THE WAKE-UP CALL

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35 Years Old - And Already a Grandfather?

Data, Demography, Thinking Errors: Why a Misconception Regarding Statistical Life Expectancy Can Hurt Companies

Von Christian Rook

Have you experienced this?
At a garden party, the conversation turns to the ever-increasing life expectancy in the Western world. Inevitably, someone will say, "Yes, in the past, people only lived to about 35."

The belief that people in former times (lets say the 19th century) died young is persistent. But: it's not only historically incorrect—it also symbolizes a deeper problem: the flawed handling of data. What is merely annoying in casual conversation—especially when you know better—can have serious consequences in a corporate setting.

The Myth of the Short Life – and What's Really Behind It

The often-quoted "average life expectancy" in the 19th century was around 30 to 35 years. This number is mathematically correct, but based on a misunderstanding: that life expectancy equals age at death.

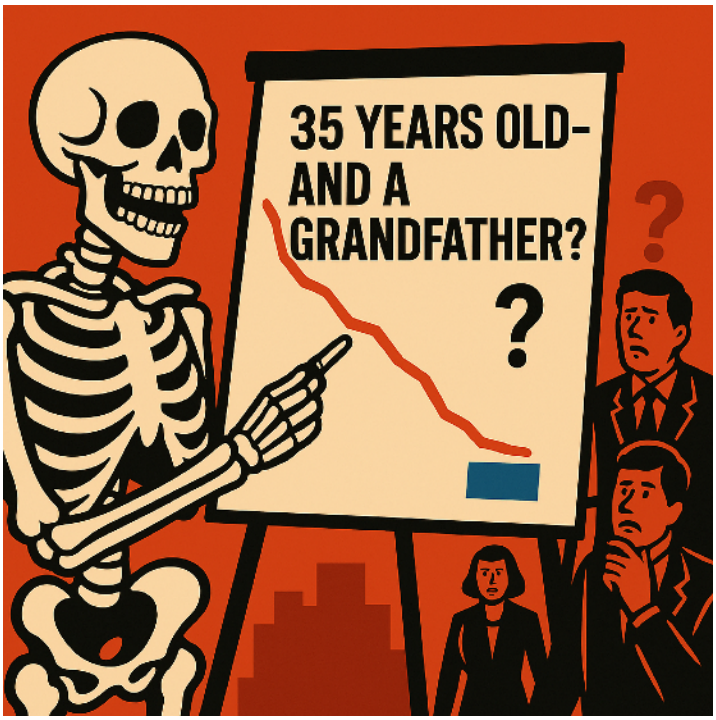
Statistical Life Expectancy

Life expectancy is the average number of years a person is expected to live, based on mortality rates for a specific year. It is usually given at birth—and includes how many people, on average, live from birth until death, even if many die very young.

Actual Age at Death

The age at death is the actual age at which an individual dies. It is a personal value, unlike life expectancy, which is a statistical average.

The problem: High child mortality significantly distorts the data picture.

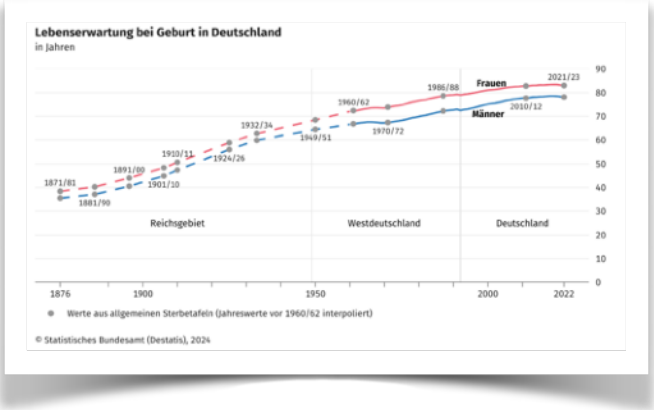


Example: The impact of high child mortality on statistical life expectancy in Germany, 1871

In 1871, there were 20 million women in Germany, and 1.5 million children were born alive. These children had a statistical life expectancy of 35.6 years for boys and 38.4 years for girls.

However, half of them (750,000 children) died within the first year of life (e.g., due to infections or malnutrition). The other 750,000 lived (some) to a high age—say, 70 years. Hence, the average statistical life expectancy is about 35 years.

So although half of those born in 1871 lived to be 60–70 years old, the average life expectancy was only 35—due to the many early deaths. In reality, life was often much longer for those who survived early childhood.



Actual age at death numbers are proven and confirmed by many sources throughout history: monastery records, civic registries, wills.

Yet the myth persists. Why? Because "35 years" is a catchy number—and fits our cognitive patterns.

What This Has to Do with Business

What may seem like a historical quirk is, in fact, highly relevant today. Modern companies also often make decisions based on data that are **formally correct** but **conceptually misleading**.

This is particularly apparent in the field of **demographics**—one of the most crucial yet underestimated levers in HR and strategic management.

Data is collected, KPIs are generated, reports are written—but what's missing **is critical reflection**: What exactly are we measuring here? And what does that really mean for our actions?

Behavioral Economics: Why False Data Often Feels Right

Behavioral economics offers a clear explanation:

Humans are cognitive "efficiency machines." We simplify complex information—and in doing so, we often use heuristics that lead us astray.

Some typical effects:

- **Availability Heuristic:** Information that is striking, emotional, or strongly visual dominates our perception. A graph with dramatic spikes sticks in our minds more than a sober forecast with room for action.
- **Confirmation Bias:** We tend to perceive only information that supports our existing beliefs. If you believe "the skilled labor shortage is insurmountable," you'll interpret data to confirm that narrative.
- **Framing Effect:** The way something is presented massively affects how it's interpreted—regardless of content. "We will lose 300 employees in ten years" sounds more threatening than "around 30 people leave each year."
- **Narrative Bias:** People prefer simple stories to complex realities—even in boardrooms.

These effects don't just influence individuals—they also shape committees, strategy meetings, and investment decisions.

Case Study: When Analysis Leads to Paralysis

I was recently asked to support a strategic reorganization in a growth-oriented technology company.

The company claimed to have a serious staffing issue (understandably, everybody has staffing issues, today, right?). The goal was to forecast personnel needs over a period of ten years, taking into account age structure, turnover, and expansion goals—and then create a plan to meet that need.

The company had already conducted its own analysis of all available data before I arrived. The document was thorough, and the model looked convincing: color-coded tables, bottleneck roles, regional scenarios.

They concluded that a huge number of highly qualified professionals would be needed over the next 10 years due to demographic reasons (retirement) and a very aggressive sales growth plan.

Over 25% of engineers would have to be replaced, and another 20% added on top.

A number that not only caused concern—but also threw the entire management into a kind of shock paralysis: *"We'll never be able to manage that!"*

The ten-year aggregated view didn't serve as a planning tool—it felt like a threat. Leaders, previously without a clear vision of the future, were suddenly faced with a seemingly unsolvable HR problem.

The result: passivity, retreat, prioritization of daily operations.

What was overlooked:

When looking at the data in more detail, the actual annual need looked actually quite manageable—usually in the single digits. That was how the company had hired new staff regularly in the past. Natural attrition simply needed to be planned for (maybe a little better), and the projected growth for the years 8–10 prepared (there was time to install better recruiting programs).

Moreover, simple measures—like early succession planning, dual education, and qualification programs—could easily address most of the demand.

But the **framing**—big numbers, long timeframes, visual impact—overshadowed the realistic possibilities for action.

Only by deconstructing the model, breaking it down into yearly targets, and putting it in context with existing resources did the analysis become a manageable project again.

The organization moved from thinking to acting.

Lesson for Practice: Data Alone Isn't Enough

This example illustrates a widespread problem:

It's not the data itself that determines its usefulness—but the way it's read, embedded, and interpreted.

This is especially true in demographic management:

- Age structures are shown—but not interpreted.
- Succession processes start too late—because the "urgency marker" is missing.
- Training programs are driven by budgets—not demographic needs.
- Strategies to secure skilled labor fall short—because risks are aggregated, not segmented.

The result: wrong actions, failed investments, operational overload.

Leadership Means: Recognizing Thinking Errors – and Deciding with Context Awareness

The historical figure of 35 years of life expectancy is not just a quaint myth—it's a **lesson for leaders**.

It shows how easily we draw false conclusions when we overvalue averages, ignore context, and fail to question cognitive patterns.

Modern leadership responsibility therefore means not just making **data-based** decisions—but also interpreting data with **awareness of bias**.

Demographics are not a fringe topic—they are a strategic key factor, as vital as liquidity, market share, or innovation.

Only those willing to think in nuanced terms can make complex challenges solvable.

And only those who understand how people respond to numbers can truly use data as a leadership tool.

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