



The linearity bias hinders the successful transformation of Germany.

Reading time: 9 minutes

Warning: This will be a tougher nut than usual. But it is worth it.

A short thought experiment: A company has two different vehicle fleets that drive the same amount of kilometres per year. There is an opportunity to make one of the two fleets significantly more efficient in terms of energy consumption in the next hr year. Fleet A can increase its range from 10 to 20 km for every five litres of diesel. Fleet B can increase its range from 20 km to 50 km for every 5 litres of diesel. Decide spontaneously: Which fleet should be modernised?

The linearity bias quickly leads our gut feeling to fleet B. Instead of an additional 10 km, we actually get 30 additional km out of this.

Every fleet manager will modernise fleet A, because that is where the savings are greatest. To understand this, one must not use the kilometres per litre, but the litres per kilometre. Fleet B already consumes only half of fleet A. If fleet A doubles its efficiency, i.e. only consumes half, fleet B will not be able to catch up.

Another quick example: A car drives a distance at 120 km/h instead of 80 km/h. How fast would the car have to travel in order to save the same amount of time by travelling at an even higher speed? 160 km/h, i.e. another 40 km/h faster? The correct answer is 240 km/h. So twice as fast.

We recognise a principle here that we encounter again and again. It is often the low hanging fruit that brings the greatest efficiency gains. The effort for additional efficiency gains, on the other hand, is rarely linear, but increases dramatically. We underestimate this effect when we imagine how quickly innovations will improve our lives. I drove my first BMW 10 years ago with an assistance system that could do more than stupid cruise control. I was sure that 10 years later I would enjoy a self-driving BMW. Far from it. In fact, my new BMW is only slightly better. The thing is as far away from autopilot as Deutsche Bahn is from punctuality.



Evolutionarily, the linearity bias has served us very well. In our complex world, however, where people encounter high technology, this bias seems to lead to enormous expectations of error. And thus to favour wrong political decisions.



The investor Frank Thelen, a tech nerd known from Höhle der Löwen (Dragons' Den), is often off the mark with his hit rate. Disruptive technologies take longer than he expected. One of his investments, the air taxi company Lilium, is not getting off the ground. Experts believe that Lilium, due to its design principles, can fly for a maximum of two minutes with passengers - before the batteries run out. However, regular operations should start in 2025. There is a class action lawsuit by investors against Lilium because of grossly false promises.

When it comes to energy, we in Germany stubbornly follow the linearity bias. Politically, the decision was made to phase out nuclear power after Fukushima. What we remember are 20,000 deaths. Our memory is deceptive. These dead were caught in the tidal wave. No or only a few victims are attributed to the reactor meltdown.

Renewable energies were supposed to make the phase-out possible. However, the expansion of renewables is proceeding much more slowly than planned at the time. In 2021, the share of renewables was just 16%. And that is probably already the low hanging fruit. Nevertheless, nuclear was switched off. Russian gas has so far prevented a disaster, with a much worse CO₂ balance than the switched-off German nuclear power. Russia supplied unusually little gas in 2021. No one in Berlin noticed.

At the time, the Republic had committed itself to what seemed to be the right path in terms of security policy. And is now quite obviously making the same mistake again. The 'right' climate policy orientation is currently being transfigured into a superpower for the energy transition.

All the chips in the casino of energy production are bet on renewables. And with imported nuclear power, imported LN gas from fracking and coal-fired power tried to hedge. German nuclear power and German fracking are simultaneously intellectual no-go areas. If the bet goes wrong, we all pay - with severe economic downturn.

Of course, I don't have an answer to this future question either. But I see the linear bias. I see the attitude-based battles on Twitter. I don't believe in the one right decision in our highly complex world. More humility would be good. On to new shores without prematurely burning bridges or surrendering to a commodity.

Unfortunately, when the state tries to manage, it usually does not bode well. I can think of overpriced mask deals, millions of expired vaccines, uncontrolled fraud at the corona rapid test centres. Social-psychological collateral damage, especially in children. Also the worst data on corona measures in Western Europe. But instead, a lot of political posturing, especially pronounced in the former public favourite Lauterbach. The Minister of Health.

Digital administration is in the Stone Age. Homeowners have to painstakingly collect data - which the administrations already have - for a new property tax assessment and enter it into online forms. And the servers collapse under the load. No joke. This administration is now supposed to manage the complex acceleration of renewables?

I very much welcome the accelerated expansion of renewables. However, I consider a linear increase, or even the announced leap, to be extremely unlikely.



The recently announced goal of an 80% share of renewables in less than seven years is wishful thinking.



A vast number of obstacles to implementation are either ignored or defined away as solvable. From partly absurd administrative regulations, capacity bottlenecks in the grid infrastructure (on sunny days in Bavaria today, solar surfaces already have to be switched off at midday!), cost explosion for photovoltaics, lack of craftsmen in all areas of energy production, house insulation and heat pumps, completely overburdened administrative courts and too few planning offices for the rapid mass construction of the systems. According to two university based leading [experts](#) in energy technology I'm still far too optimistic.

Habeck, Minister of Economics, has moved a great deal in recent months - and missed a great deal. In May, June and July, the German gas-fired power plants were operated at close to full load to generate electricity. After all, it was cheaper than coal. The incentive systems for immediate gas savings called for by many economists as early as March were laughed at.

Not only is the rate of expansion of renewables highly uncertain, it obviously takes much longer to create effective and affordable storage solutions for the frequent dark-slack situations.

The hope for hydrogen as a storage solution is also progressing much more slowly than once thought, despite the greatest attention. Just look at the share prices of the hydrogen specialists. Shattered dreams.

Heat pumps, the currently preferred heating system, use electricity not gas. Households with gas heating are buying electric heaters just for safety. Prices for emergency generators are rising massively. I have one in my house now.

My current fear, however, is even greater in another area: the linearity bias also applies to the projection of the economic potency of the republic. In the environment of the climate protection movement, there seems to be a perception of invulnerability: Germany was and is rich and could put economic growth on the back burner for a while. Yes, a little less consumerism would be ethically beneficial. I consider this perception to be extremely dangerous. Because it has not corresponded to reality for a long time. Germany no longer has a single company among the 100 largest in the world. The valuation of German listed companies in relation to the population is about half that of the UK and France and one-seventh that of the USA. The euro is falling like a stone. And the young will have to finance more and more of the old.



The pugnacious former head of the Ifo Institute, Prof. Sinn, already pointed out the rapidly deteriorating prospects many years ago. Among them is the too rapid shift to renewables as long as the storage solution does not exist, because the Republic will then have to maintain and finance two complete energy production systems in parallel. That's like keeping two different heating systems at home for safety's sake. Of course, this duplication has to be paid for. By the consumers - and by industry, which loses competitiveness in energy-intensive sectors as a result.

Habeck argues that Germany can pay high prices for LN gas. But not without an increase in debt and presumably not without a massive deterioration in competitiveness. And higher unemployment.

But surely we also benefit economically from the switch to renewables? If we are not mistaken. The materials for renewable energies come in bulk from China - in the case of solar even a staggering 80% of all production stages worldwide. That means we are giving the main value added to China. In Germany, by the way, the last manufacturer of rotor blades for wind power has just given up.

This illusory certainty that existing functioning systems can already be shut down if only the right linear plans for the future are in place is a daring process. And so is the current effectiveness of 'posturing' pro-climate while disregarding the importance of economic performance.

It scares me from time to time. For my children. And for yours as well.

I don't like to end a BrainCandy on a pessimistic note. Therefore, at least a positive outlook. In the next BrainCandy, I will talk about how you can improve your quality of life again despite the bad news.

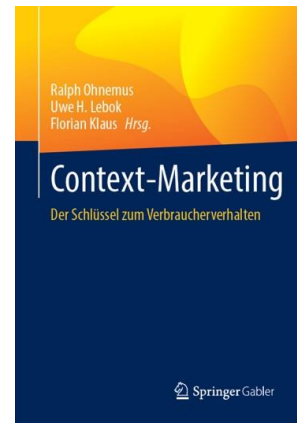


Book recommendation

By Ralph Ohnemus, Uwe H. Lebok, Florian Klaus:

Context marketing

The key to consumer behaviour To [order](#)



Feedback, suggestions or criticism about this article:
braincandy@ka-brandresearch.com

The author

Ralph Ohnemus, CEO. Board member and main shareholder of K&A BrandResearch since 2001.

Previously a client of K&A BrandResearch for 15 years.

National and international marketing and sales experience in senior management positions, including FMCG, fashion, media and telecommunications - most recently as SVP Consumer Sales responsible for marketing, sales and chain stores at Viag Interkom O2.

Contact: r.ohnemus@ka-brandresearch.com

