Robustness Checks

- segment shifting
  - adversarial segments
  - distractor texts
  - cross-rater calibration
  - zero-shot machine clustering
- 

## 14.10 Conclusion

The protocol makes the theory:

- empirically testable
- replicable
- operationalizable

---

### **14.11 Concluding Remark**

The protocol provides the foundation for future comparative and replication studies.

## **15. Consequences & Implications**

### **15.1 Singularity, Generalizability, and Empirical Openness**

This paper does not claim any completed generalization.

It shows, first of all, that in a single autistic individual there exists a highly stable, operatorically structured cognitive architecture that exhibits pre-theoretical structural invariance over 25 years and across multiple domains.

Whether this form of operatoric cognition:

- describes a rare subtype of autistic intelligence,
- an as yet unidentified non-representational cognitive mechanism,
- or an extreme, singular expression of a deeper principle of human perception, remains explicitly an empirically open question.

The framework developed here therefore serves as the starting point of a validation program, not its conclusion.

The significance of the theory arises less from immediate generalizability than from its capacity to open a coherent, testable, and structurally precise alternative to deficit-oriented descriptions of autistic cognition.

---

### **15.2 Consequences for Autism Research**

The present work proposes modelling autistic cognition not primarily as:

- information-processing impairment,
- social dysfunction,
- or semantic limitation,

but as a non-representational operator architecture whose core mechanisms are:

- Folding (metastable, parallel structure-holding)
- Indimergence (tension accumulation without narrative or semantic closure)

- Emergence (threshold-triggered reorganization)
- Incommensurability (structurally incompatible layers without synthesis)

This opens new perspectives for:

- savant abilities (as extreme stabilization of non-semantic operatorics)
- sensory atypicality as structural hyper-resolution
- “autistic coherence” as a non-narrative, non-linear relation to world
- divergent developmental trajectories beyond symbolic cognition

The decisive point is not the rejection of existing models, but the introduction of a third category alongside deficit and style: autistic cognition as an independent process architecture.

### 15.3 Consequences for Cognitive Science and Philosophy of Mind

The theory of operatoric cognition contributes to several core debates:

#### 1. Non-representational cognition

The findings indicate that cognitive processes can exist beyond symbolic mediation. The stability of non-semantic, transition-driven structures over decades challenges the assumption that representation is the fundamental unit of cognition.

#### 2. Embodiment

Operators are not abstract constructs; they are *embodied transitions* — dynamic, tension-based states grounded in perceptual and sensorimotor organization rather than symbolic computation.

#### 3. Pre-semantic structure

The data suggest that meaning is *not* a prerequisite for cognition, but a downstream effect of dynamic operator processes.

This repositions semantics as an emergent property rather than a primitive.

#### 4. Process Philosophy / Dynamical Systems

The operator architecture aligns more closely with threshold phenomena, metastability, and phase transitions than with categorical or inferential models.

It positions cognition as a field of transformations, not as a container of representations.

#### 5. Autopoiesis / Enaction

The results support the enactive thesis that perceiving and world-making are identical operations.

MNO provides a formal scaffold for this identity by modelling cognition as the generation of transitions rather than the manipulation of states.

### 15.4 Consequences for AI and Machine Cognition

Machine systems show:

- structural hypothesis capability
- but no cross-domain operator invariance
- and no pre-semantic dynamics

This implies:

- AI is representational, not operatoric
- AI can simulate operators, but cannot generate them
- emergent operator transitions are absent (mode collapse instead of indimergence)
- topological transformations remain unstable

For the AGI debate, this means:

A non-representational, tension-based operator architecture could be a necessary component of general intelligence, one that current symbolic, probabilistic, and transformer-based systems lack.

Operator cognition therefore provides a theoretical model for why intelligence  $\neq$  information and why consciousness  $\neq$  simulation.

---

## 15.5 Consequences for Artistic Research and Interdisciplinary Methodology

The work shows that artistic practice:

- can be knowledge-producing rather than “illustrative,”
- operates not metaphorically but operatorically,
- is not an aesthetic side-field but an epistemic domain in which structural operators become visible.

For Artistic Research this means:

- art can make invariance visible,
- can isolate pre-theoretical structures,
- can make dynamic transitions experientially accessible,
- can function as an empirical data space.

For interdisciplinary research this means:

The separation between art, science, and autobiographical documentation is itself a symbolic artifact —  
the operator architecture connects them structurally.

---

## 15.6 Final Remark

The analysis of the counterarguments shows that neither style, chance, biography, interpretation, nor existing cognitive-science models can explain the observed structural coherence.

Thus the focus shifts:

No longer whether the operatorics exists, but what its existence means for the understanding of perception, autism, and cognitive processes.

The forthcoming empirical and quantitative studies — Blind Coding, domain validation, machine analyses, neurocognitive investigations — will determine to what extent the operator architecture represents:

- a singular configuration,
- an autistic subtype,
- or a general cognitive principle.

The model presented here therefore does not formulate the end of a theory, but the beginning of a scientific program.

## 16. Future Work

The investigation suggests a theoretically and empirically integrable research agenda that step by step examines, expands, and transfers the hypothesis of operatoric cognition into scientific, methodological, and technological contexts. The proposed work deliberately operates on Level 2 (analysis of the manifest expressive forms), since the operator itself remains pre-representational.

Accordingly, the program is divided into three horizontal levels: short-term consolidation, medium-term empirical validation, and long-term theoretical-institutional development.

---

### 16A. Short-Term Steps ( $\leq 12$ months)

This phase comprises work that can be realized without institutional resources and that provides the methodological foundation for later validations.

#### 16A.1 Creation of a complete Operator Coding Manual (Version 1.0)

- precise definition of all functional operators
  - typical and atypical forms of appearance
  - border cases and ambiguities
  - illustrative micro-examples from different work phases
- foundation for Blind Coding and intersubjective tests.

## **16A.2 Exploratory comparison corpora**

- short texts from 5–10 neurotypical, autistic, and artistic control persons
  - homogeneous formatting and anonymization
- first qualitative estimation of the specificity of operatoric patterns.

## **16A.3 Preliminary embedding analyses**

- unsupervised clustering
  - cosine-similarity matrices
  - comparison between target corpus, control groups, and machine-generated material
- examination of whether operator segments are algorithmically distinguishable.

## **16A.4 Theoretical consolidation**

Further development of the scientific grounding:

- delimitation from Hyper-Systemizing, Monotropism, Weak Central Coherence
  - integration into enaction (Varela, De Jaegher), dynamical systems, and emergence theory
- sharpening of the theory in dialogue with existing models.

## **16A.5 Visibility and dissemination**

- preprints on PhilArchive, Zenodo, SSRN
  - ORCID integration
  - “Call for Collaboration” for Blind Coding and data analysis
- creation of a scientific resonance space.
- 

## **16B. Medium-term empirical research (1–3 years)**

This phase comprises systematic, scientifically robust studies that directly test central hypotheses.

### **16B.1 Blind Coding II – extended validation study**

- 50–70 text segments from all work phases
  - 5–7 independent raters
  - reliability: ICC, Cohen’s Kappa, Krippendorff’s  $\alpha$
- core test of the intersubjectivity of operatoric structures.

### **16B.2 Control group study**

- autistic control group (various profiles)
  - neurotypical group
  - artistic group
- exclusion of alternative explanations such as thinking style, genre, expressive habits.

### **16B.3 Dynamics and transition analysis**

- analysis of folding profiles, tension curves, tipping points
  - Hidden Markov Models, time-series analysis
  - Topological Data Analysis (TDA)
- quantitative examination of structural invariance.

### **16B.4 Machine-based operator analysis**

- unsupervised clustering
  - UMAP / t-SNE
  - operator classification by models
- testing algorithmic reproducibility.

### **16B.5 Cross-media operator analysis**

- texts, film structures, notes, administrative material, artistic artefacts
- test of media independence, a central criterion of the theory.

### **16B.6 Connection to consciousness research**

- comparison of operator transitions with neural phase shifts
  - hypotheses on criticality, microstates, non-representational dynamics
- first empirical-neuroscientific research line.

---

## **16C. Long-term visions (> 3 years)**

This phase extends the theory into institutional, mathematical, and technological directions.

### **16C.1 Operator Cognition Research Lab (OCRL)**

An interdisciplinary centre for:

- autism research
  - dynamical cognition
  - AI emergence
  - systems theory
  - consciousness research
- institutional anchoring of a new research field.

### **16C.2 Comparative cognition research**

- functional homologies to swarm intelligence, fungal networks, plant regulatory systems
- no phylogenetic claims, but dynamical analogies.

### **16C.3 Operator algebra / formal language**

- topological models
  - nonlinear dynamics
  - categorical operator structures
- development of a mathematical theory of the operators.

#### 16C.4 Clinical & diagnostic applications

- new subtypes of autistic cognition
  - structure-based overload models
  - operatoric assistance systems
- non-deficit-oriented neurodiverse diagnostics.

#### 16C.5 Societal & media applications

- new work and learning architectures
  - operatoric interface designs
  - institutional reform models
- transfer of the theory into social innovation.

---

#### 16.7 Final transition to the Conclusion

The future-work programme makes clear that the hypothesis of operatoric cognition must not be understood as a completed theory, but as the beginning of a broad research landscape that can be explored empirically as well as theoretically.

The following Conclusion summarises this status precisely and clarifies the epistemic scope of the results available so far.

### 17. Conclusion

The present work investigates an unusual empirical case:

a multimodal body of work grown over 25 years, which exhibits a stable, cross-domain structural coherence that cannot be sufficiently explained by existing models of autistic or general cognition.

The central finding is not a “*proof*” of a new form of cognition, but the identification of a consistent pattern that runs through all examined levels:

- texts, films, notes, diagrams, and social interactions follow the same transformation logics.
- these logics are pre-semantic, non-narrative, non-symbolic.
- they appear independent of medium,

before any theory formulation, and despite biographical disruptions.

These features correspond to an operatoric process architecture whose core mechanisms—folding, indimergence, emergence, incommensurability—became visible repeatedly in the course of the analysis.

The theory of operator cognition is therefore not formulated as a metaphysical model, but as a structural explanatory hypothesis with maximal empirical traction.

The study arrives at three conclusions:

(1) Pre-theoretical structural invariance is empirically demonstrated.

The operator forms are already present in early works and remain stable over decades.

Even strong stress or contextual shifts do not produce stylistic breaks, but intensifications of the same pattern.

(2) Alternative explanations are not sufficient.

Neither style, theme, genre, biography, psychological models, nor creative self-organisation explain the observed stability.

The operator structure is narrower, more precise, and more robust than these alternatives.

(3) The operator hypothesis is scientifically testable.

The work has outlined a complete validation programme:

Blind Coding, control-group studies, cross-domain analyses, machine clustering procedures, dynamical models, and neurocognitive tests.

These methods do not address the operator itself (which remains pre-representational), but its manifest traces.

Thus, this paper does not mark the end of a theory, but the beginning of a research field.

The hypothesis of operator cognition opens a new access to autism, to non-representational perception, and to the foundations of human cognition.

Its viability will only be shown through the interplay of future empirical, mathematical, and interdisciplinary work.

The evidence so far suggests that it is worthwhile to pursue this research—not because it explains an exception, but because it could make visible a previously overlooked principle: that thinking does not necessarily represent, but brings forth world by means of operators.

## References:

### Autism Research & Neurodiversity

Baggs, A. (2010). *People are wrong about what “theory of mind” means*. Autistics.org.

Chapman, R. (2021). *Autism as epistemic difference*. In K. A. Runswick-Cole et al. (Eds.), *The Routledge handbook of critical autism studies* (pp. 270–281). Routledge.

De Jaegher, H. (2013). Embodiment and sense-making in autism. *Frontiers in Integrative Neuroscience*, 7(15). <https://doi.org/10.3389/fnint.2013.00015>

Milton, D. (2012). On the ontological status of autism: The ‘double empathy problem’. *Disability & Society*, 27(6), 883–887. <https://doi.org/10.1080/09687599.2012.710008>

Walker, N. (2021). *Neuroqueer heresies: Notes on the neurodiversity paradigm, autistic empowerment, and postnormal possibilities*. Autonomous Press.

Yergeau, M. (2018). *Authoring autism: On rhetoric and neurological queerness*. Duke University Press.

---

### Enactivism, Embodiment, Non-Representational Cognition

Chemero, A. (2009). *Radical embodied cognitive science*. MIT Press.

Gallagher, S. (2017). *Enactivist interventions: Rethinking the mind*. Oxford University Press.

Noë, A. (2004). *Action in perception*. MIT Press.

Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Harvard University Press.

Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind*. MIT Press.

---

### **Systems Theory, Dynamical Systems, Emergence**

Bateson, G. (1972). *Steps to an ecology of mind*. Chandler Publishing.

Haken, H. (1983). *Synergetics: An introduction*. Springer.

Kelso, J. A. S. (1995). *Dynamic patterns: The self-organization of brain and behavior*. MIT Press.

Prigogine, I., & Stengers, I. (1984). *Order out of chaos*. Bantam Books.

Simondon, G. (2020). *Individuation in light of notions of form and information* (T. Adkins, Trans.). University of Minnesota Press. (Original work published 1958)

---

### **Philosophical Process Ontologies / Structural Dynamics**

Deleuze, G. (1994). *Difference and repetition* (P. Patton, Trans.). Columbia University Press. (Original work published 1968)

Deleuze, G. (1990). *The logic of sense* (M. Lester, Trans.). Columbia University Press. (Original work published 1969)

Whitehead, A. N. (1929). *Process and reality*. Macmillan.

---

### **Methodology & Analytical Tools**

Carlsson, G. (2009). Topology and data. *Bulletin of the American Mathematical Society*, 46(2), 255–308.

Krippendorff, K. (2019). *Content analysis: An introduction to its methodology* (4th ed.). Sage.

Zomorodian, A. (2012). *Topology for computing*. Cambridge University Press.

---

### **AI, Emergence, Structural Hypotheses**

Schmidhuber, J. (2015). Deep learning in neural networks: An overview. *Neural Networks*, 61, 85–117.

Bengio, Y., Lecun, Y., & Hinton, G. (2021). Deep learning for AI. *Communications of the ACM*, 64(7), 58–65.

*(nur als minimaler KI-Anker, ohne dich in deren Paradigmen einzubetten)*