Paper 2 (6th Grade Version)
From Small Signals to Big Change
The Intent Economy

Cedric Jones

Abstract

Paper 1 showed that systems remember. Paper 2 explains how to predict that memory before it happens. Even small pushes, repeated over time, can permanently change a system. This paper explains how to measure those small pushes, how they add up, and how to estimate the cost of reversing them later.

1. The Big Question

If systems remember, we want to know:

Before we push the system, what kind of memory will we create?
We start with the same idea:

$$S(t) \in \mathbb{R}^n$$

This is the full picture of the system at time t.

2. Intent Is a Directional Push

A decision is modeled as:

$$I(t_0) = \Delta S_0$$

This means:

Someone is trying to move the system in a direction.
But here is the important part:
Sometimes pushes are not big.
Sometimes they are tiny.

3. Small Pushes (Soft Intent)

We describe very small pushes like this:

$$I_{soft}(t) = \epsilon_i \quad \text{where } \epsilon_i \ll 1$$

This means:

The push is small. Almost invisible.
Like a small rule change. Or a quiet shift in enforcement. Or a tiny budget adjustment.

4. Small Things Add Up

Even small pushes add up over time.

We write:

$$\int_{t_0}^{t_1} I_{soft}(t)\, dt = \Sigma \epsilon_i$$

This just means:

All the small pushes over time get added together.
Like drops filling a bucket.

5. The Tipping Point

Sometimes, when enough small pushes add up, the system changes permanently.

We write:

$$\Sigma \epsilon_i > \lambda_{critical}$$

This means:

When the total small pushes pass a critical level, the system shifts into a new structure.
This is a tipping point.

6. Where Does the Memory Go?

In Paper 1, we saw that systems compress history into structure.

We write:

$$B(t) = \mathcal{C}[S(0:t)]$$

This means:

All the changes that happened get stored in rules, habits, procedures, and norms.
The system's "surface" remembers the past.

7. That Memory Changes the Future

Once the system stores the change, it affects future behavior.

We write:

$$\frac{dS}{dt} = F(S, B)$$

This means:

The system now changes based on its stored memory.
The past becomes part of the rulebook.

8. Measuring the Memory

Just like in Paper 1, we measure memory as:

$$M = S(\infty) - S_{baseline}$$

This tells us:
Where the system ended up minus where it started.
That difference is permanent change.

9. Can We Undo It?

If we want to reverse the change, it costs energy.

We write:

$$E_{reversal} \propto \|M\| + \kappa$$

This means:

The bigger the memory, the harder it is to undo.
κ represents extra difficulty, like political conflict or coordination problems.
Big change = big cost.

10. Why This Matters

Small changes do not always stay small.

If leaders are not careful:

- Small rule changes can alter culture.
- Small enforcement shifts can change trust.
- Small incentives can reshape behavior.

By the time people notice, the memory is already stored.

Final Idea

Paper 1 showed that systems remember.
Paper 2 shows that small pushes, when repeated, can cross a tipping point and create permanent structure.

Before you act, ask:
What memory are we about to create?

References

1. D. C. North, *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, 1990.

2. W. B. Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, Economic Journal **99** (1989) 116–131.

3. P. Pierson, *Increasing Returns, Path Dependence, and the Study of Politics*, American Political Science Review **94** (2000) 251–267.

4. H. A. Simon, *The Architecture of Complexity*, Proceedings of the American Philosophical Society **106** (1962) 467–482.

5. J. H. Holland, *Complex Adaptive Systems*, Daedalus **121** (1992) 17–30.

6. R. Axelrod and M. D. Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, Free Press, 1999.

7. W. B. Arthur, *Increasing Returns and Path Dependence in the Economy*, University of Michigan Press, 1994.

8. J. G. March and J. P. Olsen, *Rediscovering Institutions: The Organizational Basis of Politics*, Free Press, 1989.

9. E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.

10. M. Granovetter, *Threshold Models of Collective Behavior*, American Journal of Sociology **83** (1978) 1420–1443.

11. S. A. Kauffman, *The Origins of Order: Self-Organization and Selection in Evolution*, Oxford University Press, 1993.

12. A.-L. Barabási and R. Albert, *Emergence of Scaling in Random Networks*, Science **286** (1999) 509–512.

13. D. J. Watts, *A Simple Model of Global Cascades on Random Networks*, Proceedings of the National Academy of Sciences **99** (2002) 5766–5771.

14. T. C. Schelling, *Micromotives and Macrobehavior*, W. W. Norton, 1978.

15. A. Tversky and D. Kahneman, *Judgment under Uncertainty: Heuristics and Biases*, Science **185** (1974) 1124–1131.

16. F. H. Knight, *Risk, Uncertainty, and Profit*, Houghton Mifflin, 1921.

17. M. T. Hannan and J. Freeman, *Structural Inertia and Organizational Change*, American Sociological Review **49** (1984) 149–164.

18. J. Mahoney, *Path Dependence in Historical Sociology*, Theory and Society **29** (2000) 507–548.

19. D. Acemoglu and J. A. Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, Crown Publishing, 2012.

20. N. N. Taleb, *Antifragile: Things That Gain from Disorder*, Random House, 2012.