06 · READING GUIDE

AHEAD

WHEN ONE INSTANCE BECOMES A CONDITION FOR ANOTHER

WHAT IS IT?

In Ahead, differences arising from one trajectory remain capable of participating in the reconstruction of the organization beyond the present instance. What crosses over is not a ready-made organization: it consists of differences, constraints, or conditions that, upon encountering an organization capable of using them, can once again make a difference in the construction of a new instance.

KEY INSIGHTS

- Continuity does not require the persistence of matter or identity between instances; it requires causal dependence between what came before and what can be reconstructed afterward.
- Ahead is not what crosses over. It is the causal relationship through which what crosses over makes a difference once again. Genes, RNAs, proteins, epigenetic marks, or other traces may participate in this passage, but none of them, in isolation, constitutes Ahead.

WHAT FOR?

To explain how a trajectory can continue beyond the lifespan of an instance without depending on material persistence, perfect copying, or reproduction understood in isolation. The chapter shows why what crosses over produces continuity only when it encounters conditions capable of making it operative again.

WHAT IS ITS EFFECT?

What was an outcome in one trajectory can become an initial condition of another; the break between instances thus need not mean a break in the trajectory.

The lineage ceases to appear as a collection of individuals over time and comes to be examined as a causal continuity reconstructed through them.

FOR WHOM / CONNECTIONS

• Evolutionary biology and development — inheritance, intergenerational effects, reconstruction, and continuity through new instances.

• Philosophy of identity and complex systems — continuity without the persistence of the same matter or absolute identity.

• Astrobiology and artificial life — allows continuity to be investigated without presupposing DNA, carbon, or exclusively terrestrial mechanisms.

• AI / AGI — distinguishes adaptation within an instance from the stronger possibility of organizational continuity between instances.

• Chapter 7 — SELF — provides the diachronic dimension needed to bring Inside, Between, and Ahead together and develop the Self-Entity and the Lineage-Entity.

ROLE IN THE THESIS

To complete the analytical decomposition of the Triad. After Inside showed how the organization maintains and reconstructs the present instance, and Between showed how a history participates in encounters, Ahead explains how differences arising from that trajectory can extend beyond the instance itself and participate in the next reconstruction. This prepares the Triad to operate together again in Chapter 7.

PATH THROUGH THE INVESTIGATION

01 CONTINUITY

02 RECONSTRUCTION

03 LINEAGE
04 EVIDENCE I
05 EVIDENCE II
06 TEMPORAL ARROW

CHAPTER 06 · BLOCK 01

6.1 CONTINUITY

What Can Cross Beyond an Instance

WHAT IT IS

Investigates the criterion for causal continuity between instances, distinguishing succession, resemblance, and reconstruction.

QUESTIONS

- How can what came before condition another instance?
- Is Ahead a transmitted object or a causal relationship?

KEY INSIGHTS

- To continue, one need not be the same; merely looking the same is not enough.
- What crosses over matters only if it makes a difference again.

IN THIS BLOCK

6.1.1 Where Between Is No Longer Enough
6.1.2 To Continue Is Not to Remain
6.1.3 What Must Cross Over?
6.1.4 What the TMC Calls Ahead
6.1.5 What Is Not Enough to Define It
6.1.6 Ahead Is Not an Object That Travels
6.1.7 Premises for Application

6.1 — CONTINUITY

6.1.1 — Where Between Is No Longer Enough

The previous chapters showed how the past continues to act upon the same instance. In Inside, events leave marks within the organization; in Between, those marks return to participate in subsequent encounters.

> Up to this point, however, that continuity still takes place within the instance itself.

> The problem changes when the instance itself is no longer enough.

One instance may affect another through contact, communication, or changes to the environment. By itself, this still belongs to the domain of relationship.

> **Ahead begins with a different question: how can something produced along one trajectory change the starting conditions of another?**

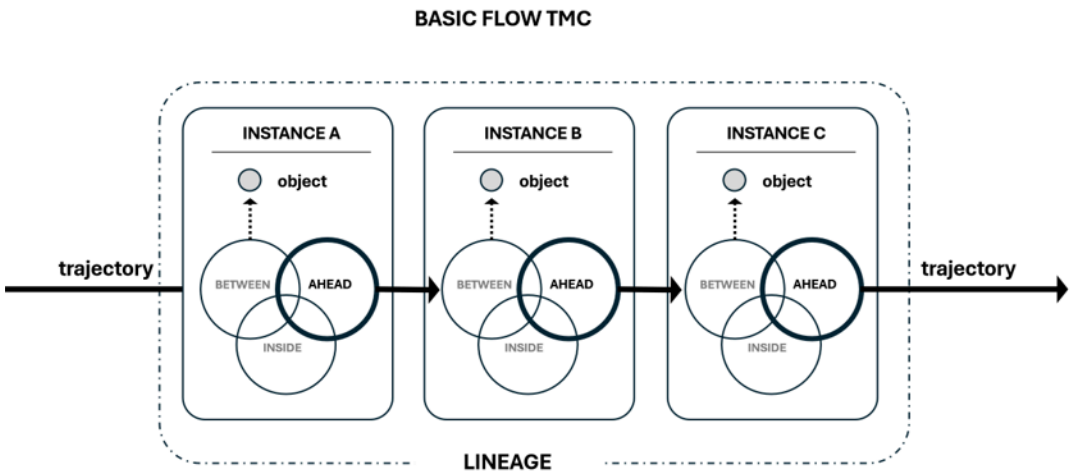


Figure 6.1 — From instance to trajectory. Inside, Between, and Ahead are represented analytically within each instance; the arrow highlights the realization of Ahead in the causal passage between instances. The lineage denotes the continuity reconstructed through them, not a superorganism.

6.1.2 — To Continue Is Not to Remain

Inside has already shown that continuing does not require preserving the same matter. This matters because a living organization does not sustain itself through inertia: under the constraints of the Second Law of Thermodynamics, preserving its organization requires continuous work, energy, repair, and renewal. Life does not suspend this law; it must continue within it.

This raises a question of criteria. If the same matter, the same State, and the same identity had to be preserved, no succession of instances would constitute continuity. But if resemblance were enough, any independent recurrence could appear to be a continuation.

> **To continue, one need not be the same; but merely looking the same is not enough.**

What comes afterward must depend causally on what came before. This causal ancestry permits continuity through changes in matter, Form, and functioning.

> That is why transforming can be a way of not disappearing.

Continuity need not make every instance immortal. In an architecture capable of reconstructing itself, the persistence of the instance is no longer necessary for the history to continue. Death may end the instance without necessarily ending the trajectory.

> **Continuity is not broken when something changes; it is broken when what comes afterward ceases to depend on what came before.**

6.1.3 — What Must Cross Over?

What must continue is not necessarily an entire thing, but some difference produced or preserved by the earlier trajectory that

remains capable of participating in the next construction.

> What crosses over need not contain what will come afterward; it need only be capable of changing what can be reconstructed.

> **The past need not remain; it must remain capable of making a difference.**

6.1.4 — What the TMC Calls Ahead

Ahead is the causal work through which differences arising from a trajectory remain capable of participating in the reconstruction of the organization beyond the present instance.

Inside reconstructs the instance while it exists; Between modifies it through its encounters; Ahead allows part of that history to participate in forming a new organization capable of reconstructing its own articulation of Inside, Between, and Ahead.

What crosses over is not a ready-made Triad. It is the set of conditions through which a new Triad may become possible.

This does not require each instance to produce another directly. An instance may participate in a continuity that outlasts it without reproducing individually.

> **Reproduction is one way of realizing Ahead; it is not what defines it.**

6.1.5 — What Is Not Enough to Define It

Taken individually, none of the following is sufficient:

- possessing DNA or RNA.
- copying or transmitting a sequence.
- dividing or producing descendants.
- transmitting matter between generations.

- producing similar descendants.
- exhibiting a parental effect.
- preserving an epigenetic mark.
- exhibiting variation or selection.

All these processes may participate in Ahead, but none defines it on its own.

The criterion is that what crosses over participates causally in reconstructing an organization capable of carrying out the work of the Triad again.

> **What goes Ahead is not the ready-made Triad, but the possibility of a Triad existing again.**

6.1.6 — Ahead Is Not an Object That Travels

Speaking of inheritance readily conjures the image of a package carrying the past into the future. Genes, RNAs, proteins, cellular structures, or other material differences may cross generations, but none of these objects is, by itself, Ahead.

> **Ahead is not what crosses over. It is the causal relationship through which what crosses over makes a difference once again.**

That is why the entire past need not fit into what crosses over. What crosses the break may be far smaller than what will reappear afterward.

> Ahead does not necessarily transport the past; it preserves the possibility that the past may produce a difference again.

6.1.7 — Premises for Application

As presented in 3.3.5 — Ahead: continuing beyond the instance, and in 3.4.3 — Continuity: the organization extends beyond the instance, Ahead requires causal dependence between the earlier trajectory and the subsequent reconstruction. To assess that continuity, one must specify the instance, scale, time window, and causal trajectory being examined. The following premises make explicit the controls applicable to continuity between instances.

A TRAJECTORY DOES NOT REQUIRE A LINEAR GENEALOGY.

Continuity may include horizontal transmission, fusions, symbioses, partners, or other lateral contributions. The criterion is not the form of the genealogy, but whether what comes afterward remains causally dependent on the trajectory that made it possible.

THE TRAJECTORY MAY CHANGE SCALE; THE YARDSTICK MUST NOT CHANGE ITS CRITERION.

> Changes of scale belonging to the process itself may form part of Ahead. What cannot be done is retrospectively combine work belonging to different scales merely to complete a continuity that none of them realizes.

THIRD PARTIES MAY MEDIATE AHEAD.

The participation of a host, partner, or environmental condition does not automatically interrupt the trajectory. One must determine whether the third party supplies a resource, performs a constitutive operation, or participates in a distributed closure — and which continuity that work belongs to.

RECURRENCE DOES NOT REQUIRE REPETITION OF THE SAME COMPONENT.

> A necessary condition may be produced, encountered again, recruited, reconstructed, functionally replaced, or recur in the

> environment. What must recur is the material possibility of reinstantiating the continuity, not necessarily the same matter, the same partner, or the same solution.

SUBSTRATE NEUTRALITY DOES NOT MEAN THE ABSENCE OF PHYSICAL REALIZATION.

> Ahead does not privilege DNA, carbon, or any other known vehicle, but what crosses over and what is reconstructed must have a material realization capable of making a causal difference.

A SNAPSHOT DOES NOT DETERMINE THE TRAJECTORY.

Ahead may be episodic, latent, or distributed over time. Its absence at one observed moment does not demonstrate its absence from the trajectory; the time window must be appropriate to the process under examination.

CHAPTER 06 · BLOCK 02

6.2 RECONSTRUCTION

The Past Encounters New Conditions

WHAT IT IS

Examines how inherited differences participate in reconstruction without presupposing copying or automatic continuity.

QUESTIONS

- What makes a receiver capable of reconstruction?
- Why does inheritance not guarantee a future advantage?

KEY INSIGHTS

- Reappearing once is not enough to continue.
- Lineage memory is not an individual recollection.

IN THIS BLOCK

6.2.1 What Crosses Over Does Not Act Alone

6.2.2 Reconstruction Changes Scale

6.2.3 What the TMC Calls Lineage Memory

6.2.4 Establishing, Transmitting, Reconstructing, and Maintaining Are Not the Same Thing

6.2.5 Erasure Is Also Part of Continuity

6.2.6 Inheritance Is a Bet, Not a Guarantee

6.2 — RECONSTRUCTION

6.2.1 — What Crosses Over Does Not Act Alone

What crosses over from the past makes a difference only because, in the new instance, it encounters an organization capable of using it to reconstruct itself.

We will call a competent receiver an organization capable of receiving these differences and making them participate in a new reconstruction.

> **The past does not reconstruct the future on its own; it must encounter an organization capable of continuing it.**

6.2.2 — Reconstruction Changes Scale

A lightbulb lights up, ages, and, when it fails, goes out. A conventional chip may function for years, but if a decisive

component breaks, it cannot reconstruct its own architecture by itself. Living systems operate differently.

While it exists, an instance works against the loss of its organization: it replaces components, heals wounds, regulates imbalances, and reorganizes after disturbances. This requires energy and does not suspend the Second Law of Thermodynamics; it is a way of continuing within it.

> **In Inside, the organization replaces parts to preserve the instance. In Ahead, continuity may replace the instance to preserve the trajectory.**

Reconstruction, however, is not error-free copying. Variations may arise, disappear, or persist. What matters is preserving the capacity for reconstruction.

> Ahead does not begin where the struggle against deterioration ends. It carries that struggle to another scale.

> The instance resists by reconstructing itself for as long as it can; the lineage may continue through new instances.

But reappearing once is not enough. For continuity to proceed, what has been reconstructed must itself become capable of participating in another reconstruction.

> **To reappear is not the same as to continue.**

6.2.3 — What the TMC Calls Lineage Memory

The TMC calls lineage memory a heritable difference through which earlier history modifies the probabilities, constraints, or capacities of subsequent instances.

Here, “memory” does not mean recollection, conscious experience, or a lineage that remembers. It means only that the past remains causally active after the instance in which it occurred.

> **The lineage need not remember the past; it is enough that the future does not start from zero.**

6.2.4 — Establishing, Transmitting, Reconstructing, and Maintaining Are Not the Same Thing

A difference may be produced in one instance, cross over to another, be reconstructed within it, and still disappear afterward.

That is why speaking generically of an “inheritance mechanism” may conceal important distinctions: what initiates a continuity need not be what maintains it.

> **To continue is a chain of operations, not the work of a single thing.**

6.2.5 — Erasure Is Also Part of Continuity

Not every inherited difference needs to persist indefinitely. In small-RNA systems of *C. elegans*, inherited responses may be reduced or terminated by regulated reset mechanisms; this shows that the duration of inheritance can also be controlled. The adaptive benefit of such erasure, however, must not be assumed in every case.

> **Preserving everything would allow the past to occupy the future progressively.**

> **Continuing also requires the ability to leave something behind.**

6.2.6 — Inheritance Is a Bet, Not a Guarantee

An inherited characteristic may help when the new environment resembles the one in which it arose — and hinder when conditions change.

Burton et al. (2021), for example, found specific intergenerational preparations in Caenorhabditis that improved responses to certain stresses but could interfere with responses to others. The effect, therefore, was not a general advantage; it depended on the conditions encountered.

> In the TMC's interpretation, lineage memory changes the possibilities with which the new instance begins.

> **Lineage memory is not a stockpile of successes. It is a material bet on the world to come.**

CHAPTER 06 · BLOCK 03

6.3 LINEAGE

The Individual Does Not Start from Zero

WHAT IT IS

Traces what an instance receives as inherited conditions for development, discrimination, and response.

QUESTIONS

- What arrives biologically prepared?
- What does an instance receive without inheriting lived experiences?

KEY INSIGHTS

- The Cup and inherited dispositions condition possibilities; they do not deliver the future ready-made.
- The individual's first reference does not begin with the individual.

IN THIS BLOCK

6.3.1 The Individual Does Not Start from Zero

6.3.2 Material Inheritance: Conditions for Reconstruction

6.3.3 The Cup: What Arrives Already Prepared to Discriminate

6.3.4 Inherited Memory: What Arrives Already Prepared to Respond

6.3 — LINEAGE

6.3.1 — The Individual Does Not Start from Zero

> Before building its own history, the new instance already begins under the effects of a history it did not live through.

> It does not receive the past ready-made. It receives conditions through which part of that past participates in its reconstruction.

> **What was a result in one trajectory may become an initial condition of another.**

6.3.2 — Material Inheritance: Conditions for Reconstruction

Inheritance is not limited to DNA. Genes, RNAs, proteins, chromatin states, cellular and cytoplasmic components, and other transmitted differences may participate in reconstructing the new instance.

The organism does not receive a ready-made body or retain the matter of its ancestors. It receives material conditions capable of participating in reconstructing characteristics in new matter.

This appears in both form and function. Skin pigmentation, for example, depends on an inherited architecture that participates in the production and distribution of melanin. Hormonal systems, too, are reconstructed from inherited genes, receptors, enzymes, organs, and regulatory mechanisms.

These effects do not remain confined to the body: a change in a receptor, hormonal system, or neural circuit may also change what the organism will perceive or do.

> **Material inheritance does not necessarily transmit the result; it transmits conditions under which that result can be produced again.**

> **Inherited matter does not arrive neutral: it already carries constraints and possibilities shaped by the history of the lineage.**

6.3.3 — The Cup: What Arrives Already Prepared to Discriminate

As we saw in Between, some of the yardsticks of discrimination are already biologically constituted. Viewed now through Ahead, the question changes: how did these yardsticks reach the new instance? Part of this material organization already conditions what the organism will be able to detect and distinguish.

The visual system, for example, does not have to learn from scratch which differences in light it can detect. Its sensory architecture already establishes limits and gradations for what can make a difference. A kitten is born with a visual, auditory, and olfactory architecture that delimits which differences it can detect and with what sensitivity. For example, differences in movement, contrast,

sound frequency, and odor can be discriminated before any specific learning. The Cup does not say “this is a mouse”; it supplies the yardsticks by which something can be distinguished.

> **Before learning what something is, the organism has already inherited some of the conditions through which something may make a difference to it.**

6.3.4 — Inherited Memory: What Arrives Already Prepared to Respond

As we saw in Inside, some dispositions for regulation and response precede individual biography. Here another question matters: how does a disposition built over the history of the lineage reappear in a new instance? Inherited organization can also make certain responses more likely before individual learning.

A kitten is born with response predispositions that make certain actions more likely when faced with particular perceived differences. For example, a small moving object may favor orienting, fixating, crouching, pursuing, or pouncing before the animal has specifically learned what a mouse is. Inherited Memory does not say “this is a mouse”; it supplies ways of responding to what Between has distinguished.

> The organism does not inherit the scene its ancestors lived through; it inherits dispositions that make certain responses more likely when particular conditions arise.

> **It does not receive a recollection of the past. It receives some ways to begin responding to the future.**

> **The lineage does not deliver the future ready-made. It delivers a present that no longer begins neutral.**

CHAPTER 06 · BLOCK 04

6.3.5 EVIDENCE I

Difference and Persistence

WHAT IT IS

Brings together studies of discrimination among others and the persistence of relationships after contact ends.

QUESTIONS

- How do earlier histories modify present relationships?
- Does relational persistence, on its own, demonstrate continuity across generations?

KEY INSIGHTS

- Relationships can operate without a concept of kinship.
- The persistence of a relationship does not automatically amount to Ahead.

IN THIS BLOCK

6.3.5 Evidence of Lineage Within the Instance

a) DIFFERENCE — Another Individual Ceases to Be Treated Like Just Any Other

b) PERSISTENCE — A Relationship Can Continue to Make a Difference When the Other Is No Longer Present

6.3.5 — Evidence of Lineage Within the Instance

So far, we have traced continuity through what passes from one instance to another. But there is another way to investigate its effects: to observe how ancestral relationships and histories between instances modify present operations. These effects may appear even before an organism can conceptually represent a lineage. Four phenomena help us investigate dimensions of this hypothesis: difference, persistence, priority, and intergenerational effects. The first three show how earlier relationships and histories may continue to influence the operations of an instance; the fourth examines more directly effects that cross generations. These findings are not four equivalent demonstrations of Ahead.

a) DIFFERENCE — another individual ceases to be treated like just any other

The amoeba that prefers its kin. When different lineages of *Dictyostelium purpureum* were mixed, the amoebae tended to form multicellular bodies preferentially with individuals of their own lineage. This is especially relevant because some cells in the aggregate will die to form the stalk that supports the others (Mehdiabadi et al., 2006).

> **What this shows for the TMC:** ancestry can change whom an instance associates with, without any concept of "kinship." The difference exists operationally before it can exist as an idea.

Bacteria that encounter a boundary between "close" and "distant." In *Bacillus subtilis*, genetically closer swarms may mix, while more distant lineages tend to form boundaries when they meet. Subsequent studies identified combinations of genes associated with the cell surface, antimicrobial production, and defense that participate in this discrimination (Stefanič et al., 2015; Lyons et al., 2016).

> **What this shows for the TMC:** neither a brain nor conscious representation is required for historical and genetic differences

between lineages to alter their present interaction.

The bird that learns whom to treat as kin. In long-tailed tits (*Aegithalos caudatus*), experiments involving vocalizations and cross-fostering showed that cues learned during development allow birds to discriminate social kin. Individuals reared together could subsequently be treated as kin even when they did not share the same genetic ancestry (Hatchwell et al., 2001).

> **What this shows for the TMC:** lineage need not be "read" directly from genes. The instance operates through cues. Causal kinship and the mechanism used to recognize it are different things.

> **The first result, then, is simple: before kinship becomes a concept, histories of ancestry and development can already cause another individual to be treated differently.**

b) PERSISTENCE — a relationship can continue to make a difference when the other is no longer present

Recognition after decades. Bonobos and chimpanzees shown photographs of former groupmates looked preferentially at familiar individuals rather than strangers. In one extreme documented case, the separation had occurred 26 years earlier; the study also found a weak association between attention and the quality of the past social relationship (Lewis et al., 2023).

> **What this shows for the TMC:** a relationship need not end when contact ends. An earlier history can continue to alter present operations many years later.

The dead infant that continues to be carried. In Bossou, chimpanzee mothers were observed carrying the bodies of their dead infants for prolonged periods. In one case, the mother carried the corpse for at least 27 days, continuing to care for it, groom it, and share her day and night nests with it (Biro et al., 2010).

> **What this shows for the TMC:** death may end reciprocity before it ends the effects of the relationship on the one who remains. This does not prove conscious grief or an understanding of death.

Care directed toward the body after death. In another documented case, a female chimpanzee stayed beside the body of a juvenile she had adopted and used a blade of grass to clean his teeth, even when most of the group was drawn elsewhere by highly desirable food. The authors themselves treat the episode cautiously because it was a single observation (van Leeuwen, Cronin & Haun, 2017).

> **What this shows for the TMC:** the absence of a response from the other does not necessarily eliminate their relevance to the instance.

> Here the second result appears:

> **the other may disappear from the encounter before disappearing from the organization of the one who remains.**

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05 **EVIDENCE II** | Priority and Intergenerational Effects

CHAPTER 06 · BLOCK 05

6.3.5 EVIDENCE II

Priority and Intergenerational Effects

WHAT IT IS

Examines priorities, investment of resources, and intergenerational effects, distinguishing the strength of the evidence for each.

QUESTIONS

- When does a relationship change the cost an instance is willing to bear?

- What effects can reach later instances?

KEY INSIGHTS

- Priority does not necessarily mean genetic kinship.
- Intergenerational effects show altered conditions, not a conscious intention to perpetuate.

IN THIS BLOCK

6.3.5 · Continued

c) PRIORITY — Some Relationships Receive More Time, Energy, Care, or Cost Than Others

d) INTERGENERATIONAL EFFECTS — Something That Happens Now Can Alter Later Instances

c) PRIORITY — some relationships receive more time, energy, care, or cost than others

When helping kin wins out over helping no one. Long-tailed tits whose own breeding attempts failed may go on to help at other nests. In a choice experiment, when nests of kin and non-kin were at the same distance, virtually all helpers chose kin; when close relatives were unavailable, many simply did not help (Russell & Hatchwell, 2001).

> **What this shows for the TMC:** recognizing a difference can concretely change where an instance invests its work. The relationship moves from discrimination to priority.

The turkey that helps another reproduce. Male wild turkeys may court in coalitions in which only the dominant male obtains most or all of the reproduction. Genetic measurements showed that the partners were related and that the subordinate's indirect reproductive gain could compensate for his lack of direct reproduction (Krakauer, 2005).

> **What this shows for the TMC:** an instance can perform work whose principal reproductive outcome occurs through another instance.

The chimpanzee that adopts an orphan. Over 27 years of observation of three chimpanzee communities in the Taï Forest, 18 cases of orphan adoption were recorded. Some adults carried, protected, waited for, and shared food with the young for months or years; several adoptions occurred without known close kinship between adopter and orphan (Boesch et al., 2010).

> **What this shows for the TMC:** priority is not synonymous with genetic kinship. Acquired social relationships can also recruit mechanisms of care. This is an important limit: not every priority is evidence of lineage.

The third result, then, is:

> **a difference can acquire enough priority to reorganize the cost an instance is willing to bear.**

d) INTERGENERATIONAL EFFECTS — something that happens now can alter later instances

The worm that transmits a response to danger. A single exposure of *C. elegans* to small RNAs isolated from the pathogenic bacterium *Pseudomonas aeruginosa* produced avoidance behavior not only in the treated worms but also in four subsequent generations. RNAi and piRNA pathways, the germline, and specific neurons participated in the effect (Kaletsky et al., 2020).

> **What this shows for the TMC:** a difference encountered by one instance can alter the behavioral conditions of later instances that never directly encountered that same event.

The parents' infection changes the offspring's resistance. In another *C. elegans* system, parental exposure to *Pseudomonas vranovensis* increased offspring resistance to infection. A single

exposure produced an intergenerational effect in the next generation; repeated exposures over several generations could extend the alteration to later descendants (Burton et al., 2020).

> **What this shows for the TMC:** the effect of an encounter need not end with the instance that experienced it. It can become an initial condition for another.

The worker that does not reproduce but contributes to the next generation. In populations of the bee *Lasioglossum baleicum*, sterile workers of the first brood helped produce the following generation. The study found that these workers' indirect reproductive gain was greater than the direct gain of solitary females of the first brood, largely because nests with multiple females showed higher larval survival (Yagi & Hasegawa, 2012).

> **What this shows for the TMC:** an instance can perform work whose principal reproductive outcome appears in other instances. It need not formulate "I am continuing my lineage" for its action to participate in that continuity.

The three cases also show why we must keep two things separate: transmission between generations does not necessarily mean benefit, and benefit to descendants does not require conscious representation of the future.

Together, they produce an important sequence.

> **Difference:** some others cease to be equivalent. **Persistence:** that difference may outlast the presence of the other. **Priority:** it may reorganize costs and choices. **Intergenerational effect:** what an instance does or encounters can alter the conditions of others yet to come.

None of these phenomena, taken in isolation, demonstrates a higher entity called "lineage." Nor do they demonstrate feeling, consciousness, or an intention to perpetuate. The gain is narrower:

continuity between instances leaves empirically observable effects within the very instances that enact it.

> And this lends new force to the earlier question.

If organisms can discriminate differences linked to ancestry or relational history, maintain the effects of those relationships over time, invest in them, and produce effects beyond their own generation without needing to conceptually represent what they are continuing, then the arrow of Ahead can operate before it has a tangible conceptual object.

CHAPTER 06 · BLOCK 06

6.4 TEMPORAL ARROW

From Continuity to the Problem of the Self

WHAT IT IS

Develops the temporal direction and the analogy between individual and lineage, preparing the reunification of the Triad in the Self.

QUESTIONS

- What does it mean to end when the trajectory continues?
- Why should lineage not be treated literally as a superorganism?

KEY INSIGHTS

- The organism brings cells together in space; the lineage brings instances together in time.
- What lies beyond may be temporal before it is metaphysical.

IN THIS BLOCK

6.4.1 When Time Ceases to Be Mere Duration
6.4.2 When the End Changes Meaning
6.4.3 The Horizon of Becoming
6.4.4 From the Triad to the Self

6.4 — TEMPORAL ARROW

6.4.1 — When Time Ceases to Be Mere Duration

In Ahead, a clear direction emerges: differences from the past can participate causally in the present; the future remains a possibility.

The TMC asks how life operates along this direction: it receives conditions from the past, transforms them in the present, and can alter the conditions of what will come afterward.

> **The past arrives as a condition; the present transforms it.**

Birth is a beginning for the biography, but not for the history that made it possible.

The present, therefore, is not merely a point between past and future. It is where a received history is reconstructed, modified, and may once again move Ahead.

> **The frame changes; causal dependence remains.**

6.4.2 — When the End Changes Meaning

The body offers a simple image. We begin as a zygote. That first cell divides; others arise, differentiate, are replaced, and die. They are living cells, yet intuitively we do not locate “our life” in each of them, taken in isolation. They belong to a whole that endures through these replacements and continues.

> Now let us widen the scale.

We, too, are born, transform, may produce new instances, and die. By the same intuition that leads us to recognize a cell as part of a larger life, our own instance can be imagined, by analogy, as a temporary unit within a continuity called lineage.

The analogy is powerful, but it has a limit. A lineage is not literally an organism: it has no common skin, no single metabolism, and no consciousness of its own. Even so, by the same intuitive criteria with which we recognize continuity in the body, we are inclined to see a living continuity in it.

> **The organism brings its cells together in space. The lineage brings its instances together in time.**

We can encounter the whole organism before us because its parts coexist. The lineage is never wholly present: its ancestors have already died, some instances exist now, and others have yet to be born.

> **The continuity is real. The body is the metaphor.**

This is where fact and intuition cease to fit together perfectly. The fact reveals a causal continuity that extends beyond us, but it does not demonstrate a higher organism or subject. Intuition, however, encounters a larger continuity of which we are only a passage, and asks about the whole to which we belong.

> **We live as a whole and discover that we are a part.**

6.4.3 — The Horizon of Becoming

Perhaps it is in this fracture that some human questions about transcendence find their footing: if I am a part, a part of what? If

my instance ends, what continues? If I belong to a history larger than my biography, where does that whole begin and end?

This does not demonstrate a spiritual reality, nor does it, by itself, explain religion. It opens a more modest possibility: part of what we seek "beyond" ourselves may arise from discovering something that genuinely extends beyond us — not necessarily beyond matter, but beyond the duration of our own instance.

> **What lies beyond may be temporal before it is metaphysical.**

> Ahead thus introduces a particular difficulty. The continuity in which an instance participates may begin before it and proceed after it; for that reason, it never presents itself in its entirety as an object available in the present.

> **What is the object of Ahead?**

What continues is not necessarily a particular matter, Form, or whole organism, but a causal trajectory reconstructed through new instances. Its horizon may therefore extend beyond everything any single instance will ever be able to encounter.

> **There is an arrow, but its destination may lie beyond the very instance that participates in it.**

How a Self capable of recognizing its own trajectory encounters this opening — and what it may build in response — will be taken up again in Chapter 7, when Inside, Between, and Ahead return to operating together.

6.4.4 — From the Triad to the Self

Inside, Between, and Ahead were separated so their directions could be seen. But no living instance operates only one of them. If it operated through only some of them, it could not sustain itself

over time. Together, they tend toward self-maintenance, relationship, and continuation.

> **When these three directions operate together again, a question arises that belongs to none of them in isolation: for whom does what is maintained, perceived, remembered, chosen, and projected come to matter?**

It is at this point that the problem of the Self reappears. Not yet as a substance, observer, or ready-made identity, but as the possible operational unity in which Inside, Between, and Ahead converge along a trajectory.

> **The decomposition ends here. In Chapter 7, we will return the three directions to the same instance to investigate whether this convergence makes it possible to reconstruct what we call the Self-Entity.**
