

Achieving Radical Change and what we can learn from Edison?

A Stimulus Paper for NHS Radical Rethink Workshop

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Electric Light did not come from continuous improvement of candles. (Oren Harari)

A stimulus is defined as something that causes growth or causes a reaction. This short stimulus paper is intended to inject several core concepts that may help progress and induce radical thinking and progress in the high-level roundtable at Windsor Castle.

1. New Theory of the Business for Health
 2. Guided Emergence for Non-Linear Systems Change
 3. Structured Industry Change Methodology – Open Innovation 2.0
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1. **Theory of the Business** - What are the core assumptions for the health industry and how do organizations achieve sustainable operating and financial models? Peter Drucker (1994) often argued that the malaise present in many industries and organizations is that their theory of the business no longer works. A very important factor for industry change is a shared vision and an associated business Model. Arguably there is currently no universal shared vision and associated theory of the business in Healthcare. Indeed, often different medical representation organizations act like guilds and compete. When commenting about health's business model, Harvard Professor Michael Porter said – "In health too many people get paid more to do the wrong thing in healthcare" and AR Johnsen would argue that the health industry is dominated by the 'rule of rescue'. Prof Anthony Staines of Dublin City University says too often the business model of health is to give care in the most expensive place, i.e. an acute hospital at the latest possible moment. In the past decade there has been a right shift of resources from primary care to the acute sector of over 10% in the NHS.

Stay Left, Shift Left-10X (SL2-10X) is a new paradigm and strategy, supported by the UNGA Digital Health Symposium leadership group which focuses on proactive and participative healthcare enabled by 10X (Ten-fold) Digital Innovations. SL2-10X could become a unifying theory of the business for health care whereby various interdependent organizations work to deliver complimentary and compounding digital health innovations which delivery structural non-linear change. The figure below presents a vision of a new healthcare system with people at the centre and envisages shifts from analogue to digital, hospital to home and illness to wellness.



Figure 1 Stay Left, Shift Left Shared Vision - source Curley et al, 2021

Across Europe on average 97% of health budgets are spent on sickness and illness recovery and just 3% on proactive wellness. Imagine the impact if we were able to achieve a shift left of resources with 10% of budgets were spent on wellness and proactive, participative health.

2. Non-Linear Systems Change - Guided Emergence and the De Medici Effect

Guided Emergence is a self-organizing ecosystem wide **order** that arises from both a Master vision (e.g. Stay Left, Shift Left-10X and the actions and interaction of interdependent organizations who pursue a common vision with shared values and who are continuously innovating and reacting based on the actions of others in the ecosystem and the changing business and societal environment. Emergent properties of a complex adaptive system are those that arises spontaneously from aggregate behaviour in the ecosystem or arise from regulatory or technology changes in the environment (Tiwana, 2014)

Frans Johansson describes **the De Medici effect** as the emergence of new ideas and creative solutions when people of different backgrounds and disciplines come together. Hermann and others (2017) observe "it becomes intuitive that often enough disruptors come from outside an industry (with a total rethinking of the current business practices)" so applying shift left to health may be non-intuitive to incumbents but very intuitive to outsiders". Imagination will be crucial to health systems transformation and those with the courage to think and act outside the box or even without boxes will be the radical transformers. This high-level roundtable attempts to establish an intellectual supercollider to help imagine, architect and engineer a completely different kind of sustainable health system which provides better health for all and better balances supply and demand.

3. Industry Transformation Methodology – Open Innovation 2.0 [Twelve principles for open innovation 2.0 | Nature](#)

A new mode of innovation is emerging that blurs the lines between universities, industry, governments and communities. It exploits disruptive technologies — such as cloud computing, the Internet of Things and big data — to solve societal challenges sustainably and profitably, and more quickly and ably than before. It is called open innovation 2.0

“Yet many institutions and companies remain unaware of this radical shift (Open Innovation 2.0). They often confuse invention and innovation. Invention is the creation of a technology or method. Innovation concerns the use of that technology or method to create value. The agile approaches needed for open innovation 2.0 conflict with the 'command and control' organizations of the industrial age. Institutional or societal cultures can inhibit user and citizen involvement. Intellectual-property (IP) models may inhibit collaboration. Government funders can stifle the emergence of ideas by requiring that detailed descriptions of proposed work are specified before research can begin. Measures of success, such as citations, discount innovation and impact. Policymaking lags behind the marketplace” .

The success rate of innovation is very low and the success rate of disruptive innovation across an industry is even lower. Leveraging a methodology for industry structural change such as Open Innovation 2.0 won't guarantee success but can significantly improve the chance of success.

What can we do to drive an accelerated phase transition to a new kind of wellness focused, patient centred, digital health system?

A **Phase transition** is a *step function change* in the structure and performance of a system as it transitions from one regime/paradigm to another as show in the figure below. Using Digital Technology, the opportunity exists to create a completely different kind of health system.

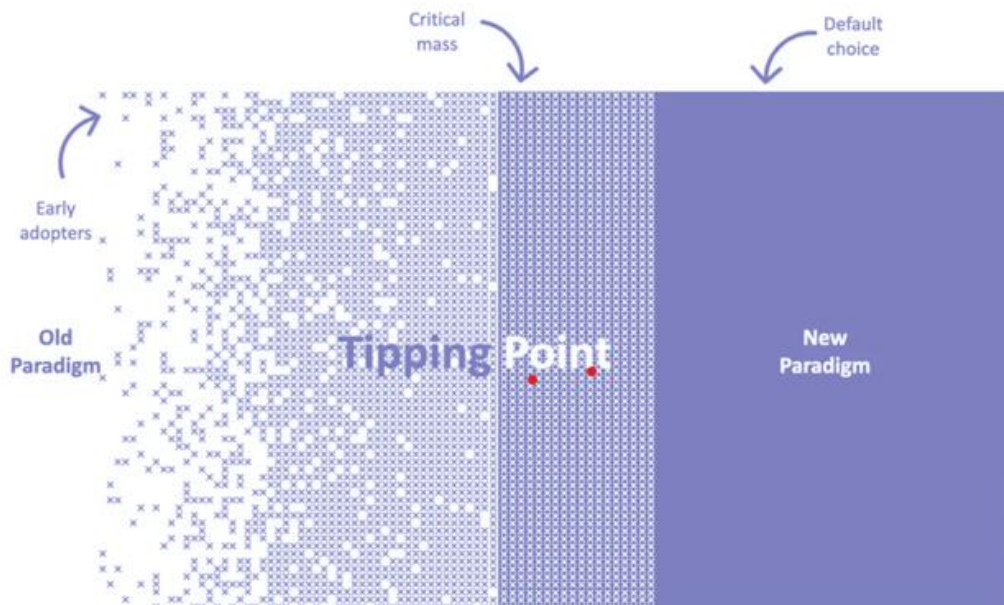


Figure 2 Phase Transition - source J Colchester

Phase transitions are inherently non-linear involving periods of exponential change and industry structures which supported the old paradigm disintegrate and new ones emerge. We should think

about how to imagine, architect and engineer a completely new kind of digitally enabled wellness and health system. An example of a phase transition would be the shift from horsepower/candle power to an electrical system.

Stimulus: What can we learn from Edison?

Integrated System of Electric Lighting:

There were many people competing with Edison, but he recognized the importance of not just inventing a product, but also building an infrastructure to support its widespread adoption.

Edison's success was also due to his development of an entire, integrated system of electric lighting. This system included generators, power distribution networks, and meters for gauging electricity usage, in addition to the light bulb itself. What is the equivalent integrated system for a new kind of health system which is patient and home centred and digitally enabled.

Proactive Health

Edison as well as being a famous inventor and entrepreneur has something important to say about our deliberations in health.

"the doctor of the future will give no medicine but will interest his patients in the care of the human frame, in diet and in the cause and prevention of disease"

"Surgery, diet, antiseptics — these three are the vital things of the future in preserving the health of humanity. There were never so many able, active minds at work on the problems of diseases as now, and all their discoveries are tending to the simple truth — that you can't improve on nature." His comment directs us to the potential of over medicalization of Health.

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