

The Maze at Civilization Scale

Cultural Continuity as a Memory Term

J. Konstapel, Leiden, 10-8-2026

Abstract

The Amazing Maze computes a personal path from two fixed inputs: date and place of birth. This essay shows that the same rule operates at civilization scale. The rule has three faces. As mathematics, it is a recursion in which every new level carries the level of two steps back as an explicit remainder. As grammar, it is context-dependence: the next symbol is written against symbols produced earlier. As lived experience, it is the longing for cultural continuity that surveys now measure worldwide. These are not three phenomena. They are one winding read at three depths. The essay closes with a public test case from August 2026: a Chinese philosopher asking America its own foundational question, and America recognizing the question it could no longer ask itself.

1. The maze is generated, not drawn

A maze in the strict sense of this work is the labyrinth of Chartres. It is unicursal. One path winds ring after ring toward the centre. There are no dead ends and no wrong turns. There is only a next ring, and the next ring lies at a computable distance.

Such a figure is not designed as a picture. It is produced by a rule. Give a start symbol and a small set of production rules, and the path writes itself. This is the old dream of Goethe: not a catalogue of forms, but the one generating process behind all forms. Goethe called it morphology. Turing gave it mathematics in his work on morphogenesis. The forms of nature are not stored; they are grown, step by step, from a compact rule.

The Amazing Maze applies this directly. The start symbol of a human path is fixed at birth: date plus place. The rule set is the same for everyone. Same input, same output. This is why the platform needs no questionnaire. A questionnaire tries to parse the output of a life from the outside, and the answers shift from Monday to Friday. The Maze runs the grammar forward from the fixed start instead. It does not read the path; it regenerates it.

2. The memory term

The rule that generates the maze has a signature. Write it as a recursion:

$$b(n) = 3 \cdot b(n-1) + b(n-2)$$

Three new elements on the current level, plus the level of two steps back, carried along as an explicit remainder. Starting from 1, 1 the series runs:

1, 1, 4, 13, 43, 142, 469, ...

The construction is visible in the numbers themselves. $13 = 3 \times 4 + 1$. $43 = 3 \times 13 + 4$. $142 = 3 \times 43 + 13$. Every level contains the level before last as a living part of itself. Drop the remainder and the

series breaks: a pure tripling with no memory gives 40 where the maze gives 43. The difference between 43 and 40 is the whole point. The old thread is not left behind; the new windings are wound onto it.

This series is presented here as the mathematical identity of the maze, not as settled physics. Whether nature selects exactly this recursion is under test elsewhere in this programme. What matters for this essay is the structure: **continuity is a term in the equation**. It is not sentiment added afterward. Remove it and the count comes out wrong.

The rings of Chartres show the same structure in stone. The path repeatedly returns to within a hand's breadth of rings walked long before. Old material is never far away. It is passed again and again, one hedge apart, on a deeper winding.

3. Context-dependence: why a life cannot be parsed

Formal language theory sorts grammars by how much of the past a rule may see. In a context-free grammar the left side of every rule is a single symbol. Such languages are easy to recognize: reading proceeds step by step, forward, with a small memory. Computer languages are built this way.

In a context-dependent grammar a rule reads its neighbours. A rule like $Ba \rightarrow aB$ moves a symbol along material produced earlier. To recognize such a language, the reader must jump backwards and forwards through the string, because the pattern only exists in relation to what came before. For unrestricted grammars the task can fail to terminate at all: the reader never knows for certain that it is done.

Human language is context-dependent. So is an organism, an organisation, a life. This is a structural fact, established in 2009 on this blog and unchanged since: **a context-free instrument cannot recognize a context-dependent path**. A questionnaire is a context-free instrument. It reads answers one by one, forward, without the string. That is why it cannot hold still.

Now place the three faces of the rule side by side. The remainder term in the recursion, the backward reference in the context-dependent rule, and the labyrinth walk that passes old rings — these are the same movement. The parser's jump back through the string is the bodily walk past the inner rings. The memory term is what that jump reads. One rule, three notations.

4. Heimat: the remainder term, felt from inside

The rule is not only computed. It is felt. Surveys from 2025–2026 measure the feeling at planetary scale.

A study across 19 European countries, roughly twenty thousand respondents, found that "nostalgic deprivation" — the sense that people like me were better off before — accounts for around 45 percentage points of difference in populist voting. It outweighs pure economic fear, on the left and on the right, east and west. In country after country, half to two thirds of the population share elements of the sentiment: concern for language, tradition, the continuity of meaning. The German word for what is longed for is Heimat: not territory, but the felt continuity of home.

Within the maze this sentiment has an exact address. The inner rings do not disappear when the path moves outward. The path passes them constantly, centimetres away, one hedge apart. Seen across the hedge, the old ring looks reachable in a single step. Measured along the path, the distance is large. Nostalgic deprivation is the mismatch between those two distances, registered as loss.

Two readings of the mismatch are on offer, and they differ in kind. Populism reads the hedge distance and promises the cross-jump: back over the wall, to the ring as it was. In a unicursal maze there is no such move. The attempt does not travel; it holds the walker at the current point, facing inward.

The maze reads the path distance. The old ring is not a destination behind you. It is the thread beneath you. By the recursion of section 2, the level of two steps back is a component of the present level: 142 contains 43 the way a rope contains its core. Cultural continuity is therefore not achieved by return. It is achieved by the next ring being wound, correctly, onto the old thread.

This turns the survey finding around without dismissing it. The longing measured in fifty to seventy percent of respondents is not a pathology and not an import. It is the remainder term, felt from inside the string. The signal is accurate. Only the proposed direction of travel is wrong.

5. The ring transition of the post-1945 order

At the largest human scale, the same passage is now underway. The order built after 1945 — one anchor, shared institutions, one narrative — is losing coherence across all three of its levels: the macro architecture, the middle layer of institutions, and the national stories underneath. The period between orders is an interregnum: the old ring is finished and the next ring is not yet closed. On the timetable of this programme the decisive window falls around 2035–2040.

The maze supplies the navigation rule for such a passage, and the states that are coping best already follow it. The swing states — India, Indonesia, Brazil, Turkey, Saudi Arabia — refuse both available errors. They refuse bloc loyalty, which is the too-close error: fusing with a neighbouring strand and losing the own winding. They refuse isolation, which is the too-far error: cutting the couplings and losing the net. They hedge, sector by sector, at intermediate distance.

This is the individual next-step rule of the Amazing Maze, unchanged, at state scale: the viable next step lies at the right distance — not too close, not too far — and that distance is computable. The identity is not an analogy. In a net, the same winding recurs at every depth. A person, a company, a state, a civilization: different mesh sizes, one rule.

6. The observer at the right distance

One element is still missing: who states the next ring, when the walker cannot.

The limit is formal and was also set out here in 2009. Turing showed that a machine cannot answer questions about its own performance. Gödel showed that no system proves its own consistency. A system cannot parse its own grammar. It needs a second, independent machine — an observer — and the working solution is cooperation: two machines, each able to reflect on the other, neither able to reflect on itself.

August 2026 delivered a public demonstration. Yiyang Zhuge, a Chinese doctoral candidate in political philosophy, interviewed the film director Christopher Nolan in Beijing about his adaptation of the Odyssey. She did not ask about Hollywood. She asked about the Christianization of Greek philosophy and about the demise of value systems. The interview went viral in the United States. Commentators asked, in public and at volume, why no Western interviewer asks such questions anymore, and whether the institutions still teach the material at all. A country argued for weeks about a question it had not been able to formulate itself.

Read this in maze terms and every component is in place. America is mid-passage: its founding ring — the Greek layer — is close by across the hedge and far away along the path. That is the Heimat condition of section 4, at civilization scale. It cannot parse its own string. That is the Turing condition. The reflection arrives from a node at precisely the right distance. Not too close: Zhuge is not a product of the stalled internal discourse. Not too far: she was trained in the Western system, lives in Boston, translated Arendt and Plutarch, works in an American school of political philosophy. Full coupling, independent position. The observer condition, met exactly.

And note what she carried. She handed America its Greek layer back — not as a destination to return to, but as a thread from a further winding. That is the memory term, performed in public: the old level, re-entering the present level as a component.

The reaction proves the fit. A system that can no longer state its foundational question still resonates when the question arrives from the correct distance. What resonates is selected; what does not resonate passes without effect. Ten thousand utterances crossed the Pacific that week. This one closed a loop.

7. One rule, six depths

The chain assembled in this essay runs as follows. A grammar with a backward reference generates a unicursal path (sections 1 and 3). The backward reference appears in the count as a remainder term: $13 = 3 \times 4 + 1$, $43 = 3 \times 13 + 4$, $142 = 3 \times 43 + 13$ (section 2). Walked, the path passes its own old rings at one hedge's distance; felt from inside, that passage is the worldwide longing for Heimat, and the survey data measure its strength (section 4). At the largest scale, the post-1945 order is in exactly such a passage, and the states navigating it best apply the right-distance rule that the Maze computes for individuals (section 5). Where the walker cannot state the next ring, the statement arrives from an observer at the right distance, because no system parses itself (section 6).

One rule, six winding depths: recursion, grammar, walk, feeling, geopolitics, reflection. The Amazing Maze computes the first three from birth data. This essay shows that the last three are the same computation, running at larger mesh.

The practical consequence is stated once, plainly. The longing for continuity that now moves electorates on every continent is a correct signal read in the wrong direction. There is no jump over the hedge. There is a next ring, at a computable distance, wound onto the old thread. The old is not behind us. We are wound onto it.

8. Status

Computed: the recursion, its values, and the 43-versus-40 discrimination between the memory rule and the memoryless tripling. Measured, by others: nostalgic deprivation as a predictor of populist voting (19 countries, $n \approx 20,000$); the worldwide prevalence figures for continuity concerns.

Documented: the Zhuge episode and its reception, August 2026. Interpretation, proposed here: the identification of remainder term, context-dependence, Heimat, swing-state hedging, and the observer role as one rule at six depths. Open: whether nature selects the bronze recursion; this is under separate test and nothing in the present argument depends on its outcome — the grammar argument of section 3 and the observer argument of section 6 stand on their own.

Annotated References

None of the following is required to follow the argument; all computations and definitions appear in the text.

1. **Konstapel, J. (2008). "About the Trinity, Ternary Numbers and the Last Judgment." constable.blog, 29-12-2008.** — The origin post of the recursion: "the Thirteen ($3 \times 4 + 1$)" and the forty-two steps appear here first, together with balanced ternary as the natural representation of fractal expansion from the middle.
2. **Konstapel, J. (2009). "About Morphology or How Alan Turing Made the Dream of Goethe Come True." constable.blog, 17-11-2009.** — Source of the grammar argument: Goethe's *Urpflanze* as process, Turing morphogenesis, the Chomsky hierarchy, the impossibility of parsing context-dependent structures with context-free instruments, and the observer/cooperation solution to the self-reflection limit.
3. **Turing, A.M. (1936). "On Computable Numbers, with an Application to the Entscheidungsproblem." Proceedings of the London Mathematical Society.** — The formal limit used in section 6: a universal machine cannot decide questions about its own performance.
4. **Turing, A.M. (1952). "The Chemical Basis of Morphogenesis." Philosophical Transactions of the Royal Society B.** — Form as the output of a generating rule rather than a stored design; the mathematical fulfilment of Goethe's programme.
5. **Chomsky, N. (1955/1957). The Logical Structure of Linguistic Theory; Syntactic Structures.** — The hierarchy of grammars and the definition of context-dependence used in section 3.
6. **Konstapel, J. (2025). "Ideogram 142: The Labyrinth." constable.blog, 10-11-2025.** — The unicursal reading of the maze and the identification of 142 with the labyrinth figure.
7. **Konstapel, J. (2026). "Counting the Universe." constable.blog / working paper, 2-8-2026.** — The full derivation of the recursion, the 43-versus-40 test, the ladder height, and the status ledger for the bronze series.
8. **Konstapel, J. (2026). "Geopolitical Shifts: Analyzing Post-1945 Order Erosion." constable.blog, 22-1-2026.** — The multi-scale decoherence analysis, the interregnum, swing-state hedging, and the 2035–2040 window used in section 5.
9. **Konstapel, J. (2026). "Het Wereldwijde Verlangen naar Culturele Continuïteit." constable.blog, 15-2-2026.** — The survey synthesis behind section 4, with full sourcing of the prevalence figures and regional manifestations.
10. **Ferwerda, J., Gest, J. & Reny, T. (2025). "Nostalgic Deprivation and Populism: Evidence from 19 European Countries." European Journal of Political Research 64(3).** — The measurement itself: nostalgic deprivation as the strongest single predictor of populist voting in the pooled European sample.
11. **Konstapel, J. (2026). "MAZE — The Human Correspondence of the Vacuum.Net Theory." Working paper, constable.blog, 8-8-2026.** — The platform: birth date plus birth place as start symbol, the right-distance rule for the next step, and the attunement computation.

12. **Wired (2026). "The Chinese Philosopher Americans Can't Stop Fighting About." August 2026.** — The documented episode of section 6: the Zhuge–Nolan interview, its content, and the American reception.