

**Unbundling: the future of health and social care: 2035 as seen from 2047**

The following scenario was prepared in December 2016, and originally submitted to a King’s Fund scenario writing competition (it didn’t win, by the way). It is based on strong and weak signals that are salient to varying degrees in late 2016. Signals represent an evidence base rather than relying on speculative or aspirational scenario writing. As such, these signals, if they propagate into the future in a causal sense, offer a contemporary evidence base for thinking about a future situation.

**Causal Driver: Unbundling**

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### The future of health and social care: 2035 as seen from 2047

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Between 2016 and 2035, the way that people worked had substantially changed by widespread digitisation of information. Smart machines and robots had moved from doing physical work to being central to much cognitive work and which led to fundamental restructuring of the economy. By 2035, taxation was changing from taxing people to taxing the work done by devices, cognologies (machine learning embedded in digital systems), and robots (artificially intelligent and mobile).

The fault lines between reality and expectations were starkly evident during the 2020s, as public investment in health and social care struggled to cope with the rapidly changing world. People were becoming accustomed to flexible access to personalised services that came to them and expected the same from care provision. Rising displeasure at service decline led to middle-class flight to alternatives with rising use of private medical insurance, progressively fracturing the social contract that legitimated publicly-funded care. Indeed, by 2028, 38% of the population used private care, with over 55% amongst Millennials.

Fearful health and social care executives and worried Ministers of Health had reacted to these stresses by pulling the care system even more tightly together, to protect jobs and avoid the failure of publicly-funded institutions.

This tighter winding fed further public displeasure by the dominant middle-aged Millennials who challenged the traditional approaches to health and social care. In the United Kingdom, for instance, this unrest led to the 2028 Referendum on their tax-funded healthcare system, leading to the replacement of this system with social insurers and personal Social and Health Care Savings Accounts. Other countries soon found public displeasure made this third rail of policy even more electrified and influential at the ballot box. Changes that were unthinkable in 2016 emerged as routine.

The process of changes in health and social care around the world has become known as **Unbundling** and produced the systems we take for granted today. This brief historical retrospective outlines three of the key components of that unbundling.

### The 1st Unbundling: of knowledge and clinical work

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Professional knowledge was affected by digital technologies which had unbundled knowledge from the expert person. This changed how expert knowledge was organised, used and accessed; research institutions and knowledge-based organisations were the first to feel the changes, with librarians being one of the first professions to face obsolescence. Rising under-employment, particularly in traditional male-dominated occupations was still being absorbed by the economy.

Routine cognitive work and access to information and services was increasingly provided by cognologies (known as artificial intelligence in 2016 but quickly replaced by machine learning and computation intelligences by 2025) or personal agents as they were often called. Widely used across society, they were embedded in clinical workflow from diagnosis to semi and later autonomous minimally invasive surgery. By this time, jobs with “assistant” in the title had generally disappeared from the care system, despite having been seen as an innovative response to workforce shortages through the late 20-teens. These jobs had

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turned out to be uninteresting, and involving highly fragmented tasks, and required time-consuming supervision.

The benefits of precision medicine were substantial by 2035, enabling earlier diagnosis and simpler and less invasive treatments. Theranostics, the merging of diagnosis and therapy, unbundled the linear care pathway and the associated clinical and support work. This also led to the unbundling of specialist clinical services, laboratory testing and imaging from monopoly supply by hospitals. Indeed, the last hospital was planned in 2025, but by the time it opened in 2033, was deemed obsolete.

### **The 2nd Unbundling: of financing and payment**

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The unbearable and unsustainable rise in health and social care costs necessitated better ways to align individual behaviours and preferences with long term health and well-being. Behavioural science had shown that people did not always act in their own best interests; this meant the care system needed people to have ‘skin in the game’, best done by monetising highly salient personal risks.

Existing social insurance systems which used co-payments were more progressive in this direction, while countries with tax-funded systems were forced to reassess their avoidance of the use of co-payments, and financial incentives. The Millennials, having replaced the baby-boomers as the primary demographic group, were prepared to trade-off equity for more direct access to care. It also became politically difficult to advance equity as a goal against the evidence of poorer health outcomes in tax funded systems as comparisons with peer countries drove performance improvements.

The use of medical/social savings accounts was one way that gave individuals control of their own money and building on consumerist behaviour. This directly led to improved service quality and incentivised provider performance as they could no longer hide behind the protecting veil of public funding. The social insurers were able to leverage significant reforms through novel payment systems, and influence individual health behaviours through value-based (or evidence-based) insurance not possible under a taxation system.

### **The 3rd Unbundling: of organisations**

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With people used to having their preferences met through personalised arrangements, care was organised around flexible patterns of provision able to respond easily to new models of care. This replaced the “tightly coupled” organisational approach known in the early part of the 21st century as “integration”, which we know led to constrained patient pathways, limited patient choices and was unable to evolve with social, clinical and technological changes.

The big-data tipping point is reckoned to have occurred around 2025. Because the various technologies and cognologies had become ambient in care environments they were invisible to patients, informal carers, and care professionals alike; this enabled the genesis of smaller and more diverse working environments.

By 2032, medical specialists were rarely hospital-based, having become clinical care networks, with their cheaper, smaller, portable, networked and intelligent clinical resources. Other care professionals had followed suit. These clinical groupings accessed

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additional clinical expertise on as-needed basis (known as the “Hollywood” work model); this way of organising clinical expertise helped reshape the provision of care and met patient expectations for a plurality of care experiences.

It takes time to shift from the reliance on monopoly supply of care from hospitals in those countries that continued to pursue the highly politicised state monopoly role. Asian countries, which had already designed an alternative role for government, are seen as providing key leadership given the huge population demand they were able to meet. And most care systems did eventually repurpose themselves quite quickly adopting early 21st century innovations as focused factories, and lean methods, while the more research-oriented specialised in accelerating the translation of research into daily use, helped along by the new discovery tools and the deepening impact of systems biology which was making clinical trials obsolete.

### Conclusion

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This Unbundling arose as a product of the evolution of social attitudes, informed by the emerging technological possibilities of the day. The period from 2016 to 2025 was a critical time for all countries, exacerbated by shortages in the workforce coupled with economic difficulties and political instability.

Today, in 2047, we are removed from those stresses that caused such great anxiety. We must marvel, though, at the courage of those who were prepared to build what today is a leaner, simpler and more plural system, removed from politicised financing and decision making.

It is hard to imagine our familiar home-based theranostic pods emerging had this trajectory of events not happened. As our Gen-Zeds enter middle age, they will, in their turn, reshape today’s system. Plus ça change, plus c'est la même chose.

27 December 2047

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