# Innovation: a Waste of Time?

## Show notes: the innovation lessons in depth

*Companion notes to the Origin Files episode on Frank and Lillian Gilbreth* · Nov 5, 2026

Every innovation story worth teaching holds more than one lesson. The Gilbreths' hunt for wasted motion sits at the intersection of scientific management, human factors and user research — three traditions usually taught apart, but which began, in this case, inside the same marriage. Their story also raises a harder question: what happens to a body of knowledge when the person who built it loses standing to keep teaching it? Lillian Gilbreth's forced pivot from factory floor to kitchen counter is itself a case study in how ideas migrate once their original market closes.

## Lesson 1: Go and see

**The idea.** Direct, first-hand observation of work as it is actually done — later named *genchi genbutsu* ("go and see for yourself") inside the Toyota Production System that Taiichi Ohno helped build from the 1950s – 80s — treats the workplace itself, not a report about it, as the primary source of evidence.

**In the case.** Frank Gilbreth didn't theorise about bricklaying from an office; he watched bricklayers directly, timed their individual motions using film and light-trail "cyclegraphs," and cut the motions needed to lay a brick from eighteen to as few as two. Bessant's own story from a Dominican Republic fruit-pulp factory repeats the pattern seventy years on: the fix came from watching the actual bottleneck, not from an org chart.

**Contrast cases.** Toyota's own shop-floor "go and see" culture was built explicitly on this principle. The opposite case is Frederick Taylor, who favoured time-and-motion studies conducted at a clipboard's distance, often without the worker's trust — a difference the episode credits with causing Taylor and the Gilbreths to fall out.

**For discussion.** If "go and see" is this old and this proven, why do organisations still default to reports and dashboards instead of direct observation? Is there a size at which a business becomes too big for "go and see" to scale?

## Lesson 2: Efficiency is about people

**The idea.** Fatigue, morale and wellbeing are legitimate variables in work design, not noise to be optimised away — a claim the Gilbreths made directly, and one the Hawthorne studies (Elton Mayo and colleagues, Western Electric, 1924–1932) later made the founding claim of the whole human-relations school of management.

**In the case.** Lillian Gilbreth's 1914 doctoral thesis, published as *The Psychology of Management*, argued for fatigue and morale as central to productivity, not an afterthought. The couple's 1916 *Fatigue Study* called unnecessary fatigue "humanity's greatest unnecessary waste," and that conviction carried into real work with wounded soldiers during the First World War.

**Contrast cases.** The Hawthorne studies reached a related conclusion — that attention and social conditions move output — independently and a decade later, without building on the Gilbreths' work directly. The useful opposite case is Taylor's own stopwatch-only time studies, which the episode credits with no equivalent interest in the worker's experience.

**For discussion.** Where's the line between "designing work around the people doing it" and treating wellbeing as just another lever for extracting more output?

## Lesson 3: Ask the user

**The idea.** Treating the people who will actually use a product as a source of design evidence, rather than guessing on their behalf — a method later formalised, decades on, as user-centred design and "lead user" research (Eric von Hippel, from the 1970s onward).

**In the case.** In 1927, commissioned by Johnson & Johnson, Lillian surveyed thousands of women about the Modess sanitary pad, which was losing market share to Kotex. The findings — that the product was too large, too stiff and poorly packaged — are an early, documented instance of systematic user research shaping a mass-market product.

**Contrast cases.** Von Hippel's later research on "lead users" in industrial and software markets formalised the same instinct a generation on. The contrasting case is product design carried out purely from an engineer's internal assumptions about what users want — the position the episode implies Modess was in before Gilbreth was brought in.

**For discussion.** What is lost, and what is gained, when a company outsources its understanding of the user to a researcher rather than building that empathy in-house?

## Lesson 4: Measure it

**The idea.** Giving a phenomenon a shared name and unit is itself an innovation: it turns a vague complaint ("this feels wasteful") into something teams can see, compare and act on together — close to what Nonaka and Takeuchi (1995) called codifying tacit knowledge into explicit, shared language.

**In the case.** The Gilbreths broke work into eighteen basic motions and named the unit after themselves, spelled backwards: the "therblig." The name is almost a joke, but the effect was serious — it gave a diffuse idea (wasted effort) a fixed vocabulary that could

be taught, measured and compared across completely different jobs.

**Contrast cases.** Lean manufacturing's own vocabulary of the "seven wastes" (*muda*) does the same job a generation later, at Toyota. The contrasting case is any workplace that still relies only on impression and anecdote ("that process feels slow") rather than a shared, nameable unit of waste.

**For discussion.** What would a "therblig" for your own organisation's wasted effort look like — and would naming it change anyone's behaviour, or just give you a word for something people already quietly know?

## Lesson 5: Borrow across boundaries

**The idea.** Many innovations are not new inventions but successful recombination — taking a method proven in one domain and applying it, with real adaptation, somewhere it was never designed for. Ogburn and Thomas's 1922 work on "multiple discovery" treats this kind of recombination as the normal route to new ideas, not the exception.

**In the case.** The episode traces the clearest possible version of this: Yoichi Ueno read the Gilbreths' work around 1907 and brought motion study to Japan, where it fed into what Shigeo Shingo and Taiichi Ohno eventually built into the Toyota Production System. Lillian herself repeated the move domestically, carrying factory-floor method into the American kitchen through her 1930s "Kitchen Practical" design.

**Contrast cases.** A well-documented recent example: hospitals, including Great Ormond Street, borrowing Formula 1 pit-crew handover protocols to redesign how surgical teams hand over patients. The contrasting case is any organisation that treats its methods as proprietary and resists borrowing from, or lending to, other fields.

**For discussion.** What's a method from a completely different field that your own organisation has never seriously considered borrowing?

## Lesson 6: Pivot when a market closes

**The idea.** When a venture's means-at-hand suddenly can't reach its original market, the available move is often not to invent something new but to redirect existing capability toward a market that will still take it — close to what Sarasvathy (2001) calls effectuation: starting from the means you actually have, not a fixed goal, once circumstances change.

**In the case.** After Frank Gilbreth's sudden death in 1924, industrial clients — uncomfortable taking advice from a widow — withdrew. Lillian didn't invent a new method; she redirected the same observational, motion-study approach toward a market

that had never been rigorously studied at all: the home and the kitchen. The L-shaped "Kitchen Practical" layout, later generalised as the "work triangle," came directly out of that redirection.

**Contrast cases.** Listerine's well-known pivot from surgical antiseptic to household mouthwash, when its original market stalled, follows the same logic: same product, rebuilt case for a different buyer. The contrasting case is any venture that folds rather than redirects when its first market disappears.

**For discussion.** Was Lillian's pivot opportunism, resilience, or simply the only option left to her — and does the distinction matter for what we take from the story?

## Using this case in class

- **Debate motion:** "The Gilbreths, not Taylor, are the true founders of modern management thinking."
- **Strategy exercise:** Using the effectuation lens from Lesson 6, list the means genuinely at hand in your own organisation — skills, relationships, reputation, existing tools — and sketch one new market those means could reach if your current market closed tomorrow.
- **Personal reflection:** Identify one piece of your own work that, like bricklaying before Frank Gilbreth studied it, you've never actually watched yourself do — then go and see it.

## Further reading

The fullest account of Lillian Gilbreth's life, including the period after Frank's death that this episode turns on, is Jane Lancaster's *Making Time: Lillian Moller Gilbreth — A Life Beyond "Cheaper by the Dozen"* (Northeastern University Press, 2004). The Gilbreths' own 1914 doctoral thesis is in the public domain and free to read as *The Psychology of Management* on Project Gutenberg.

On the academic concepts used above (check editions and details before publishing — these are drawn from general knowledge, not re-verified against primary copies): Elton Mayo's human-relations findings are collected in Roethlisberger and Dickson's *Management and the Worker* (1939); Eric von Hippel's user-innovation work is set out fully in *Democratizing Innovation* (2005); Nonaka and Takeuchi's *The Knowledge-Creating Company* (1995) covers tacit-to-explicit knowledge codification; William Ogburn and Dorothy Thomas's "Are Inventions Inevitable? A Note on Social Evolution" (*Political Science Quarterly*, 1922) is the original multiple-discovery paper; and Saras Sarasvathy's "Causation and Effectuation" (*Academy of Management Review*, 2001) is the source for Lesson 6.