

THE LONG CLOCK · CHAPTER FOUR

Two Clocks in Every Company

Chapter Four of The Long Clock

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Chapter Four of The Long Clock. The whole book, with every chapter, is at business.hautelumiere.life/library/the-long-clock (DOI https://doi.org/10.5281/zenodo.23989072).

A NOTE BEFORE YOU READ

This work is offered for education and leadership development. It is not legal, financial, accounting, investment, medical or psychological advice; take the advice of a qualified professional who knows your circumstances. Companies and events are described from the public record as the author understands it; characterisations are the author's analysis. Examples are illustrative, and no particular outcome is promised to any reader.

ABSTRACT

A farmer whose well has always given water does not measure the aquifer beneath it. The pump runs, the tank fills, the crop is watered. If more land goes under irrigation, the pump runs longer and the tank still fills. Nothing in the daily experience of the farm says that the water is coming from a store laid down over centuries and refilled, each year, by a fraction of what is now being drawn. Then one August the pump draws air. Ammanuel Santa Anna uses this image in his manuscript on the costs of the machine metaphor in business. A firm that systematically underinvests in the long-cycle assets that generate its future earnings, he argues, is consuming the ecology that sustains it, and its earnings can look healthy the whole time it does so. He ends the passage on the point that matters for anyone reading a set of accounts: "the yield can be maintained until, suddenly, it cannot."

CHAPTER FOUR

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A well in August

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Ammanuel Santa Anna uses this image in his manuscript on the costs of the machine metaphor in business. A firm that systematically underinvests in the long-cycle assets that generate its future earnings, he argues, is consuming the ecology that sustains it, and its earnings can look healthy the whole time it does so. He ends the passage on the point that matters for anyone reading a set of accounts: "the yield can be maintained until, suddenly, it cannot."[31]

Chapters 2 and 3 set out Colin Mayer's argument for corporate purpose and the strongest objections to it. Both stayed close to the language of law and finance, because that is where the argument has been conducted. This chapter reads the same territory through the house's own lens, the living-systems reading developed in . Its claim is that short-termism is not a failure of character but a mismatch of clocks: the period over which a decision is judged is shorter than the period over which the asset it draws on regenerates, and patient capital is any arrangement that brings the two clocks back into line. Read that way, purpose and patient capital stop being moral preferences. They become the ordinary maintenance of a living system.

The rest of the book leans on this chapter. The evidence in chapter 5, the cases in chapters 6 to 8, the field manual in chapter 9 and the measures in chapter 10 all assume the two clocks. It is worth taking slowly.

Two clocks

Every productive asset has a regeneration time. A stand of timber has one, measured in decades. A fishery has one, set by the age at which fish breed. A research programme has one: the years between the first experiment and the product on the shelf. So do the less visible assets on which most companies now depend:

the trust of a long customer, the tacit skill of a team that has worked together, a reputation, a culture in which people say what they see.

Every decision also has a clock: the period over which the person who makes it will be judged. For a listed company this is often a quarter, sometimes a year, and for an executive's share awards three to five years. For a fund manager it may be the annual ranking against peers. For a lender it is the covenant test. For a household it is often the month.

Santa Anna's manuscript on regenerative governance places the relation between these two clocks at the centre of the problem. He writes: "The time horizon problem is the most structurally consequential feature of governance design. Chapter 4 established that extraction becomes self-defeating when the time horizon of the decision-maker is shorter than the time horizon over which the productive asset regenerates. This is not a problem of individual virtue — it is a problem of institutional design."[32]

The same manuscript names what governance owes a firm's long-cycle assets, and it is a demanding list. Governance, he writes, "must sustain the capacity for renewal across all four capital types simultaneously and across time horizons long enough for feedback loops to close."[32] The four are the financial, the relational, the knowledge and the structural. Of the second, which most balance sheets do not show at all, he adds that the network of trust "be actively maintained rather than passively assumed."[32] A reader does not need the rest of the framework to use the sentence. Trust that is assumed is trust being drawn down.

Ecology has a word for the line between the two clocks. It is yield. A fishery can be harvested indefinitely at a rate below its rate of renewal, and anything taken above that rate is paid out of the stock. The northern cod off Newfoundland is the case every student of the subject meets. The stock that had fed a fishery for centuries fell so far that in July 1992 the Canadian government declared a moratorium on fishing it, and tens of thousands of people in Atlantic Canada lost their work.[33] Fisheries scientists have argued for three decades over the weight of each cause, overfishing, the assessments that guided the catch, changes in the ocean itself, and the house does not settle that argument here; Ransom Myers, Jeffrey Hutchings and Nicholas Barrowman's 1997 study in *Ecological Applications* is one of the principal contributions to it.[33] What is not in dispute is the shape. The catch was set by people judged on a season and a budget. The fish bred on a clock of years.

A company is not a fishery, and the analogy should not be pressed into figures it cannot support. The structure of the decision is the same. When the people who decide are judged faster than the asset renews, the asset pays the difference, and the accounts record the payment as profit.

The loop that settles toward decline

The aquifer has a second lesson, and it is the one that makes short-termism hard to leave once it has begun.

A farm drawing down its aquifer earns more for a while. If it has borrowed against those earnings, the debt has to be serviced from the same water. When the yield falls, the farm must draw harder to meet the payments, which lowers the water further, which makes next year's yield smaller. The farm is in a loop, and every turn makes the next turn tighter.

Santa Anna describes the corporate version precisely. "The machine model's time horizon problem is self-reinforcing," he writes. Short-horizon governance produces decisions that deplete long-horizon capacity; depleted capacity makes the firm more dependent on short-horizon extraction to meet its commitments; and that dependence compresses the horizon further. In the systems language of his manuscript the loop is balancing, but "it equilibrates not toward renewal but toward managed decline."[32]

This reading has a practical consequence that the moral vocabulary around short-termism misses. A company caught in the loop cannot leave it by resolving to be more patient. Each quarter's pressure is real, because the commitments behind it are real: the interest, the dividend the market has priced in, the bonus pool that keeps the best people from leaving. It leaves the loop only when something outside the quarterly cycle changes. An owner absorbs a weak year. A lender extends a tenor. A pay plan measures over five years instead of one. A purpose clause tells the board which asset it may not draw down without saying why. Patient capital, in this light, is not generosity. It is the outside support that lets a system in a declining loop rebuild its store.

The systems thinkers who taught a generation of managers to draw causal loops, Peter Senge chief among them, made the same point in another vocabulary: structure produces behaviour, and people placed inside a structure will reproduce its results whoever they are. The Luminous 100 carries Senge's systems thinking among its frameworks, and the house's reading of it agrees with this one. Change the loop, not the people in it.

There is a quieter consequence too. A loop that settles toward decline does not announce itself. Each quarter looks like a reasonable response to the quarter before. The board that approved a training freeze in a hard year approved it for good reasons, and the board that renewed it the year after did so because the results showed the freeze had not hurt. That is the loop speaking. It hurts later, on the other clock.

The body's own clock

The most distinctive part of Santa Anna's argument is that the clock a decision runs on is not only set by institutions. It is also set by the nervous system of the person deciding.

Ecstatic Economics gives a chapter to what scarcity does to the body, and its account of time is exact. Under threat, the autonomic nervous system shifts into mobilisation, and the future contracts. He writes: "Your time horizon collapses. The future shrinks to the immediate — this quarter, this month, this paycheck.

Long-term thinking feels like a luxury you can't afford."[34] He is careful to add that this is not a flaw of character. It is what a body designed for survival does when it believes survival is at stake.

The observation joins the institutional argument at a precise point. A board facing an activist, an executive with a share award vesting in eighteen months, a founder whose lender has called a covenant, a household one bill from an overdraft: each is a body under threat, and each has a shorter clock for physiological reasons before anyone has made a decision. Institutional patience and personal steadiness are therefore not separate subjects. A structure that removes the threat of a sudden sale lets the people inside it think on longer clocks, and people who can think on longer clocks make the decisions that patient structures exist to protect.

The book makes the converse point as well: under conditions of safety, it argues, the capacities needed for planning and weighing future consequences come back. The house claims no more for this than the book does. The physiology belongs to a field with live debates, and the account draws on polyvagal theory, whose claims are contested in the research literature.[34] The practical lesson is modest and useful. A leader who wants a long-horizon decision should take it where the people taking it are not afraid: not in the week of a profit warning, not in the meeting where jobs are being cut, not at the end of a month that has gone badly. Chapter 9 builds that into the field manual as a rule about when the long-clock decisions are scheduled.

Severed feedback

The book names a second mechanism that shortens horizons, and it is the one most relevant to capital. It is distance.

The modern investor can own a fraction of a company on another continent through a fund she has never read, managed by a model she has never seen. Santa Anna calls this "the severance of capital from consequence," and treats it as the financial version of the somatic dissociation his book examines in the body.[34] The harm is not that such investors are careless. It is that no signal from the asset reaches them except its price, and price is the fastest and shortest of all the clocks.

His remedy is structural. Looking across the alternatives his book surveys, from worker cooperatives to steward-owned firms to local investment networks, he finds restored feedback among their shared features: in each, the loop that connects an owner's decision to its consequence has been closed again.[34] The owner who sits on a foundation board, the worker who owns a share of the firm, the lender who walks the farm: each receives signals from the asset on the asset's own clock. The book puts the consequence in one sentence: "When you *feel* the impact of your economic choices — in your body, not just your mind — you make different choices."[34]

A reader in finance may find the language unfamiliar. The mechanism is not. Information that arrives on the right clock changes what is decided. A lender who visits the plant twice a year and knows the appren-

tices by name reads the same covenant test differently from one who sees only the ratio. The case chapters return to this: the Bosch industrial trust in chapter 6 and the John Lewis partners in chapter 7 are, among other things, arrangements for getting the asset's own signal to the people who decide.

Who is in the room

If short-termism is a mismatch of clocks, the first practical question is whose clocks are represented when a decision is made. The classical instrument for that question is the stakeholder map, which plots the parties to a decision by their power and their interest and assigns each a treatment. The Alpha Papers set out the instrument in full at.

The Luminous 100 upgrades the map in a direction that bears directly on time. It replaces the grid's first question with another: "Who are the living beings and systems affected by this decision?"[35] Some of those beings and systems run on long clocks: the next generation of employees, the river downstream, the town that will still be there when the plant closes, the customer who comes back in ten years if she is treated well now. They are rarely powerful in the grid's sense, and so the conventional map puts them in the corner marked *monitor*. The upgraded map asks what each relationship needs in order to be healthy, and that is a question about time.

Ecstatic Economics draws a related principle from Haudenosaunee governance, the practice of weighing decisions by their effect on the seventh generation. Santa Anna is careful about what the principle asks. He writes: "Seven-generation thinking doesn't mean we can predict the future perfectly. It means we *include the future in our moral horizon* — we recognize that the people who will live after us have a legitimate claim on the decisions we make today."[34] The same chapter asks readers to engage such traditions through relationship and credit rather than by borrowing a phrase. This book holds to that: the principle is cited for what it asks of a decision, not offered as a technique.

In practical terms, including the future means giving a long clock a seat. A foundation does it by charter. An employee owner does it by staying. A board can do it more modestly by naming, in the minutes of every major decision, which long-lived asset the decision draws on and how long it would take to rebuild. That one line in the minutes is the cheapest structural change in this book, and it is one of the candidate changes at the midpoint gate of the field manual in chapter 9.

Reading a set of accounts with two clocks

The lens becomes practical when it is turned on a real document. An annual report rarely shows regeneration times, but it usually shows enough to find the pairs that matter.

Begin with the lines that renew a long-clock asset. Training and apprenticeship spending, where it is disclosed. Research and development. Maintenance capital expenditure set against depreciation. Customer

service headcount. Staff turnover, which is the reverse of tacit skill. Supplier tenure, where a company reports it. None of these lines is complete and some are not reported at all. Together they are the nearest thing a public document offers to a reading of the aquifer.

Then put each beside the result it might be paying for. Margin beside training. Earnings per share beside research. Free cash flow beside maintenance spending. A result that improves while the line beside it falls is not proof of a draw-down, because a company can grow more efficient. It is a question to ask, and a board that asks it each year learns more about its company than one that reads the two lines on different pages.

Chapter 5 shows the arithmetic of a draw-down at the moment it is most tempting, the year before a sale. Chapter 10 turns the pairs into a set of measures a board can track. Here the point is only that the second clock is not invisible. It is merely kept on a different page.

A household on two clocks

The same reading works at the scale of a kitchen table, and it is often clearer there. Chapter 12 gives the household a whole chapter; this section sets out only the lens.

A household's long-clock assets are not hard to name. Health renews slowly once it is run down. So does a marriage, a friendship, a child's confidence at school, a parent's trust that someone will come. A skill that earns the family's income has a regeneration time too: a qualification lapses, a network thins, a trade moves on. Against these, the household's decision clocks are often very short. Rent is monthly, the card statement is monthly, and work paid by the hour is judged by the week.

The draw-down pairs are familiar to anyone who has lived through a hard year. Income rises while sleep falls. Savings hold while a parent's visits stop. The overtime is paid this month; its cost arrives in a later year and in another account. None of this is a moral failing, and the book's chapter on the body says so plainly: a household under threat shortens its clock for the same physiological reasons a board does.

What the lens offers is not a budget, and nothing here is financial advice. It is a question to put beside the budget each month: which long-clock asset paid for this month's result, and how long will it take to refill? A household that can name one patient party, a relative, a buffer, an employer with a longer view, has the advantage a company has when it finds one long-term owner. It has somewhere to stand while the slow store refills.

The finer points of reading two clocks

For a leader who wants to use the lens on Monday, five distinctions make it practical.

Regeneration time is not useful life. A machine has a useful life and is replaced. A team's tacit skill has a regeneration time: if it is dispersed, it does not come back by purchase. The register below asks for the second. When in doubt, ask the person who would have to rebuild the asset how long it would take, and write down the answer they give, not the one the budget would prefer.

Draw-down hides inside good results. The clearest sign of an aquifer problem is a result that improves while the asset behind it is not renewed: margins rising as training falls, sales rising as service is cut, earnings rising as research is deferred. Look for the pair.

Every clock has an owner. For each short clock, name who sets it: the analyst consensus, the remuneration committee, the lender, the card statement. A clock with an owner can be negotiated. A clock nobody owns is usually a habit, and a habit can be changed by the person who notices it.

One patient party is often enough. A system does not need every participant to be patient. It needs one party with a long clock and the standing to act on it: a foundation, a family, an employee trust, a single long-term lender. Find out who that party is in your organisation, or notice that there is none. Chapter 13 makes this the book's closing question.

Fear shortens the clock before policy does. Before asking whether the structure is patient, ask whether the people inside it are frightened. A long-term plan written in a frightened room will be a short-term plan with a longer title.

The Tool: The Two Clocks Register

Keep it as a single table, reviewed each quarter beside the accounts. Chapter 10 shows how to turn its trend column into measures; the workbook at the back of the book reprints it.

1 · The assets on long clocks

ASSET THE PURPOSE DEPENDS ON	WHAT RENEWS IT	REGENERATION TIME IF RUN DOWN (YEARS)	LAST YEAR'S SPEND ON RENEWING IT	TREND: RENEWED / HELD / DRAWN DOWN
A team's tacit skill				
Long customers' trust				
Research or product pipeline				
Reputation in the town or trade				
Land, water, materials				
For a household: health, a qualification, a child's schooling, a home				

2 · The decision clocks

WHO DECIDES	JUDGED OVER (MONTHS)	WHO SETS THAT CLOCK	COULD IT BE LENGTHENED, AND BY WHOM

3 · The mismatches

For each asset in part 1 whose regeneration time is longer than the clock of anyone in part 2 who can draw on it, write one line:

- Asset __ renews over _ *years; can draw on it and is judged over* ___ months.

4 · The draw-down pairs

List any result that improved last year while an asset in part 1 was drawn down:

- Result __ rose while ____ fell.

5 · The room

- Was this register reviewed in a meeting where people were afraid for their jobs or their year? yes / no
- If yes, the date it will be read again in a calmer week: ______

6 · The patient party

- The one party with a long clock and the standing to act: ______ (or: none)
- When did they last act on it, and how: ______

7 · The single change

- The one mismatch to close this quarter, and how (an owner, a tenor, a pay period, a purpose clause, a line in the minutes): ______

The water table

A farm that measures its aquifer does something simple and rare: it puts the slow clock on the same page as the fast one. It learns how much the ground refills in an ordinary year, it draws less than that, and in a dry year it draws less again. Nothing about this is heroic. The harvest is smaller in some years than it could have been. The well gives water in August.

Chapter 5 turns to the evidence: what the research shows when ownership and pay lengthen the clock, and a composite family firm worked through line by line. The house's reading of complexity in *The Economy That Keeps Becoming* and of regenerative economics in *The Second Brief* extends the systems view taken here.

The well gives water in August because somebody measured the water table in May.

A NOTE FROM THE HOUSE

Every company keeps two clocks: the one its decisions run on, and the one its people, customers and assets renew on. Where the first runs faster than the second, a gain is being drawn down that no quarter records. Luminous Prosperity Inc. reads both clocks inside organisations as a gainshare, and is paid as a share of the gain it helps find.

REQUEST A CONVERSATION

References

1. Santa Anna, A. "The Machine Metaphor and Its Costs," Chapter 1. Unpublished manuscript, Luminous Prosperity, 2026.
2. Santa Anna, A. "Regenerative Governance," Chapter 5, sections on the ecological requirement and on time horizons. Unpublished manuscript, Luminous Prosperity, 2026. Quoted for its argument; the manuscript's own figures are not repeated here because they were not re-checked against their sources for this book.
3. Myers, R. A., Hutchings, J. A., & Barrowman, N. J. (1997). Why do fish stocks collapse? The example of cod in Atlantic Canada. *Ecological Applications*, 7(1), 91–106. https://doi.org/10.1890/1051-0761(1997)007[0091:WDFSCT]2.0.CO;2 (resolved by Crossref, 19 October 2026). The paper's own conclusions are not summarised here because its abstract could not be read for this book; it is cited as a principal contribution to the debate over the causes. The date of the moratorium (July 1992) is as given in standard references, including *Encyclopaedia Britannica*, "Cod fishery collapse of 1992." The cod is used here as an analogy for decision clocks, which none of these sources address.
4. Santa Anna, A. *Ecstatic Economics*. Luminous Prosperity, 2026. Chapters 2, 3 and 5. The physiological account in Chapter 3 draws on polyvagal theory, whose claims are debated in the research literature; it is cited for the book's argument about time horizons, not as settled physiology.
5. Santa Anna, A. *The Luminous 100*, No. 85, "Stakeholder Mapping," Luminous Upgrade. Luminous Prosperity, 2026.

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