

THE SECOND BRIEF · CHAPTER FIVE

The Café and the Compost

Chapter Five of The Second Brief

Ammanuel Santa Anna

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Chapter Five of The Second Brief. The whole book, with every chapter, is at business.hautelumiere.life/library/the-second-brief (DOI https://doi.org/10.5281/zenodo.23989141).

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

Kalundborg is a small port on the west coast of Zealand, in Denmark. Over several decades from the 1960s, a handful of firms there began to trade what they would otherwise have thrown away. By the late 1980s the arrangement had a name, industrial symbiosis, and visitors were arriving to study it. It became the case every textbook on the circular economy reaches for. The most useful account of it is one of the first. In 1997, John Ehrenfeld and Nicholas Gertler published "Industrial Ecology in Practice: The Evolution of Interdependence at Kalundborg" in the first volume of the Journal of Industrial Ecology . Their finding was not the one visitors tended to take home. The links among the firms, they wrote, had come about through "a sequence of independent, economically driven actions". No master plan had produced them. Each exchange had been agreed because it made sense to the two parties at the time. And they warned that the pattern "may not be easily transferable to greenfield developments": that is, to new sites designed from the start to be symbiotic.

CHAPTER FIVE

The Café and the Compost

A town nobody planned

Kalundborg is a small port on the west coast of Zealand, in Denmark. Over several decades from the 1960s, a handful of firms there began to trade what they would otherwise have thrown away. By the late 1980s the arrangement had a name, industrial symbiosis, and visitors were arriving to study it. It became the case every textbook on the circular economy reaches for.

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The literature on Kalundborg describes exchanges among a power station, an oil refinery, a pharmaceutical and enzyme maker, a plasterboard factory and the municipality: surplus steam and heat, cooling water, and gypsum recovered from the power station's flue-gas cleaning used in place of mined gypsum for plasterboard.[35] The specific firms and flows have changed over the decades. The symbiosis's own site dates the collaboration to 1972 and today describes it as seventeen public and private companies, among them Novo Nordisk, Novonesis, Ørsted, Saint-Gobain Gyproc, Kalundborg Refinery and the municipality's utility, exchanging water, energy and materials.[35] Chapter 7 returns to Kalundborg at length; here it is the opening of a smaller story.

This chapter works the idea twice. First at Kalundborg's scale, through the research on what happened when others tried to copy it. Then at the scale of a single business, through a composite café, to show what the three chapters before this one (chapters 2, 3 and 4) look like when someone actually sits down with them.

Uncovered, not designed

A decade after Ehrenfeld and Gertler, Marian Chertow of Yale returned to the question of whether Kalundborg could be reproduced. Her 2007 article, titled with deliberate quotation marks "'Uncovering' Industrial Symbiosis", examined fifteen eco-industrial park projects brought to national attention by the US President's Council on Sustainable Development from the early 1990s, and contrasted them with twelve other projects that showed more signs of self-organisation.[36]

Her conclusion is in the abstract, and it is plain. Uncovering existing symbioses "has led to more sustainable industrial development than attempts to design and build eco-industrial parks incorporating physical exchanges." The recommendation that follows is to look for the "kernels" of symbiosis that already exist, the exchanges firms are making on their own, and to nurture those, rather than drawing a park on a map and inviting tenants to fill it. The article closes with a sentence that reads like a field guide: desirable symbiotic exchanges "are all around us and now we must shift our gaze to find and foster them."

For a practitioner, Chertow's finding is liberating. It says that the first step is not a grand design. It is an inventory of what already moves, and of who nearby might want what you discard. It also explains a pattern many managers have seen: the circular initiative launched from the top with a diagram tends to stall, while the arrangement a site manager made with a neighbouring farm ten years ago is still running.

What Chertow's study cannot show is how much any one exchange saves or what it does to the environment in total. It is a comparison of how projects came about and which survived, not an audit of their effects. The third chapter's warning about rebound applies: an exchange that makes a by-product useful can also make it profitable to produce more of it.

The composite: a café

What follows is a composite, built for teaching. It is not a real business, and every figure in it was set by the writer to be plausible for a small independent café-bakery in a market town. The structure of the example, not its numbers, is the point.

The café has forty seats, bakes its own bread and pastries each morning, and sells coffee from seven until four. Its owner, whom the example will call the owner, has read about regeneration, believes in it, and has had no time to do anything about it. She has a waste contract, a recycling bin and a vague sense that she should be doing more.

The idea she starts from is not hers. It is a sentence in Ammanuel Santa Anna's notes, in a Notion volume called *Luminous Holonics Earth*, describing a small closed loop:

> *the coffee grounds from a café could become rich compost for urban farms, which in turn supply fresh produce to the same café.*[37]

The same passage adds a line that matters more for her than the loop itself: "Such systems aren't just efficient—they foster relationships between communities, businesses, and the natural world."[37] That is the reciprocity question from the fourth chapter in one sentence, and it turns out to be where her real gains are.

The ledger, first month

She begins with the Three-Column Ledger from the second chapter. The stock she chooses to watch is not a material at all. It is the soil of the two market gardens within five miles that already supply some of her vegetables, because if they fail she loses her best produce and her customers lose the reason they come in on Saturdays. She describes its condition as the growers do: thin in one garden, good in the other, and both short of organic matter after a dry summer.

Her first ledger has eleven lines. Four results stand out.

Coffee grounds: about forty kilograms a week (the writer's figure), currently in general waste. Column 3, effect on the chosen stock: none. Verb: none at all.

Unsold bread: on an average day, a tenth of the morning bake (the writer's figure), given to a staff member or binned. Column 3: none.

Milk: delivered in single-use plastic, returned to nobody.

Wages: paid on time, with two of her six staff on short contracts they would like to lengthen. Column 3, read against the stock she chose: none directly, but the line makes her notice that a stock she depends on, her staff's skill, is one she has not been watching.

The ledger does not tell her what to do. It shows her, on one page, that most of what leaves the café goes nowhere useful, and that the condition of the gardens is something she affects not at all.

The map, second week

Two weeks later she draws the Metabolism Map from the fourth chapter with her head baker and her front-of-house lead. It takes them an evening. The step-three list of outputs has seven blanks, places where nobody knows where an output goes after it leaves.

The five questions produce five answers, two of which become actions.

Circularity. The grounds and the unsold bread have no next user. One of the market gardeners, asked by phone the following morning, says she will take the grounds and any vegetable trimmings if they are kept separate and collected twice a week. This is a kernel in Chertow's sense: an exchange that makes sense to both parties, arranged directly, without a programme.

Diversity. The café buys all its flour from one mill. That is a single point of failure she had not seen. No action yet, but it is written down.

Redundancy. Only the head baker knows the sourdough. If he is ill, there is no bread. The second action: one of the staff on a short contract is trained on the dough over the next two months, and her contract is lengthened. The book's line about the regenerative workplace sits behind this decision:

> *A sustainable workplace reduces employee burnout. A regenerative workplace produces employees who leave each day with more energy, skill, and sense of purpose than they arrived with.*[38]

Reciprocity. When she asks the gardener what the relationship returns to *her*, the answer is not price. It is predictability: knowing in March what the café will buy in July, so she can plant for it. That costs the café nothing but a conversation and a written estimate.

Distributed intelligence. The front-of-house lead says she sees which pastries are left at two o'clock every day but has never been asked to change the bake. From the following week she is.

The test, before anything is spent

Before the grounds start going to the garden, the owner runs the Leak and Rebound Test from the third chapter. Three of its questions change the plan.

Which loop? Composting is material recovery, the lowest of the three. Is there a repair or exchange option first for the bread? There is: a small shelf of the previous day's loaves at a lower price at opening, and a standing arrangement with a community kitchen for what remains. The bread moves from the bin to two higher loops.

What does it displace? The grounds should replace some of the compost or manure the gardener would otherwise buy. She confirms that they do. The day-old bread shelf is the harder case: does it replace a fresh loaf the customer would have bought, cutting the café's revenue, or does it reach people who would not have bought bread at all? The owner decides to watch the fresh-bread figures for a month before deciding. That is the rebound question asked honestly.

Will it survive a bad year? The grounds collection costs nothing and saves on general waste. The training costs the head baker's time. She writes the training into the rota, not into a project plan, so it does not disappear in a busy month.

Six months on

The figures below are, again, the writer's, set to show the shape of a result rather than to predict one.

General waste collected falls by roughly a third, mostly the grounds and bread, and the waste contract is renegotiated to a smaller bin. The day-old shelf sells most of its loaves, and fresh-bread sales do not fall, which suggests the shelf is reaching new buyers rather than diverting old ones. The community kitchen takes the rest. The second baker can run the morning bake alone. The front-of-house lead has cut the two o'clock leftovers by adjusting the pastry mix.

And the stock she chose, the gardens' soil? The gardener reports that the bed where the grounds have gone is holding moisture better, which is consistent with adding organic matter but is not a measurement. Six months is too short to say more. The owner writes exactly that in the ledger: *condition: slightly better in one bed, by the grower's account; not measured.* That sentence is worth more than a claim of regeneration, because it can be checked next year.

The financial line is modestly positive: a smaller waste bill, a little more bread sold, no new cost beyond time. The book is clear that this matters: a regenerative practice still has to pay its way, a point the fourth chapter quoted in full. Nothing in the example required a grant, a consultant or new equipment.

What she got wrong first

A composite is most useful where it shows the mistakes, and the café's owner, being plausible, made three before the arrangement settled. They are worth setting out because they are the ones real organisations make most often.

She started with the bin. Her first instinct, before the ledger, was to order a second recycling bin and a supply of compostable cups. Both would have reduced harm a little. Neither would have touched the stock she later chose, and the compostable cups, in her town, would have gone to the same landfill as the old ones because the local collection did not accept them. The ledger's value was that it made her look at what actually left the building before she spent anything on what might.

She tried to arrange everything at once. After the inventory she had four possible exchanges: the grounds to the garden, the bread to the community kitchen, the milk containers back to the dairy and cardboard to a local maker who wanted packing material. She set up all four in the same week. Within a month two had lapsed, because nobody had written them into a routine and the people involved were busy. She restarted them one at a time, each with a named person and a day of the week. Chertow's finding that self-organised exchanges outlast designed ones has a small-scale corollary: an exchange survives when it fits the way people already work.

She measured the wrong thing. For the first two months she counted the weight of waste diverted, because that was easy. It went up satisfyingly and told her almost nothing about the gardens, the staff or the café's finances. The Three-Column Ledger's third column was what corrected her: the question was not how

much left the bin but what was in better condition as a result. Weight diverted is a flow. The ledger asks about a stock.

None of these mistakes was expensive. Each was the ordinary consequence of starting from the first brief, less harm, and only gradually moving to the second. That gradual movement is what this book tries to describe, and the composite shows it taking about a season.

What the example shows and does not

It shows the order that works: ledger, then map, then test, then a small number of actions written into routines. It shows Chertow's finding at a tiny scale: the useful exchange was found by asking a neighbour, not designed. It shows that the second brief, more life rather than less harm, often arrives through people before it arrives through materials. Two of the café's four gains were in skill and in the use of what staff already knew.

It does not show that this café, or any café, will see these results. The figures are a teacher's. And it does not show that a loop this small changes anything at the scale Haas and colleagues measured in the third chapter. It changes one business, two gardens and six jobs. That is the scale at which Kalundborg also began.

Santa Anna's book describes a pattern beneath all the alternatives it surveys, from cooperatives to community currencies, and names its first feature as restored feedback loops:

> *Every ecstatic alternative restores that connection — making the impact of economic decisions visible, felt, and somatically real.*[39]

In the café, the restored loop is literal. The owner now knows the woman whose soil her grounds go into, and the woman knows what the café will buy in July. The companion book on the commons (*The Pasture Was Never Empty*) describes how shared resources are kept healthy by the people who use them; this is a very small instance of the same thing. The companion book on gift and reciprocity (*The Channel Keeps It*) explains, through Marcel Mauss and the experimental economists, why an exchange that begins as a favour so often outlasts one that begins as a contract. For a business with more relationships to map than a café, the house's stakeholder paper at hautelumiere.life is a natural next instrument.

On Tuesday and Friday mornings a bucket of grounds goes out of the back door, and in July a crate of tomatoes comes in at the front.

The Tool: The Waste-Is-Food Inventory

An inventory for finding the kernels Chertow describes: exchanges that already make sense and have not yet been arranged. It takes one person about an hour to start and a week of noticing to finish. It works for a business, a school, an office or a household.

Part 1 · What leaves (one week of noticing)

OUTPUT	ROUGHLY HOW MUCH, HOW OFTEN	WHERE IT GOES NOW	COST TO DISPOSE OF IT NOW	IS IT KEPT SEPARATE, OR MIXED WITH OTHER WASTE?

Include materials, food, packaging, heat, water, equipment no longer used, skills nobody is using, and time (empty rooms, idle vehicles, quiet hours).

Part 2 · Who might want it (one afternoon of calls)

For each output, list three possible users within a short distance: a farm, a garden, a school, a workshop, a charity, a neighbouring business, a maker, a local authority service. Ask each one question: *would this be useful to you, and in what form?*

OUTPUT	POSSIBLE USER 1 · ANSWER	POSSIBLE USER 2 · ANSWER	POSSIBLE USER 3 · ANSWER

Part 3 · The higher loop first

For each output with an interested user, before agreeing, ask:- Could it be used longer or repaired by us first? __- Could it be passed on whole, as it is, before it is broken down? _- *Only then: should it be recovered as material (compost, recycling)?* ___

Part 4 · The kernel

For each exchange you agree:- What it replaces for the other party (what would they otherwise buy or use?): __- What the other party says the relationship gives them, in their words: _- *What it costs us: money · time - Which routine it is written into (rota, delivery schedule, contract): - Date of first exchange: · date of first review:* ___

Part 5 · The review (three months on)- Exchanges still running: __ of _- *For each, has it replaced something, or added to the total? - The stock we chose to watch (from the Three-Column Ledger): condition now, and how we know: - The next output from Part 1 to find a user for:* ___

How to read it. Most inventories find two or three kernels in the first week. The temptation is to arrange all of them at once. Arrange one, write it into a routine, and wait until it has run for a month before arran-

ging the next. Kalundborg grew one agreement at a time over decades, and that, on Ehrenfeld and Gertler's account, is why it held.

A NOTE FROM THE HOUSE

What a firm throws away is often an input somebody, sometimes the firm itself, is already paying for. Counted from records the firm already keeps, a closed loop is a gain both sides can see. Luminous Prosperity Inc. does this work inside organisations as a gainshare, and is paid as a share of the gain it helps find.

REQUEST A CONVERSATION

References

1. Ehrenfeld, J., & Gertler, N. (1997). Industrial ecology in practice: The evolution of interdependence at Kalundborg. *Journal of Industrial Ecology*, 1(1), 67–79. https://doi.org/10.1162/jiec.1997.1.1.67. Both quotations are from the article's summary. A historical and analytical account of one district; it does not measure the environmental effect of the exchanges in total.
2. The historical list of firm types and flows follows Ehrenfeld and Gertler (1997) and the wider literature. The current description is from Kalundborg Symbiosis, symbiosis.dk, read 19 October 2026: the text says seventeen companies, the partner list on the same page names sixteen; the page gives no quantities for any flow.
3. Chertow, M. R. (2007). "Uncovering" industrial symbiosis. *Journal of Industrial Ecology*, 11(1), 11–30. https://doi.org/10.1162/jiec.2007.1110. All quotations and the 15 and 12 project counts are from the article's summary. A comparison of how projects arose and fared; it does not estimate the savings or environmental effects of any exchange.
4. Santa Anna, A. *Luminous Holonics Earth*, "Circular Economy". Unpublished notes, Ava's library. Both passages proven verbatim.
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The Café and the Compost

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